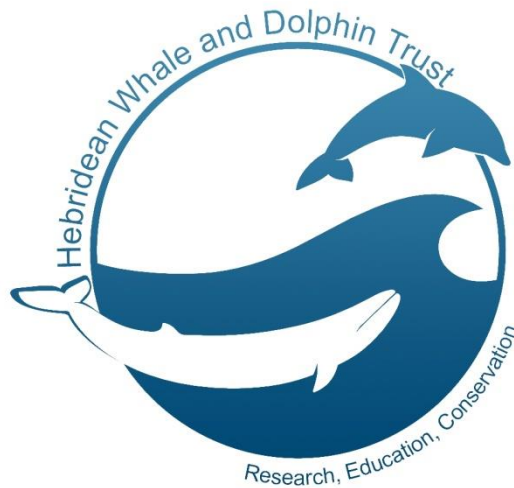


HEBRIDEAN WHALE AND DOLPHIN TRUST



Annual Report 2013



HWDT (2013) Annual Report 2013.

Hebridean Whale and Dolphin Trust, Tobermory

Cover picture: *Silurian* © Patrick Keith

CONTENTS

CONTENTS.....	3
LIST OF FIGURES AND TABLES.....	5
INTRODUCTION.....	6
RESEARCH.....	8
<i>Silurian</i> Surveys.....	8
Methodology.....	8
Survey Routes.....	10
Sightings.....	10
Acoustic Monitoring.....	12
Photo Identification.....	14
Bottlenose Dolphins.....	14
Minke Whales.....	14
Killer Whales.....	15
Risso’s Dolphins.....	15
Anthropogenic Impacts.....	16
Aquaculture and Acoustic Deterrent Devices.....	16
Offshore renewables.....	16
Marine Litter.....	17
Community Sightings.....	19
Strandings.....	21
Use and Impact of Research Data.....	23
Biodiversity Objectives and Actions.....	23
Military Activity.....	23
Public Consultation.....	23
Cooperation with Universities.....	24
Dissemination of Research Results.....	24
ENGAGEMENT WITH THE PUBLIC.....	25
Volunteer Programme 2013.....	25
Public Workshops, Talks and Events.....	26
EDUCATION.....	28
School Visits.....	28

Youths Onboard.....	29
OURREACH AND MEDIA.....	30
SUPPORTERS.....	31
REFERENCES.....	32
APPENDICES.....	33
Appendix 1: Silurian survey routes 2013.....	33
Appendix 2: Survey coverage 2003-2013.....	37
Appendix 3: Sighting of species from Silurian 2003-2013.....	42
Appendix 4: List of papers published and in progress in 2013.....	44
Appendix 5: HWDT in the media in 2013.....	47
Appendix 6: Staff, Board of Directors, Committee Members and Patrons in 2013.....	49

LIST OF TABLES AND FIGURES

Tables

Table 1: Surveys and Activities 2013.....	9
Table 2: Species seen in 2013 compared with 2012.....	10
Table 3: Encounter effort during 2013 survey season.....	13
Table 4: HWDT in the media in 2013, Appendix 5.....	47
Table 5: Public engagement events attended by HWDT in 2013.....	27
Table 6: School visits in 2013.....	28

Figures

Figure 1: White-beaked dolphin	8
Figures 2.1 to 2.10: <i>Silurian</i> survey tracks 2013, Appendix 1.....	33
Figure 3.1 to 3.21: Survey coverage 2003-2013, Appendix 2.....	37
Figure 4: Killer whales sighted onboard <i>Silurian</i> 2013.....	11
Figure 5: Proportion of species sighted from <i>Silurian</i> in 2013.....	12
Figure 6: Classified harbour porpoise acoustic detections in 2013.....	12
Figure 7: Photo-identification image of a minke whale	15
Figure 8: West of Islay survey 2013.....	17
Figure 9: Pie chart: proportion of litter types recorded in 2013.....	17
Figure 10: Sightings of minke whales and creels recorded in 2013.....	18
Figure 11: Sightings per year reported via the HWDT CSN 2004-2013.....	19
Figure 12: Sightings per species reported via the HWDT CSN in 2013.....	20
Figure 13: Sperm whale in Oban Bay.....	21
Figure 14: Bottlenose dolphin stranded at Achnamara, Lochgilphead.....	22
Figure 15: Primary school students learning about marine life.....	28

INTRODUCTION

This report details the activities of the Hebridean Whale and Dolphin Trust (HWDT) in 2013. HWDT's small, dedicated team of four full-time and two part-time staff worked hard this year to overcome many challenges, assisted by enthusiastic volunteers, consultants and trustees. Another comprehensive programme of research and education was undertaken successfully throughout the Hebrides both on the motor-sailor *Silurian* and via land-based activities.

The Trust continued to build on its extensive dataset of cetacean distribution and abundance with 2013 being the 11th year of surveying. *Silurian* surveyed 3,309 nautical miles this season, from Ballycastle, Northern Ireland in the south, west to the Outer Hebrides, and to Cape Wrath in the north, spanning nearly all of the Hebrides, running surveys both independently and in conjunction with Biosphere Expeditions. HWDT's surveys have enabled the collection of numerous data streams over several years, resulting in a large and complex data set. This enables both projects investigating specific research questions using discrete parts of the dataset, and also collaborative work where the trust's data contribute to larger Scottish or UK-wide initiatives as part of comprehensive long-term analyses. As the dataset expands, with ongoing surveys using consistent methodology, its value can only increase in terms of its capacity to provide the trend data often required by researchers and policy-makers.

Photo-identification is central to HWDT's research to help monitor population size and understand the movements and ranges of species. The more challenging funding environment has meant that the trust has had to work without a dedicated member of staff in this role for two years. Catalogue work has been difficult. However, with the 2013 HWDT internship programme, the trust's two interns have managed to match all bottlenose dolphin and minke whale photos taken between 2010 and 2012 to the relevant existing catalogue. Results have been updated in the corresponding databases and the aim now is to update the catalogues fully in 2014.

HWDT's Community Sightings Network received 792 sighting reports in 2013 via the online sightings form. HWDT would like to thank everyone who submitted a sighting report in 2013 and for contributing useful data to help increase the trust's understanding of cetaceans and basking sharks off western Scotland. A number of sightings submitted by the public during the year sparked media interest, as detailed within this report, the most prolific of these was the sperm whale that spent 11 days in Oban Bay during March and April.

Volunteers are essential to HWDT's work; assisting on important projects whilst receiving invaluable training and experience. In 2013, the HWDT internship programme supported three

interns. A total of 48 volunteers worked onboard *Silurian* for 10-12 days each during the year, contributing a significant amount of time to the collection of data. HWDT science staff provide training throughout the season to enable volunteers to conduct the monitoring surveys and this combination of research and education is highlighted in the surveys where students (14 in 2013) from St Andrews University receive cetacean survey expertise through practical field work onboard *Silurian*.

HWDT continued to support and collaborate with many undergraduate and postgraduate students throughout the year, adding to the large number of research collaborations held currently.

HWDT is a member of the Scottish Environment Link Marine Task Force and has contributed to a number of consultations throughout the year. Through this umbrella body, HWDT expresses its expert voice on cetacean and marine biodiversity issues on a national Scottish scale. A list of LINK publications supported by HWDT can be found in Appendix 4 of this report.

Public outreach is central to HWDT's work and the Education Officer organised and attended many workshops, talks and events throughout the year to increase public awareness and understanding of cetaceans and marine biodiversity present off the west coast of Scotland. Feedback shows that HWDT continues to provide a high quality, well-received curriculum-based programme. HWDT ran an Education week onboard *Silurian* in September 2013 providing 82 school children with a unique opportunity to learn and develop onboard *Silurian*.

The Trust looks forward to continuing its work and developing its partnerships in 2014 to help conserve Scotland's cetaceans and marine environment.

HWDT thanks all who have supported the charity in many different ways throughout the year.



Figure 1: White-beaked dolphin sighted during a *Silurian* survey © HWDT

RESEARCH

The Hebridean Whale and Dolphin Trust's research vessel, *Silurian*, has been conducting cetacean monitoring surveys since 2003, including the following species:

- Minke whale
- Bottlenose dolphin
- White-beaked dolphin
- Common dolphin
- Risso's dolphin
- Killer whale
- Harbour porpoise

The data collected are unique to the west coast of Scotland and there are no other data available on such a large spatial and temporal scale in this area. Distribution and abundance is essential to the management of marine mammals and where data were confined initially to the Argyll Islands region, more recently effort has been put into extending north, south and west the survey areas in order to obtain a more uniform and expansive data set.

I. **Silurian surveys**

Methodology

In 2013, HWDT scheduled nine survey trips from May until the end of September. The trips are led by HWDT's biodiversity officer and involve a group of enthusiastic volunteers, who pay to

go on the *Silurian* in order to learn basic research techniques and assist with data collection following HWDT’s methodology. Four of the trips in 2013 were scheduled to be run using volunteers and support from Biosphere Expeditions. One trip formed part of the Sea Mammal Research Unit MRes programme. *Silurian* was chartered by a team of researchers from St Andrews University in July for two weeks.

Trip	Trip type	Start date	End date	Notes
HWDT 1	Research	17/05/13	28/05/13	
SMRU	Research/ Education	01/06/13	10/06/13	St Andrews University students
Biosphere 1	Research	12/06/13	23/06/13	
Biosphere 2	Research	25/06/13	06/07/13	
Charter	Private Research	07/07/13	21/07/13	
HWDT 2	Research/ Education	22/07/13	28/07/13	Teen team. 1 berth funded by Scottish Power Renewables
WWF	Research/ Education	29/07/13	31/07/13	Youths onboard
HWDT 3	Research	01/08/13	11/08/13	
Biosphere 3	Research	14/08/13	25/08/13	
Biosphere 4	Research	27/08/13	07/09/13	
Education	Research	09/09/13	13/09/13	Mull schools
HWDT 4	Research	16/09/13	26/09/13	

Table 1: Surveys and activities scheduled for 2013 onboard *Silurian*

The survey methodology used in 2013 was identical on all monitoring trips, and has remained very similar since 2003, with some methodological and equipment adaptations and improvements made where necessary. Trips were mostly 12 days long, the usual distance covered being between 200 – 450 nautical miles depending on the weather conditions and the trip duration. Surveying was generally carried out for eight to nine hours per day, depending on conditions and levels of light available at the time of year.

During these surveys HWDT undertook the following activities:

- Visual observations were conducted for all cetacean species, plus basking sharks, seals, seabirds, marine litter, creels, and other vessels
- Passive acoustic surveys¹ were carried out simultaneously with the visual surveys. A towed hydrophone array was deployed in all sea conditions during daylight hours in waters >10m depth².

¹ Passive acoustic monitoring is a non-lethal, non-invasive method of measuring abundance and distribution of marine mammals through detecting their vocalisations.

² Continuous acoustic monitoring was conducted at a 500 kHz sample rate, and 1-minute recordings were made of audible sounds every 15 minutes by volunteers.

- Photographs of minke whales, bottlenose dolphins, common dolphins, white-beaked dolphins, killer whales, Risso's dolphins and basking sharks were collected for individual identification. These photographs showed the dorsal fins and any body scars or flank patterns that could be used to distinguish individual animals.
- Environmental conditions (sea state, swell, visibility, sun glare, and weather conditions) were recorded every 15 minutes or whenever they changed. Sea surface temperature was recorded using an automated temperature probe.

Survey Routes

Silurian survey routes carried out during each monitoring survey are presented in **Appendix 1** in Figures 2.1 to 2.9, with the total 2013 route shown in Figure 2.10. Routes were chosen to take into account weather and sea conditions and to obtain an even coverage of survey effort throughout the area. In spite of poor weather on some surveys, good coverage of all core survey areas was achieved. When surveys first began in 2003, effort was highest around the Argyll Islands. In more recent years coverage has extended to include more northerly and westerly areas of the Hebrides. Figure 3 in **Appendix 2** demonstrates the relative intensity of survey coverage across the area, both visually and acoustically from 2003 to 2013 (no acoustic surveys were conducted in 2003).

Sightings

Patterns of sightings for 2013 were similar to those of previous years, except for harbour porpoises and basking sharks, with harbour porpoises being the most frequently sighted marine mammal, closely followed by the pinniped species.

Species	Number of encounters	
	2013	2012
Harbour porpoise	316	173
Common seal	116	92
Grey seal	104	111
Unidentified seal	62	28
Minke whale	34	36
Basking shark	32	68
Common dolphin	22	28
Unidentified dolphin	18	10
Unknown	10	6
White-beaked dolphin	6	7
Risso's dolphin	1	2
Killer whale	1	1
Bottlenose dolphin	0	4
Sunfish	0	2

Table 2: Species and number of species encountered in 2013 compared with 2012

There were 34 minke whale sightings in total during 2013 with the first encounters occurring in May, during the first survey of the year. Lunge feeding was observed throughout the season though 10 out of the 15 lunge feeding instances occurred during August and September. 32 basking shark sightings were recorded during 2013 with 129 individuals in total. 14 of the encounters with basking sharks occurred in and around Gunna Sound over two days in July. These two days contributed significantly to the total number of basking sharks encountered. In August, a group of killer whales were encountered at the entrance to the Soay Sound, near the Isle of Skye. The three individuals were confirmed as individuals of the West Coast Community (Comet; WCC005, Aquarius; WCC008 and Lulu; WCC006) that were previously encountered east of Lochmaddy at the beginning of August in 2012.



Figure 4: ‘Comet’ WCC005 (left) + ‘Lulu’ WCC006 (right) of the west coast community © Tom Reade

Common, white-beaked, bottlenose and Risso’s dolphins were sighted during the 2013 season. Group sizes varied greatly, with common dolphin groups containing over 100 individuals in some instances and the Risso’s dolphin encounter consisting of just one individual. White-beaked dolphins were found in the North Minch, an area previously identified by HWDT as an area of particularly high importance to this species (Harries et al. 2012).

Sightings of species in 2013

The pie chart below shows the proportion of mammal species sighted from Silurian in 2013. Harbour porpoises are clearly the most frequently sighted species followed by a combination of seal species, minke whale and basking shark.

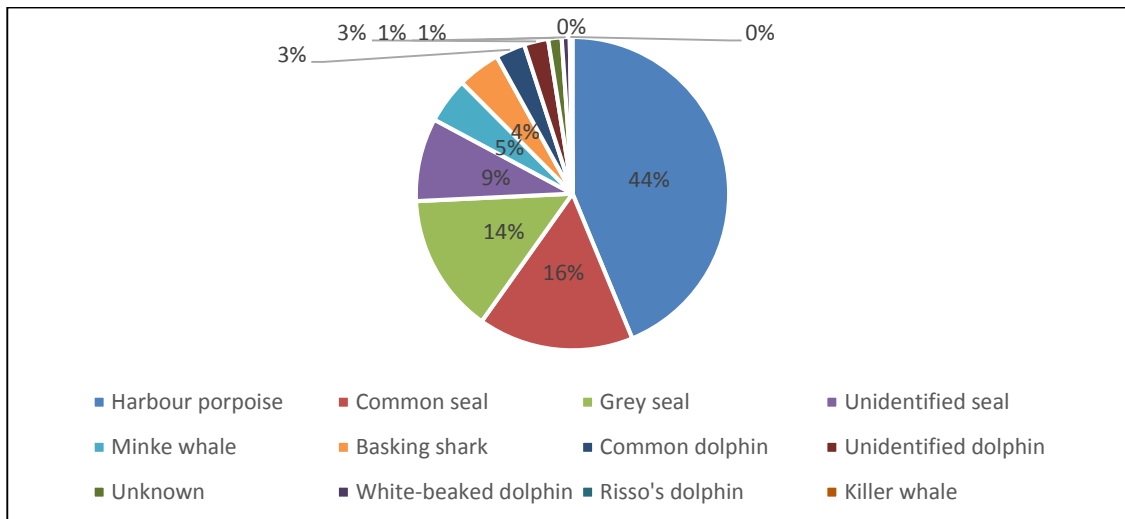


Figure 5: Proportion of species sighted from Silurian in 2013

Acoustic monitoring

Automated classifiers designed to detect harbour porpoises recorded 821 acoustic events during the 2013 season (compared to 316 visual sightings); the acoustic survey equipment proving its value. Harbour porpoise detection rates are influenced heavily by sea state, with anything but the calmest conditions significantly negatively impacting on sightings rates. Acoustic equipment functions and collects data irrespective of weather, sea state or light levels.

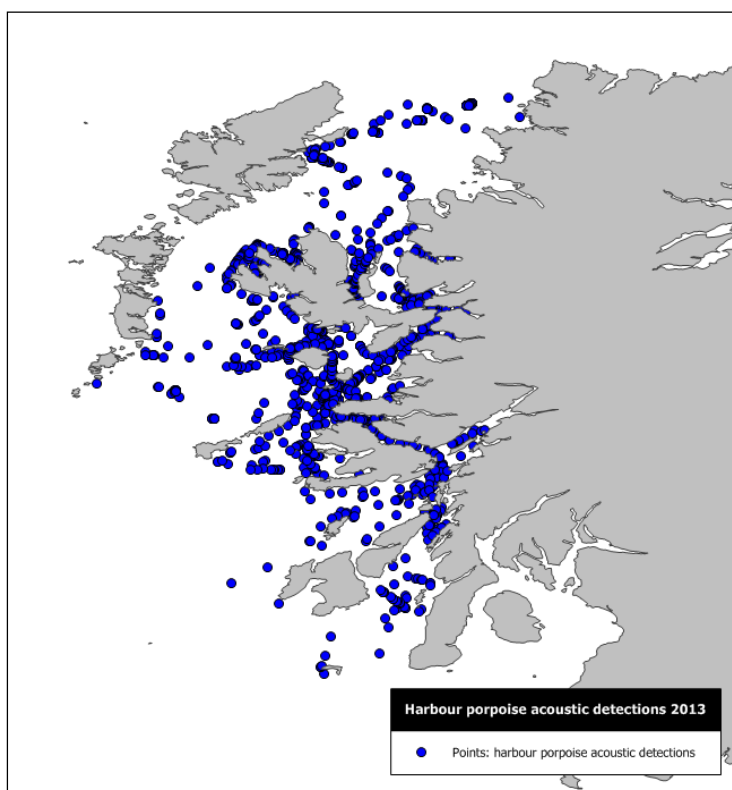


Figure 6: Classified harbour porpoise acoustic detections in 2013

129 common dolphin acoustic events were recorded during 2013. There were six acoustic detections of white-beaked dolphins and one of Risso’s dolphin. The large number of common dolphin detections is likely to reflect the amount of time spent with this species in comparison to that spent with white-beaked and Risso’s dolphin (Table 4).

Species	Total encounter time (minutes)
Basking shark	432
Minke whale	344
Common dolphin	235
Killer whale	55
White-beaked dolphin	26
Risso's dolphin	26

Table 4: Encounter effort during 2013 survey season.

In 2012, HWDT and its partners (Marine Ecological Research, ‘MER’, and independent consultants) were commissioned by Scottish Natural Heritage and Marine Scotland to investigate the acoustic characteristics of white-beaked dolphin and Risso’s dolphin clicks. Preliminary analysis (supported by WWF-UK earlier in 2012) found that white-beaked dolphin clicks have characteristics that could be used to attribute clicks to white-beaked dolphins during acoustic surveys. It was also found that differences in characteristics between east coast recordings of white-beaked dolphins and west coast recordings indicate some level of population structure. In the commissioned study, carried out over the winter of 2012/2013, HWDT found that white-beaked dolphin and Risso’s dolphin clicks have distinct characteristics in their structure that could be used to identify them to species during acoustic surveys where there is an absence of visual confirmation (Calderan et al. 2013). These click characteristics are distinct enough for there to be the potential of developing an automated click classifier, which has already been done for harbour porpoise clicks (see above). In contrast to the preliminary study, the trust did not find sufficiently clear regional differences in click characteristics to determine population units. However, it was concluded that the use of acoustics to make inferences about population structure would merit revisiting, given the potential value for management decisions affecting the conservation of these species of a better understanding of population structure. Acoustic data from *Silurian* of both Risso’s and white-beaked dolphins were used in this study in conjunction with data collected by other organisations in other areas of UK waters to assess the most comprehensive dataset of recordings possible. Acoustic data collected in the six white-beaked dolphin encounters and the one Risso’s dolphin acoustic encounter onboard *Silurian* during 2013 will contribute to this innovative project.

Photographic Identification

Photo-identification (or photo ID) is a non-invasive technique used by HWDT and scientists around the world to study whale and dolphin populations. The basis of photo ID is that each animal within a population is unique and has certain physical characteristics and distinctive markings which distinguish it from other individuals. Nicks or marks on the body surface are captured on camera during an encounter and then kept as a permanent record of the individual. Once individuals have been photographed and identified, they can be added to the photo ID catalogue. HWDT has been using photo ID to study the whales and dolphins off the west coast of Scotland for many years and has established catalogues for the area's minke whales, killer whales and bottlenose dolphins. Using this technique, we can monitor the movements of whales and dolphins, learn about their social structure and estimate the number of animals in a population.

Species

Bottlenose dolphins

Research continues to take place on the photographic-identification of bottlenose dolphins found off the west coast of Scotland. Images taken in 2013 are being added to the already-established catalogue. The catalogue currently consists of 35 individuals that make up the Inner Hebridean group. The HWDT interns have this year matched photo-identification photos from 2010, 2011 and 2012 to the catalogue and have begun preliminary matching on the 2013 data. Of the bottlenose dolphins encountered and photographically- identified by HWDT based on photos of the public during 2013, one, apparently new, identification has been made. It is unclear at this stage, however, whether this addition represents a new individual not seen in previous years, or is one of the individuals previously seen, but not recognised subsequently due to mark loss in intervening years. Further research into this individual will take place over the winter. The former HWDT Marine Biodiversity Officer, Nienke van Geel, is now writing up her PhD. Cross-catalogue matching will take place prior to the PhD's completion.

Minke whales

Minke whale photo-identification work this season was very successful, with 17 photo-identification encounters, onboard *Silurian*. Typically for this species, most encounters were of only one animal, although some encounters comprised between two and six animals. In 2010, the minke whale catalogue comprised 125 animals. This year interns have carried out matching on the 2010, 2011 and 2012 photo-identification data and the database has been updated to reflect

this. In 2014 the trust intends to update the catalogue to include new images and new individuals and also carry out a reassessment on the number of minke whales in the local population.



Figure 7: Photo-identification image of a minke whale © HWDT

Killer whales

Dr Andy Foote and HWDT continue to work together on the west coast killer whale community photographic identification catalogue; however the management of the catalogue is now HWDT's responsibility. There remain just nine regularly sighted individuals; four males and five females which are unusual demographics. In July 2013, a peer-reviewed journal article was published by the Journal of the Marine Biological Association of the United Kingdom. The article reported the decline of this community over 19 years of study. Further peer-reviewed journal articles are due to be published in 2014 commenting on this group's future in west Scottish and Irish waters.

Risso's dolphin

There were five photo identification encounters with Risso's dolphin this year (including those from the HWDT Community Sightings Network). Photos from these encounters will be shared with the Whale and Dolphin Conservation (WDC) and the Manx Whale and Dolphin Watch (MWDW). By exchanging data with multiple organisations HWDT hopes to build a broader-scale picture of Risso's dolphin distribution and movement patterns.

In addition to the trust's photo-identification catalogues for bottlenose and Risso's dolphins and minke and killer whales, image records of common and white-beaked dolphins have also been added to this season. Basking sharks are photographed and the images sent to The Shark Trust.

Anthropogenic Impacts

Aquaculture and Acoustic Deterrent Devices

A dominant and growing activity in the study area is aquaculture, both fin fish (predominantly salmon) and shellfish (predominantly mussels and oysters). Every major sea loch on the west coast of Scotland contains fish farms and over 50% of these employ anti-predator devices (known as Acoustic Deterrent Devices or ADDs) which emit high source level noise (typically up to 194 dB re: 1µPa at 1m) intended to deter seals from preying on the salmon. The ADD sound frequencies (typically around 10kHz, but with higher and lower frequencies depending on the type of device) used, are similar to those used by many cetacean species. Using the HWDT data set, Booth (2010) found that harbour porpoise avoided areas where some types of ADDs were active and that some ADDs produce sounds which might result in temporary hearing loss in this species. Collaborative research between HWDT and SMRU for the Scottish Aquaculture Research Forum (SARF) on predator control at fish farm sites has been ongoing. Most of the recordings made of ADDs in 2013 were within the Sound of Mull, Firth of Lorne and the Sound of Sleat (including its adjacent lochs). HWDT also made recordings of active Terecos ADDs during the 2013 research season. Recent research suggests that the Terecos ADD may not impact harbour porpoise distribution as severely as other types of ADDs. Therefore, these devices might be useful as a lower-impact type of ADD in areas where acoustically sensitive coastal cetaceans, such as the harbour porpoise may be affected (Northridge et al. 2010). This is a significant finding for the harbour porpoise and the trust will continue to collect data on these and other ADD types to establish and manage potential mitigation strategies.

Offshore renewables

Several sites within HWDT's research area are potential locations for offshore renewable developments. Whilst offshore renewables have value in the generation of non-carbon-based energy, their construction and operation also have implications for the area's cetacean populations. Simply by carrying out regular surveys, the trust is collecting a valuable dataset to increase the baseline data available for these areas. These data can then be used by renewable energy companies for an Environmental Impact Assessment (EIA) and by the Scottish Government for future Marine Spatial Planning. During Biosphere Expedition 1, the survey effort included a transit of an area west of Islay (Figure 8), which is a proposed offshore wind farm site, to add to the body of data on marine mammal distribution in the area.

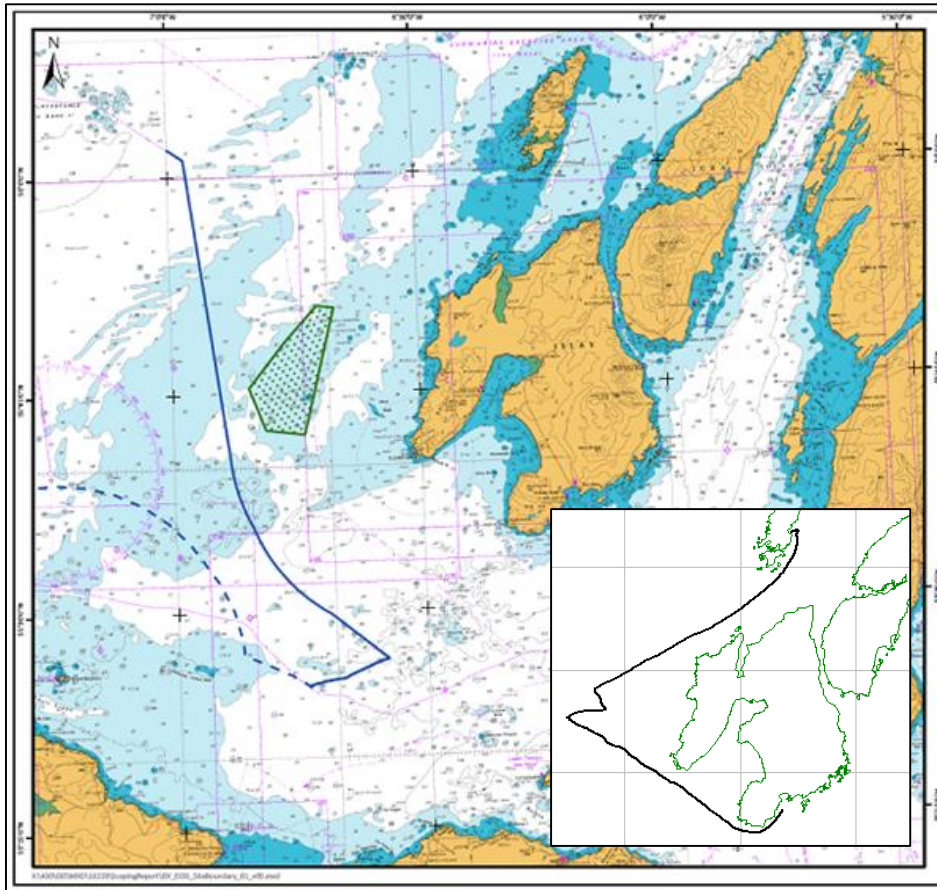


Figure 8: Location of the Islay Offshore Wind Farm Site Boundary (green, on colour map) and survey route on 18th June 2013 (inset map).

Marine Litter

HWDT has continued its research into marine litter, as its presence, particularly plastics, is a significant conservation concern for cetaceans which can ingest litter and/or become entangled in it. In 2013, nearly 70% of items observed were confirmed as plastics (either plastic bags, bottles or other plastic items) Figure 9 shows the proportion of litter recorded, by category, during 2013.

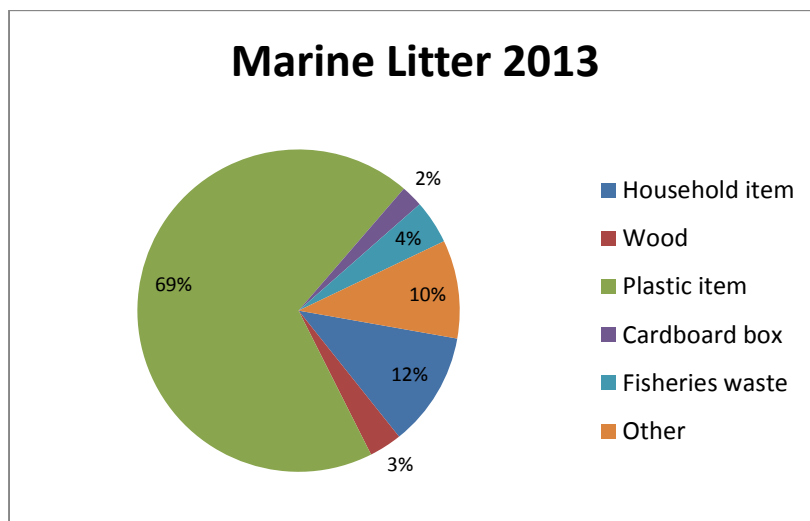


Figure 9: Pie chart showing the proportion of litter types recorded in 2013

Marine debris can have severe biological effects on cetaceans, causing death, injury and harm. Collecting data on floating marine debris allows HWDT to investigate the likelihood of cetaceans becoming entangled in or ingesting debris. Mapping the location of debris over the distribution of cetaceans will identify areas where negative interaction is likely to occur and has direct conservation management applications. This is especially relevant when considering surface fishing gear.

The Sea Mammal Research Unit at St Andrews University and HWDT are investigating the potential risks of minke whales becoming entangled in creel lines (creels are fish traps widely used in west Scottish coastal waters to catch shellfish such as crabs, lobsters and nephrops) (Northridge et al. 2010). 17.7% of identified minke whales in the Hebrides show some evidence of previous entanglement. The head of the whale is the body region found most commonly with scars suggesting that minke whales become entangled in gear whilst feeding. There are two areas (north of the Isle of Skye and South Uist) where minke whales (Matthewson 2012) appear to be at particularly high risk of entanglement. Figure 10 shows the 2013 sightings of minke whales and their geographical proximity to the creels also recorded during 2013. The results of these works highlight areas that future mitigation methods should focus on, and provide information for developing and implementing appropriate mitigation methods.

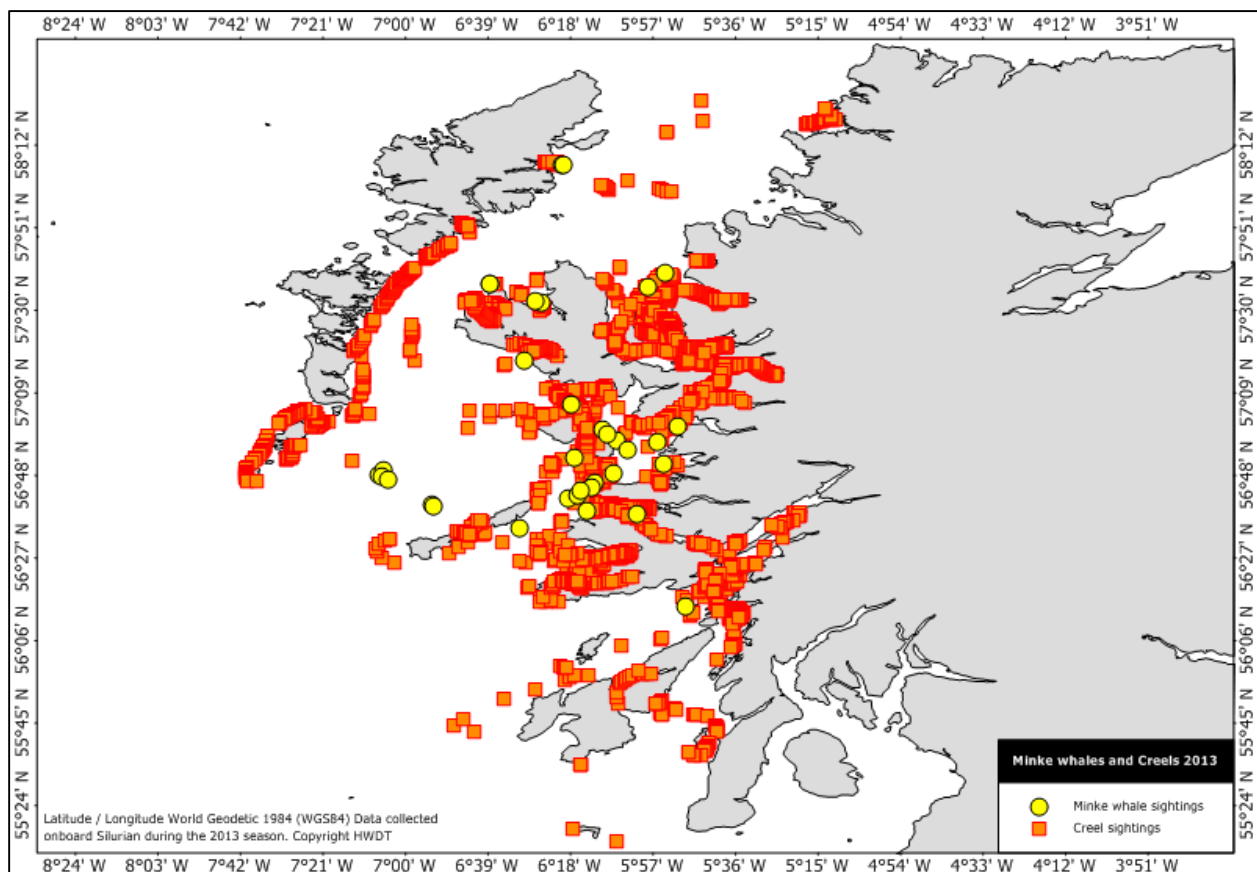


Figure 10: Minke whale (yellow) and creels (orange) recorded during 2013 surveys

II. Community Sightings

The HWDT Community Sightings Network (CSN) began officially in 2001, although records go back to the early 1990s. An online data recording facility was implemented in 2007 and, generally, the number of sighting reports made by the public has been increasing on an annual basis (Figure 11). HWDT received 792 sighting reports through its online sightings form in 2013. This is less than the 1,032 sighting reports received in 2012 but more than the 696 reported in 2011. It is believed that the lower numbers of sightings reported in 2013 in comparison to 2012 may be the result of a greater number of the public spending time outdoors during 2012 because of the settled weather conditions. Also in 2013, the seasonal cetacean visitors to the Hebrides arrived a little later than normal.

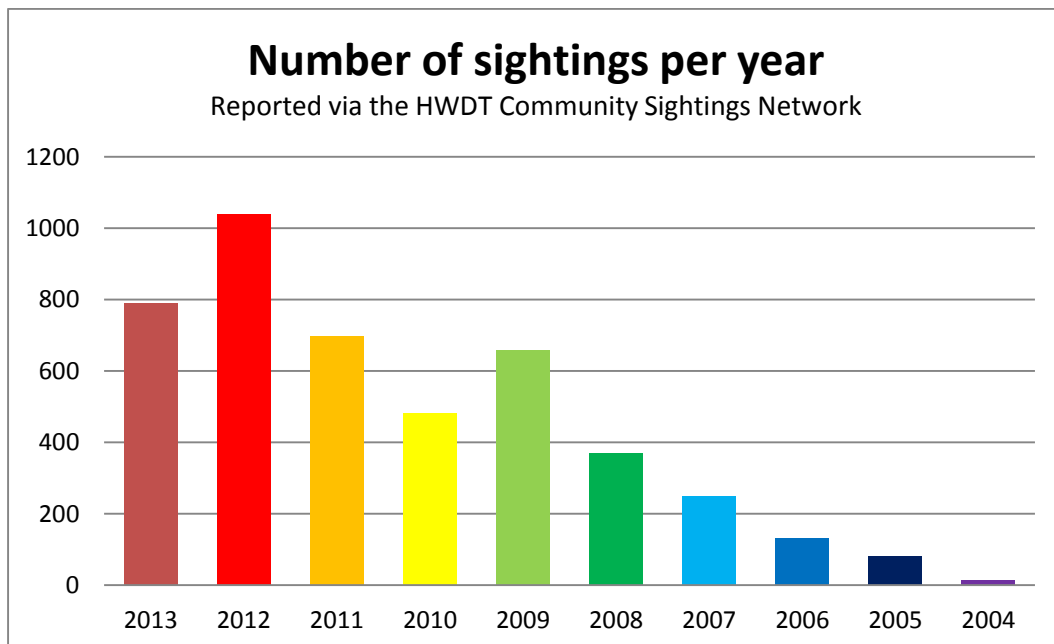


Figure 11: Number of sightings per year reported via the HWDT Community Sightings Network

The harbour porpoise was the most frequently reported species in 2013 with 254 sightings being reported throughout the year (Figure 12). HWDT received 140 basking shark reports, 112 reports of bottlenose dolphin, 98 reports of minke whale, 71 reports of common dolphin, 27 reports of killer whale and 23 reports of sperm whale. Common dolphins and basking sharks were still being reported in November and a minke whale was seen on 28 November.

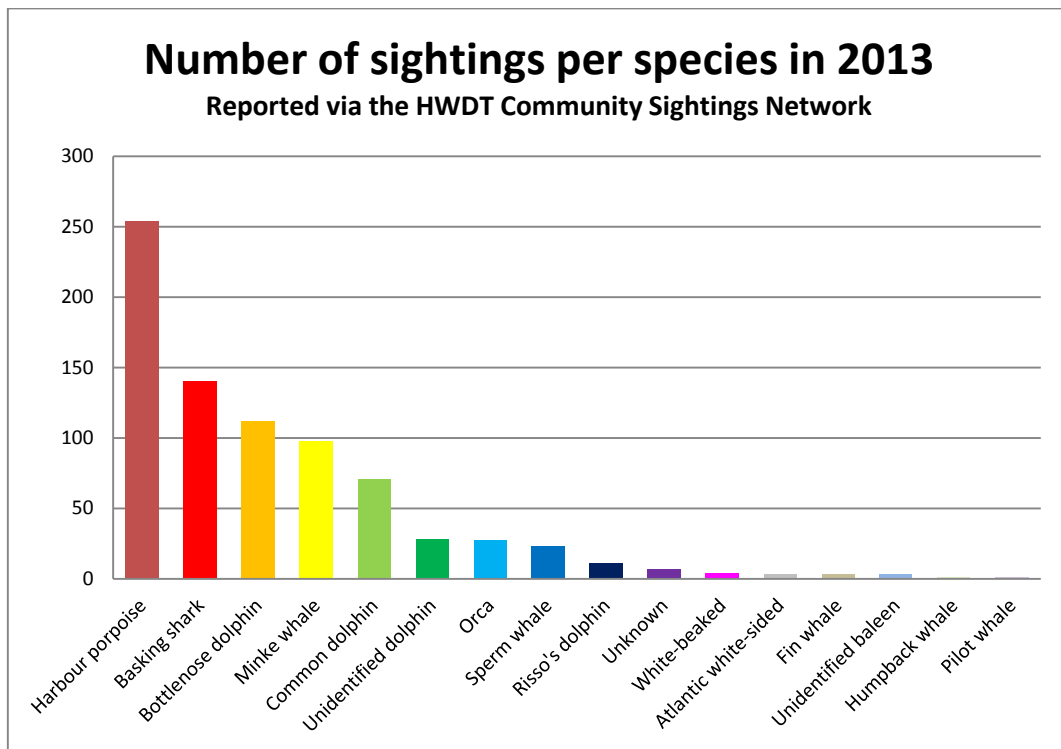


Figure 12: Number of sightings per species reported via the HWDT Community Sightings Network in 2013

21 of the 23 sperm whale sightings reported in 2013 occurred in between 30th March and 8th April 2013. An individual sperm whale was sighted in Oban Bay on Good Friday (29th March). The animal appeared to be in no immediate distress and remained in Oban Bay (Figure 13) until 8th April, 11 days after it arrived. During this time, HWDT staff were kept busy talking to concerned members of the public and also featured regularly on local and national news. On 23rd April 2013, a sperm whale was sighted by a local fisherman off Ardmore Point, Tobermory. The report was made at 6:30am and the whale was not spotted after that. The Oban Bay sperm whale was thought to be one of the five sperm whales that were spotted between the Isle of Skye and the mainland of Scotland on 21st February 2013. HWDT forwarded all the sperm whale identification photos to colleagues who maintain North Atlantic sperm whale photo-identification catalogues in a bid to determine whether this was a catalogued individual. Whilst sperm whale sightings are relatively rare in west Scottish waters, HWDT trustee and Director of Sea Watch Foundation, Dr Peter Evans suggests that sightings of sperm whales may become more commonplace round the British Isles as squid, the main prey of sperm whales, is reportedly increasing.



Figure 13: Sperm whale in Oban Bay © Chris Jackson

The longstanding relationship between HWDT and Sea Life Surveys (SLS) continues into 2014. Sightings and effort are recorded onboard the tour operator's boat using LOGGER 2010 and photo-identification takes place too. These data are then shared with HWDT and contribute to the projects investigating harbour porpoise distribution and density, minke whale entanglement and movement and habitat use of all species photo-identified. This year, a student from the University of Glasgow is using the SLS dataset to investigate "The impact of changing Sea Surface Temperature on seasonal minke whale *Balaenoptera acutorostrata* sightings on the west coast of Scotland: Cairns of Coll 1992-2013".

III. Strandings

Over the autumn, winter and sometimes spring months, HWDT receives a number of stranding reports, with storms and windy weather washing ashore animals that have perished at sea. HWDT had received 17 reports of stranded animals since the start of 2013.

In April, HWDT received two separate reports of stranded bottlenose dolphins. On 18th April a report was made of a dead bottlenose dolphin on the east coast of Colonsay. A few days later on 24th April it was reported that a bottlenose dolphin was stranded on the coast near Achnamara, Lochgilphead. This animal had stranded alive the previous evening and concerned locals attempted to re-float it. Unfortunately, the animal washed ashore dead the next day on a nearby beach. Nienke van Geel, former Marine Biodiversity Officer attended the stranding and reported that whilst the animal had identifiable nicks on its dorsal fin (Figure 14) it did not match to any of the bottlenose dolphins in the west coast catalogue.



Figure 14: Bottlenose dolphin stranded at Achnamara, Lochgilphead © Nienke van Geel

A sperm whale was found on 2nd June at Knockangle Point, Islay. When the whale was first reported there was some concern that it may have been the same animal that was present in Oban Bay during the end of March and the start of April. Upon further investigation it was determined that the stranded whale on Islay was a juvenile (7.05m long) and was therefore too small to have been the sperm whale sighted in Oban.

On 7th June, HWDT received a report of a basking shark that had become trapped in Loch Ob, a tidal loch on the east coast of Barra. It was believed that the shark entered the Loch on a spring tide and it was feared that it might remain trapped in the loch. However, a report was received stating the shark had managed to navigate its way out of the loch.

A Sowerby's beaked whale was found washed ashore at Droman Pier, near the town of Lairg on 14th June. Upon investigation it was discovered that the animal was a juvenile, and that it had suffered a head trauma that was consistent with a ship collision.

The information gathered on stranded marine animals allow the trust to monitor trends of strandings across the west coast of Scotland and can provide insight into population structure and distribution.

IV. Use and impact of data collected by HWDT

Biodiversity Objectives and Actions

Since 2003, HWDT has monitored marine biodiversity and conservation priority cetaceans in west coast waters, in particular harbour porpoises, minke whales and bottlenose dolphins. This monitoring has directly addressed actions identified in local and national Biodiversity Action Plans (BAPs) and is linked to EC Habitats Directive priority species, thus delivering locally, nationally and internationally recognised biodiversity objectives.

Currently, survey data are being used to contribute to the Scottish Government's initiative to identify areas for possible Marine Protected Areas featuring cetaceans and basking sharks and within the Joint Cetacean Protocol which is a UK-wide initiative to combine a number of data sets to examine distribution and trends. HWDT will continue its involvement in the various management projects as the only organisation collecting long-term effort-based survey data in this area.

Military Activity

HWDT has ongoing environmental concerns regarding the military exercises that take place on the west coast of Scotland, specifically the Joint Warrior exercises. Joint Warrior is a UK led exercise conducted in the Spring and the Autumn of each year. It is assessed that JW is the largest tactically focused exercise in Europe. At-sea operations are conducted for two weeks and up to 85 aircraft, 22 ships and 3 submarines can operate during this massive international exercise. The trust believes that it is important to monitor cetacean presence during these exercises as HWDT has strong environmental concerns regarding the impact of these exercises on cetacean species. It is the only organisation collecting long term monitoring data in this area and is, therefore, best placed to monitor the potential effect of naval activities. Unfortunately, HWDT surveys in 2013 did not coincide with military exercises; but survey dates for the 2014 season have been scheduled to occur at the same time as the autumn exercise.

Public Consultation

Due to staffing resources, HWDT has been less active than usual in the Scottish Environment LINK's Marine Task Force during 2013. However, it has ensured that its expert voice on cetacean and marine biodiversity issues is strongly represented nevertheless on a national scale through this umbrella body.

Cooperation with universities

HWDT continues to work with and support students at all levels and gains considerably from these valuable collaborations. Nienke van Geel is completing the final year of her PhD at SAMS, her thesis title being “Bottlenose dolphin (*Tursiops truncatus*) movement patterns on the west coast of Scotland”. Joshua Lawrence of SAMS began and completed an investigation into the “Spatiotemporal distribution of marine mammals in the Great Race tidal system off western Scotland” and Ruth Abernethy of the University of Glasgow is using SLS data to investigate “The impact of changing Sea Surface Temperature on seasonal minke whale *Balaenoptera acutorostrata* sightings on the west coast of Scotland: Cairns of Coll 1992-2013”.

2013 saw the sixth year of the University of St Andrews Marine Mammal Science MRes, to which the trust’s monitoring trip at the start of June was devoted as a survey techniques module.

Dissemination of Research Results

If HWDT’s research is to impact on policy-makers, fellow researchers and members of the public, it is essential that the trust’s results be communicated to as wide a range of audiences as possible, both within and outside of the scientific community. In 2013, HWDT has been particularly successful in this respect. One of the most significant pieces was a paper published in the Journal of the Marine Biological Association of the United Kingdom about the population decline of killer whales in British and Irish waters. HWDT completed several commissioned reports in 2013, for example the “*White-beaked dolphin and Risso’s dolphin click characteristics and the potential for classification and species identification*” for Scottish Natural Heritage. We provided support for several academic dissertations, as well as for the publications of the Scottish Environment LINK. HWDT made its data available for projects and workshops, such as the Joint Nature Conservation Committee (JNCC) and Scottish Natural Heritage Marine Protected Areas (MPA) project.

HWDT’s biodiversity officer also held presentations about white-beaked dolphins at the 2013 conference of the European Cetacean Society.

See a detailed list of papers, presentations, publications and dissertations in Appendix 4.

ENGAGEMENT WITH THE PUBLIC

I. Volunteer Programme

On board *Silurian*

Overall, HWDT welcomed 42 volunteers onboard *Silurian*, of which 24 came via a partner organisation, Biosphere Expeditions. Additionally, 14 students participated in the SMRU surveys onboard *Silurian*.

Volunteers stay onboard *Silurian*, and work as observers to collect data during visual surveys for cetaceans. They also conduct acoustic monitoring, enter data and assist with the deployment of hydrophones. For all these tasks, volunteers receive full training from the Science Officer. In addition to providing training for research work, science staff will deliver lectures and lead discussions on a variety of topics related to marine research and conservation. *Silurian* is a fully-equipped sailing vessel, and being involved in its running is an important aspect of the survey. Volunteers have ample opportunity to learn about sailing, and also assist with the day-to-day running of the research vessel, including cooking and cleaning.

Volunteers can come from any walk of life, and each volunteer brings with them an invaluable range of skills and experience; from those who understand the sea and sailing to those who may never have set foot on a boat, or seen a cetacean in the wild before. Our volunteers make our research possible. They work long hours carrying out visual observations and logging data, especially in the middle of summer when daylight hours are very long. Teams of two rotate as visual observers, entering data into the trust's computer system and logging seabird sightings. Teamwork is extremely important if the research is to run smoothly.

What volunteers learn and gain from volunteering on one of the trust's surveys is as varied as their backgrounds. They get full training in scientific research techniques, and benefit from having marine science and sailing experts constantly at hand. They have the opportunity to see a variety of wildlife in its natural habitat, visit remote and beautiful places, and get to know and work closely with a small team of like-minded people. Volunteers know that their hard work and enthusiasm contribute directly to knowledge and conservation of cetaceans in the Hebrides.

Scottish Power Renewables funded the berth of one of the teenagers that participated in the HWDT Teen Team between the 22nd and 28th June 2013 onboard *Silurian*. Without this fund, the

teenager would not have been able to take part and the trust acknowledges Scottish Power Renewables' valuable support. It is hoped that more companies will come forward in this way.

Land-based volunteers

HWDT conducted a Sightings and Strandings internship programme in 2013 through which two excellent interns joined HWDT for 4-6 months gaining mainly scientific but also educational experience working for a small charity. The interns had separate roles, one focused on public outreach and the Community Sightings and Strandings Network and the other focusing on Photo-identification.

For the first year, the Education Department also recruited an intern to assist the Education Officer with the aims and objectives of the Trust's long standing education programme.

HWDT would like to extend its thanks to all the interns and volunteers who joined HWDT over the 2013 season: Kerry Froud and Mark Hosford (Sightings and Strandings interns), Georgina Reeve and Andrew Simpson (Education volunteers). Alongside the interns, HWDT hosted a number of local volunteers who assist with various tasks throughout the year. Many thanks to Linda Young, Eugenie Thomasson and Jane Putsey who assisted with many tasks over the year, most notably helping with shop duties.

II. Public Workshops, Talks and Events

HWDT attended a number of workshops, talks and events to increase public awareness and understanding of cetaceans and marine biodiversity found off the west coast of Scotland. These key events enable the trust to involve many people, from local residents to seasonal visitors, in learning about their natural coastal and marine heritage, and it encourages them to participate actively in the conservation of marine biodiversity. Community events serve to increase interest in, and awareness of, cetaceans and HWDT's work, including ways to become involved in projects, such as via the community sightings network and beach cleans.

In 2013, the location of events has targeted, where possible, Argyll and Skye to tie in with the Education Strategy, funding project targets and to maintain the trust's presence locally. The Education Officer was supported by other members of staff and volunteers to provide a programme of 11 events with a total estimated attendance of 550 people. Table 6 outlines events delivered from January 2013 to December 2013. Donations are gratefully received at many of these events.

Event	Description	Date	Location	Numbers
THA launch day	Marine Visitor Centre launch Touch tank and interpretation	23/04/13	Tobermory	50
Beach Clean	Beach clean with Ulva Primary – helping clear the beach and providing activities for the children	24/05/13	Kilninian Beach, Mull	30
Classic Malts Cruise	Gave a presentation and provided resource packs for the yachts participating in the Classic Malts Cruise	06/07/13	Kerrera	75
Garmony Fun Day	Interpretive stand	14/07/13	Garmony, Mull	40
Tobermory HG's	Interpretive stand	18/07/13	Tobermory	50
NWDW	Cetacean watch	01/08/13	Ardnamurchan Lighthouse	10
THA WISE talk	Gave a presentation and provided resource packs to attendees	02/08/13	Tobermory	40
Salen Show	Interpretive stand	08/08/13	Salen	35
Lifeboat day	Interpretive stand	18/08/13	Tobermory	40
Oban HG's	Interpretive stand	22/08/13	Oban	65
MCS beachwatch	Beach clean	05/10/13	Tobermory	15
Total				450

Table 6: Public engagement events attended by HWDT in 2013

EDUCATION

School Visits

In accordance with HWDT’s Education Strategy and funding targets, the trust’s formal education programme in 2013 focussed on its local region of Argyll. Details of school visits are shown in Table 7. HWDT engaged 82 pupils from 4 different schools during 2013 in educational workshops. Figure 15 shows a group of primary school pupils learning about marine life onboard *Silurian* during an outdoor workshop. Feedback continues to suggest that well-qualified staff deliver a high quality product using materials and practices which have been refined over the last few years. Schools value the unique work trust staff do, their expertise, and the high staff to student ratios offered. Outdoor learning has remained a priority and has been found to be powerful and beneficial to those students involved. *Silurian* provides a unique teaching environment, which allows for direct hands-on learning about the marine environment.

School	Description	Dates	Location	Numbers
Salen Primary School	<i>Silurian</i> workshops	09/09/13	Mull	35
Tobermory Primary School	<i>Silurian</i> workshops	10/09/13	Mull	20
Dervaig Primary School	<i>Silurian</i> workshops	11/09/13	Mull	15
Ulva Primary School	<i>Silurian</i> workshops	12/09/13	Mull	12
Total				82

Table 7: School visits in 2013

HWDT continue to be part of the Argyll and Bute Beach Forum, with twice-yearly meetings and regular updates.



Figure 15: Primary school students learning about marine life © G. Paterson/HWDT

Feedback provided by school staff indicates the popularity and value of these visits:

“The children thoroughly enjoyed their visit. Activities were well structured and a good balance between active tasks and listening” Tobermory Primary School

Youths onboard

During July, HWDT and WWF-UK organised a trip onboard *Silurian*. Participants learned about the general work of the Trust and specifically what takes place onboard *Silurian*. They also experienced sailing gaining valuable transferable skills such as team-work and communication through this activity. The project was funded by WWF-UK. The feedback received was highly positive and HWDT hopes to offer more opportunities of this nature in the future.

OUTREACH AND MEDIA

Brochures/Leaflets

The HWDT photo identification guide and leaflets continue to be distributed at events and from the Visitor Centre/Shop. The guide educates the general public on what kind of cetacean pictures are useful for photo identification work and aims to increase the number of good quality identification photographs. The leaflet gives basic information about HWDT and encourages further interaction via the website and by becoming a 'Friend of HWDT'.

Digital Media

The HWDT website remains a key method of communicating with a wide audience on a global scale. Monthly sightings updates have contributed to staff efforts to keep the site up to date and relevant. A daily blog is written by volunteers onboard research trips and is published on the HWDT website during the season (<http://www.whaledolphintrust.co.uk/blog.asp>). The *Silurian* blog has been well used throughout the 2013 field season, giving readers an insight into life onboard the research vessel. The Facebook (2,255 friends; <http://www.facebook.com/pages/Hebridean-Whale-and-Dolphin-Trust/143062472433>) and Twitter (398 followers; https://twitter.com/HWDT_org) accounts are being actively maintained, and serve as additional free showcasing opportunities. Information is also available on the HWDT page on Planet Whale, which features HWDT alongside other cetacean charities and organisations.

Mass Media

HWDT has been well represented this year in articles, news items and radio pieces (Table in Appendix 5). The coverage received around mid-January was notable, particularly relating to the killer whale footage shown on the BBC's One Show.

Much of the media coverage in 2013 came through online sources. Featured media items generally explain and emphasise the importance of the trust's work, highlight research findings and report on unusual events. Since limited resources are available to evaluate comprehensively HWDT's mentions in the media, the list is far from exhaustive.

Additionally, HWDT often obtains requests from journalists and magazine editors for anecdotes and pictures to contribute to their stories.

Meetings, Courses and Conferences

- European Cetacean Society (ECS) conference. Setúbal, Portugal 2013
- Nature of Scotland Awards Ceremony, Edinburgh 2013

SUPPORTERS

The funding environment in 2013 remained challenging and HWDT, like many charities, has been affected adversely by the prevailing economic situation. HWDT would like to thank all of the funders who gave their support in 2013:

Charity Bank – HWDT shop and Visitor Centre

SNH – monitoring and outreach programme and Environmental Training Officer;

Biosphere Expeditions – monitoring programme and volunteer recruitment;

WWF-UK – Adopt a Dolphin programme, monitoring and core work;

Argyll and Bute Council – education trip onboard *Silurian*;

The Bromley Trust – grant funding to strengthen the trust’s reserves, and

HLF Catalyst fund – development and implementation of a resilient fundraising strategy

Scottish Power Renewables – funded berth on HWDT teen team onboard *Silurian*

In addition HWDT would like to thank those who have contributed by donating, becoming a Friend of HWDT (90) or sponsoring a cetacean (35) in 2013. A legacy was also gratefully received. All donations contribute to the Trust’s own revenue generating programmes, making HWDT more sustainable and less reliant on grant income.



REFERENCES

- Booth, C.G. (2010). Variation in habitat preference and distribution of harbour porpoises west of Scotland. PhD thesis. University of St Andrews.
- Embling, C. B., Gillibrand, P.A., Gordon, J., Shrimpton, J., Stevick, P.T. and Hammond, P.S. (2010). Using habitat models to identify suitable sites for marine protected areas for harbour porpoises (*Phocoena phocoena*). *Biological Conservation* 143 (2), 267-279.
- Harries, O. R., Weir, C. R., Calderan, S. V., van Geel, N. C. F., Shrimpton, J. and Gordon, J. C. D. (2012) The role of spatial modelling in the potential management of a priority Scottish cetacean species, the white-beaked dolphin (*Lagenorhynchus albirostris*). Presentation made at European Cetacean Society Conference. March 2012. Galway, Republic of Ireland.
- Matthewson, F. (2012) Non-Lethal Entanglement of Minke Whales (*Balaenoptera acutorostrata*) in Fishing Gear in the Hebrides. BSc Thesis, University of St Andrews.
- Northridge, S.P., Cargill, A., Coram, A. Mandleberg, L., Calderan, S., Reid, B. and Held Wirz, M. (2010) Entanglement of minke whales in Scottish waters: an investigation into occurrence, causes and mitigation. Final Report to Scottish Government CR/2007/49. Sea Mammal Research Unit, St Andrews: 57pp.
- Northridge, S.P., Gordon, J.G., Booth, C., Calderan, S., Cargill, A., Coram, A., Gillespie, D., Lonergan, M. and Webb, A. (2010) Assessment of the impacts and utility of acoustic deterrent devices. Final Report to the Scottish Aquaculture Research Forum, Project Code SARF044: 34pp.

APPENDICES

Appendix 1: Silurian survey tracks

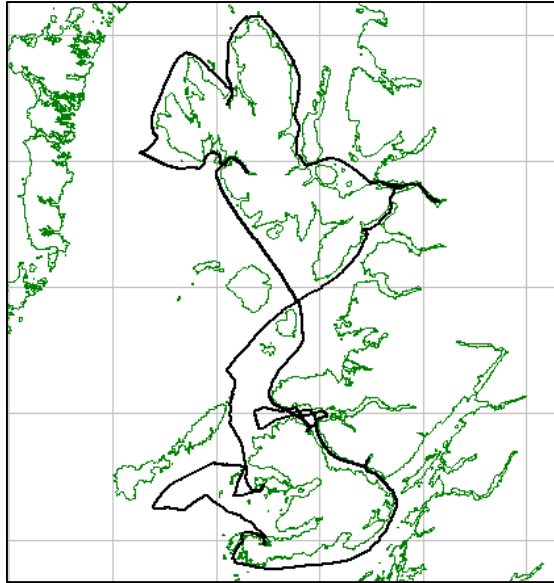


Fig. 2.1: HWDT 1 survey tracks

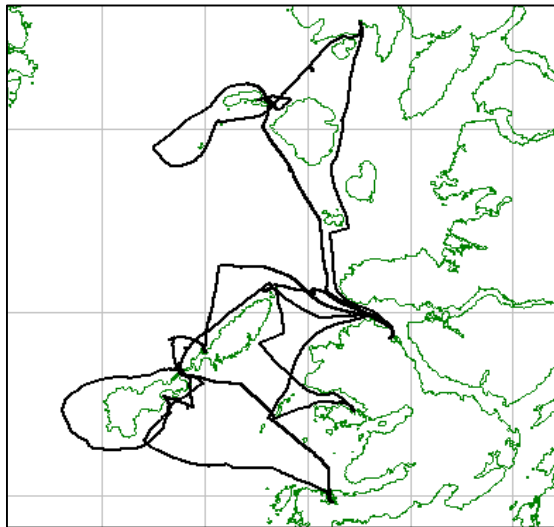


Fig. 2.2: SMRU survey tracks

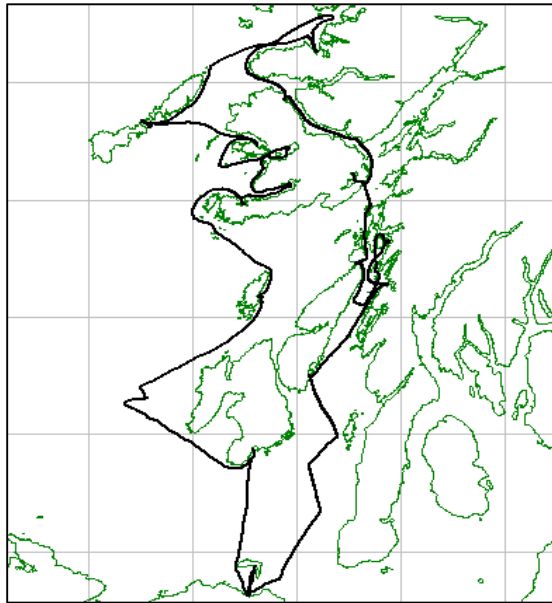


Fig. 2.3: Biosphere 1 survey tracks

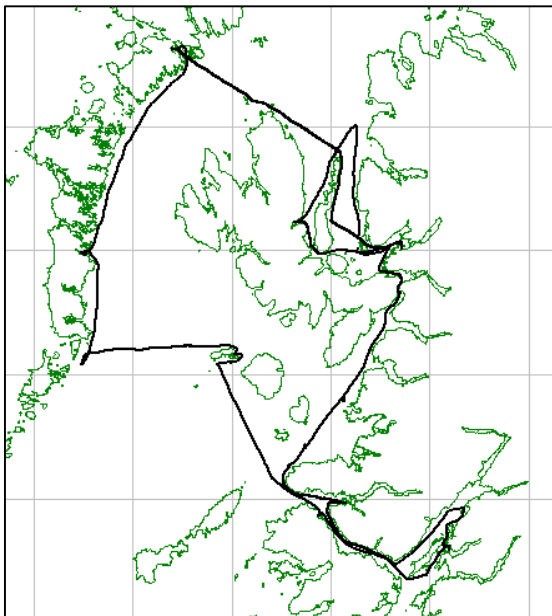


Fig. 2.4: Biosphere 2 survey tracks

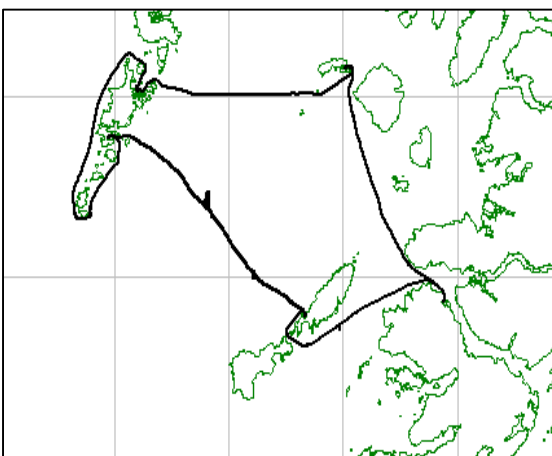


Fig. 2.5: HWDT 2 survey tracks

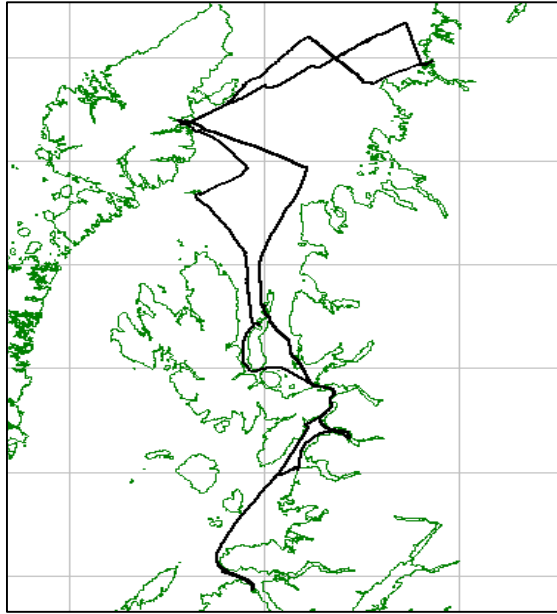


Fig. 2.6: HWDT 3 survey tracks

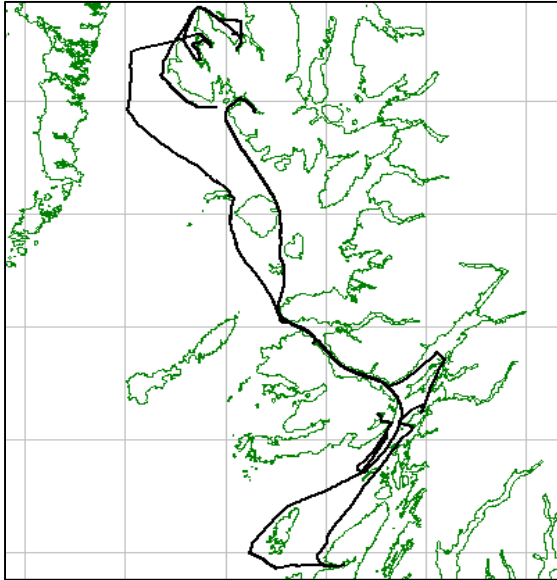


Fig. 2.7: Biosphere 3 survey tracks

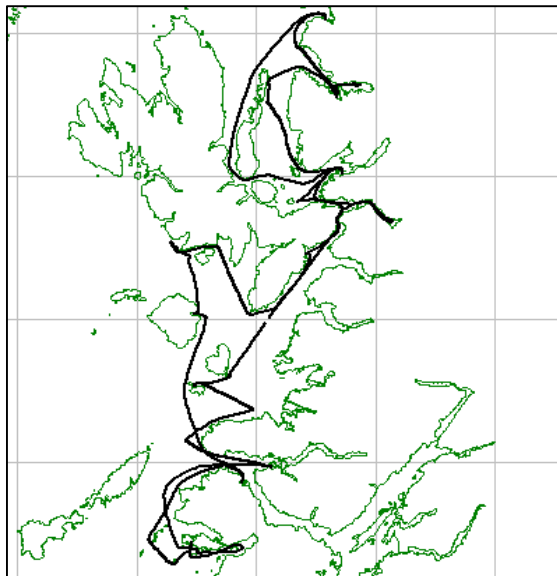


Fig. 2.8: Biosphere 4 survey tracks

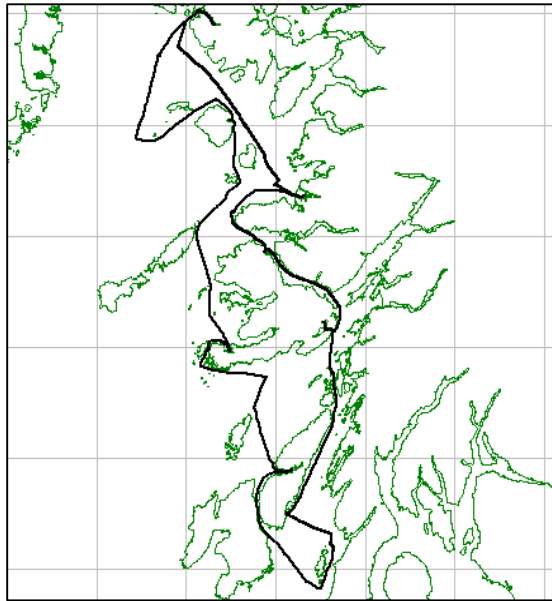


Fig. 2.9: HWDT 4 survey tracks

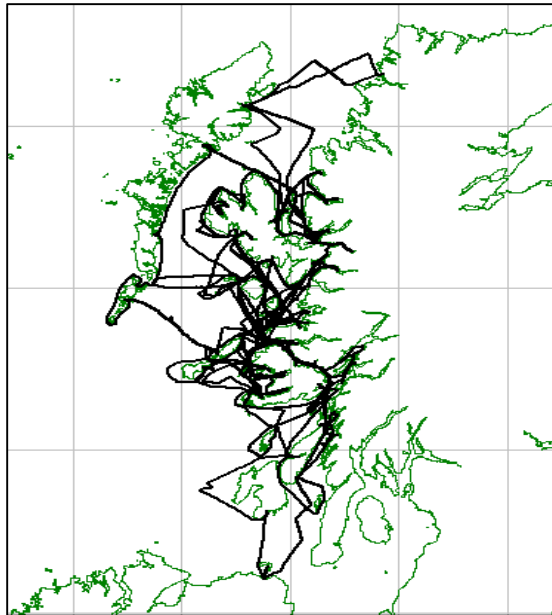


Fig. 2.10: All 2013 survey tracks

Appendix 2: Visual and acoustics survey efforts 2003-2013

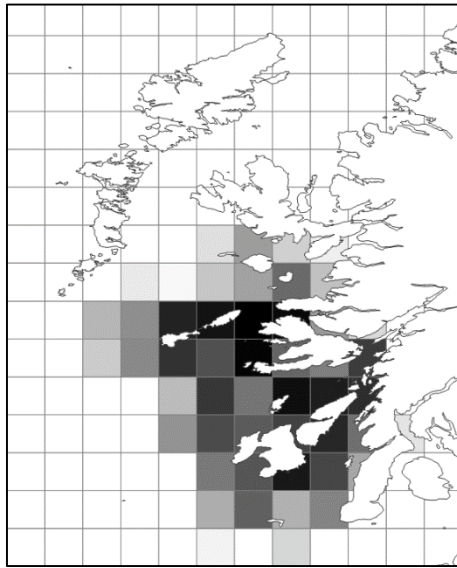


Fig. 3.1. visual effort 2003

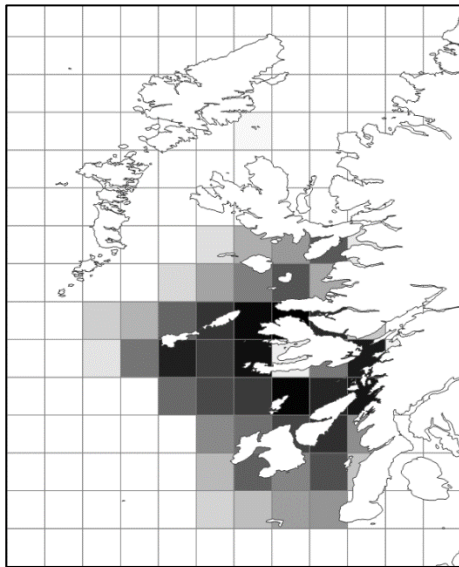


Fig. 3.2. visual effort 2004

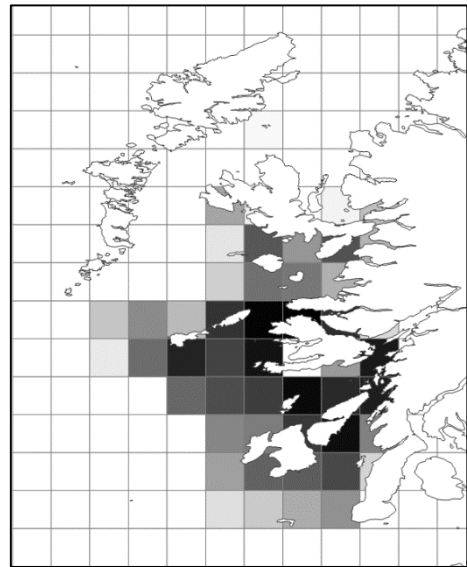


Fig. 3.3 acoustic effort 2004

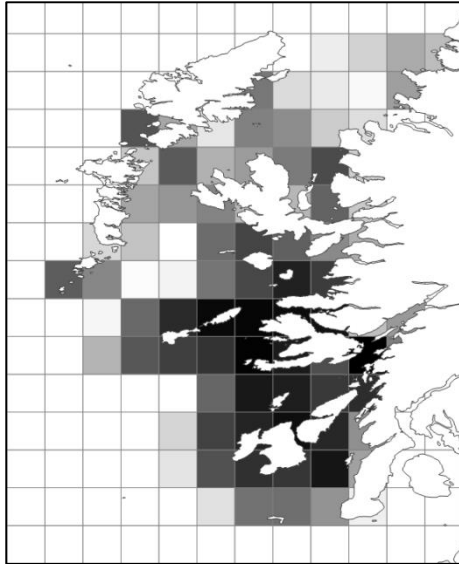


Fig. 3.4. visual effort 2005

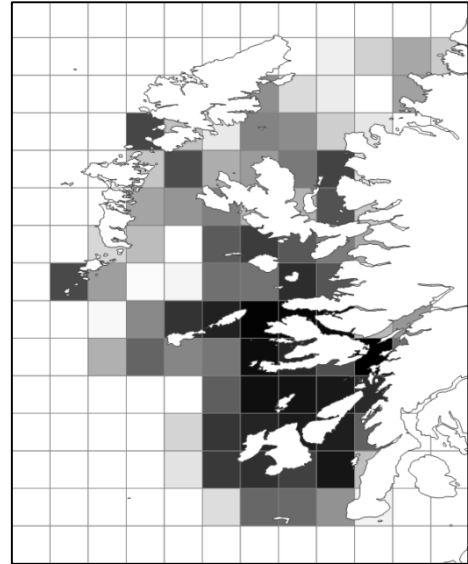


Fig. 3.5 acoustic effort 2005

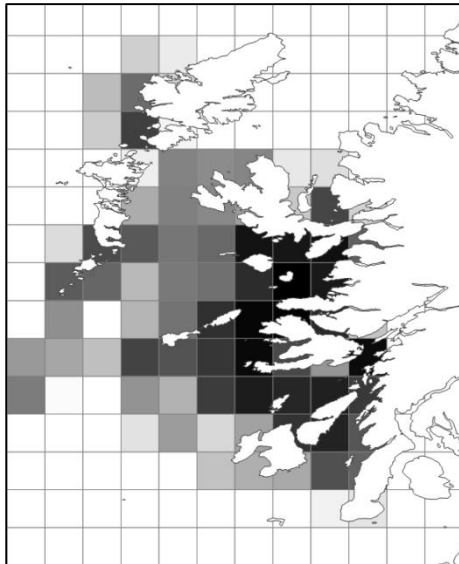


Fig. 3.6. visual effort 2006

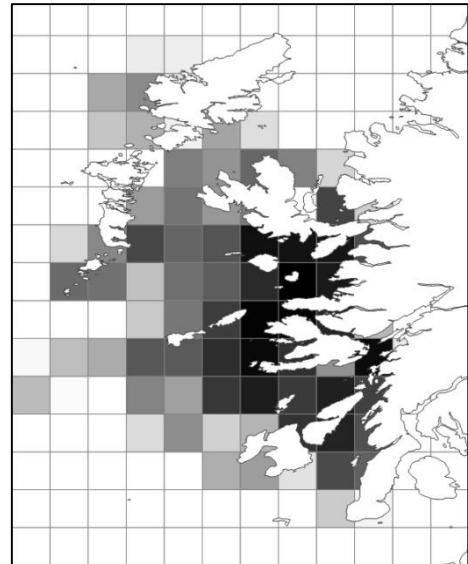


Fig. 3.7 acoustic effort 2006

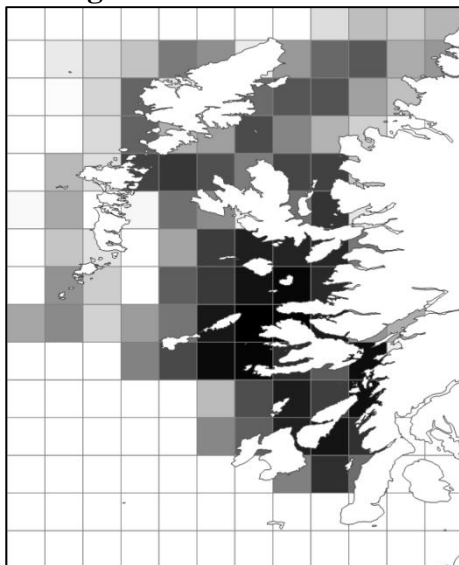


Fig. 3.8. visual effort 2007

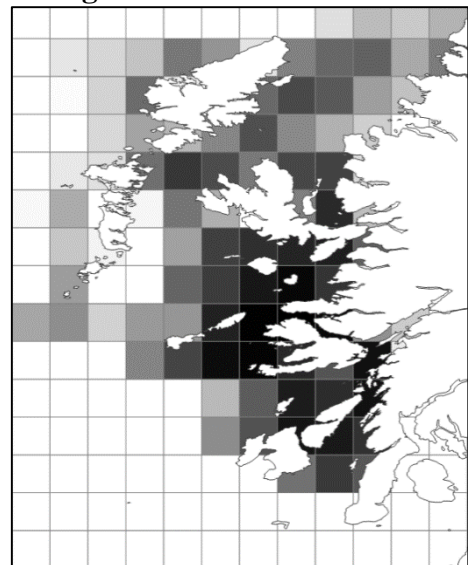


Fig. 3.9 acoustic effort 2007

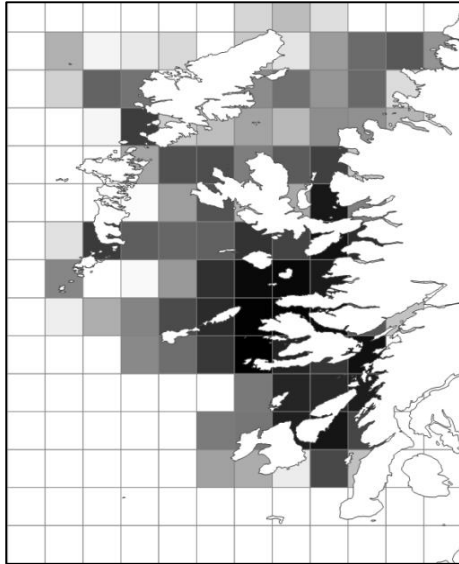


Fig. 3.10. visual effort 2008

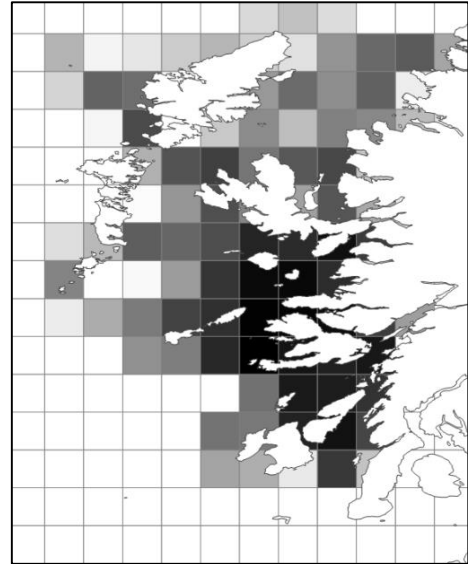


Fig. 3.11 acoustic effort 2008

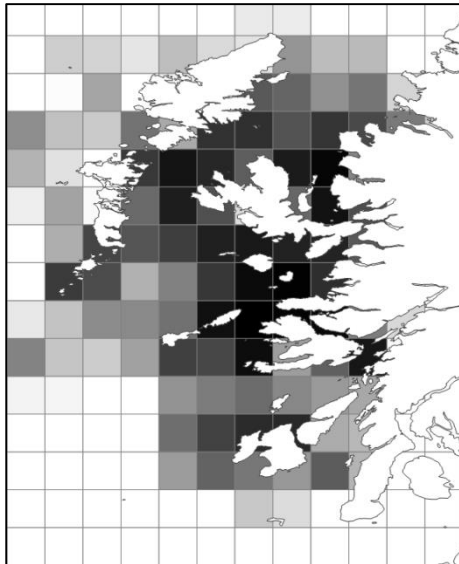


Fig. 3.12 visual effort 2009

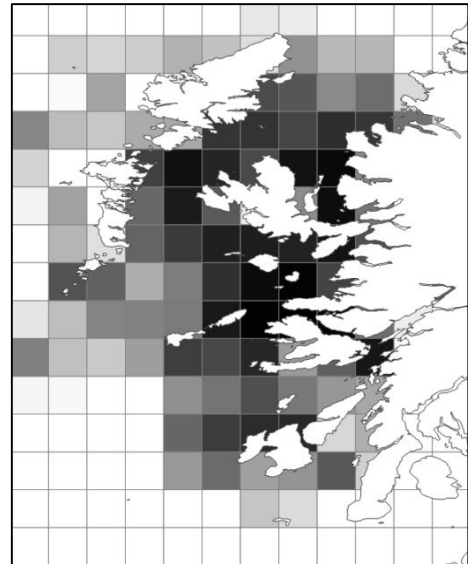


Fig. 3.13 acoustic effort 2009

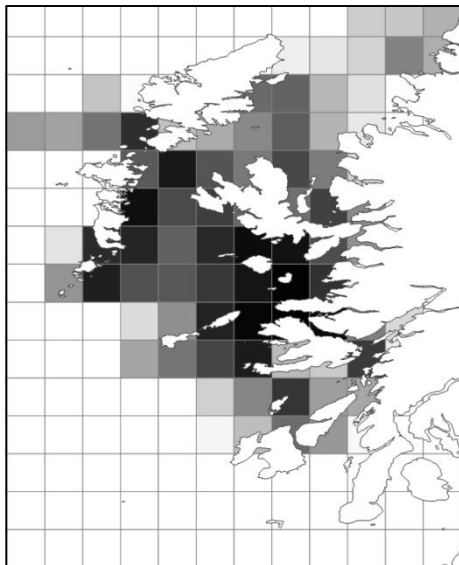


Fig. 3.14 visual effort 2010

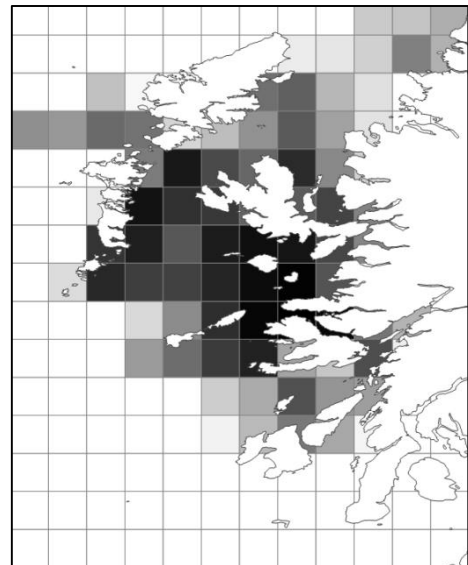


Fig. 3.15 acoustic effort 2010

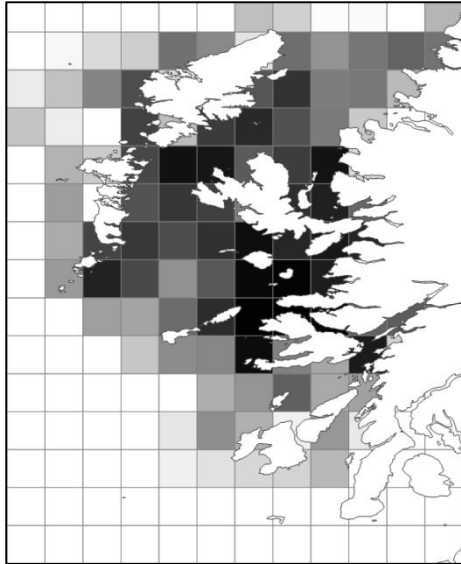


Fig. 3.16 visual effort 2011

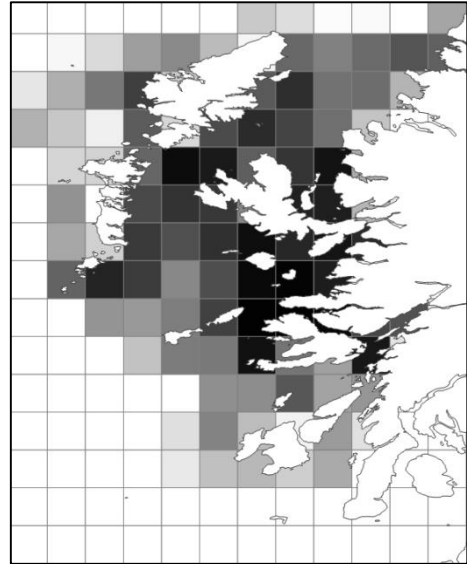


Fig. 3.17 acoustic effort 2011



Fig. 3.18 visual effort 2012

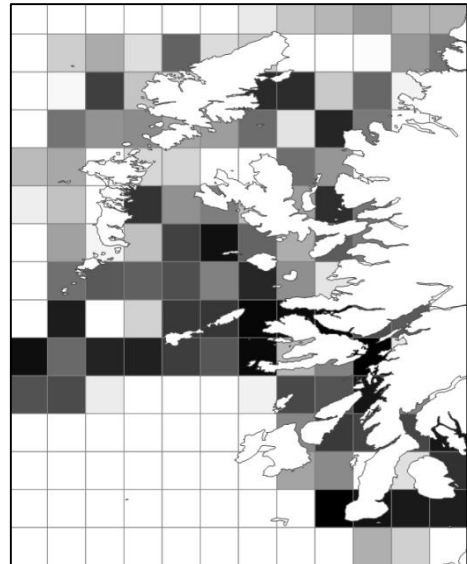


Fig. 3.19 acoustic effort 2012

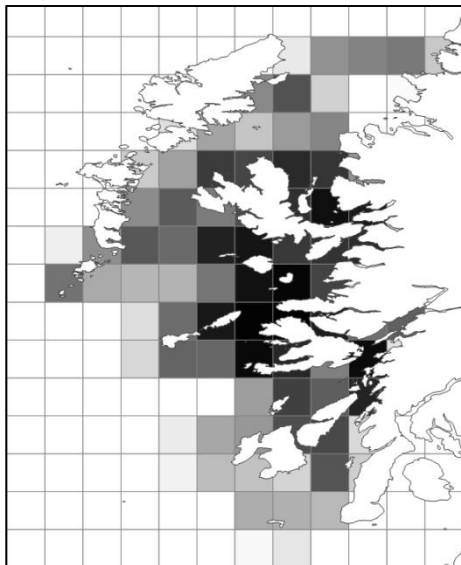


Fig. 3.20 visual effort 2013

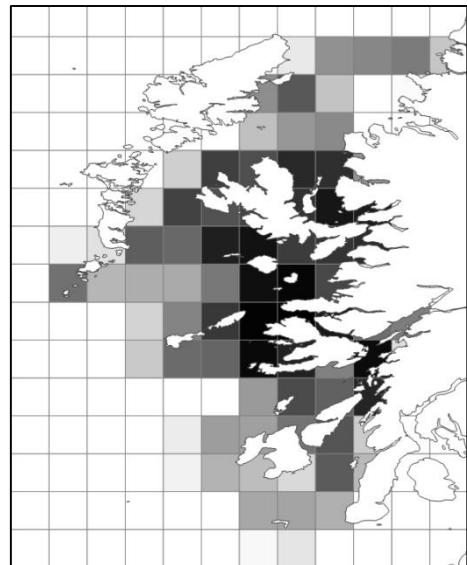
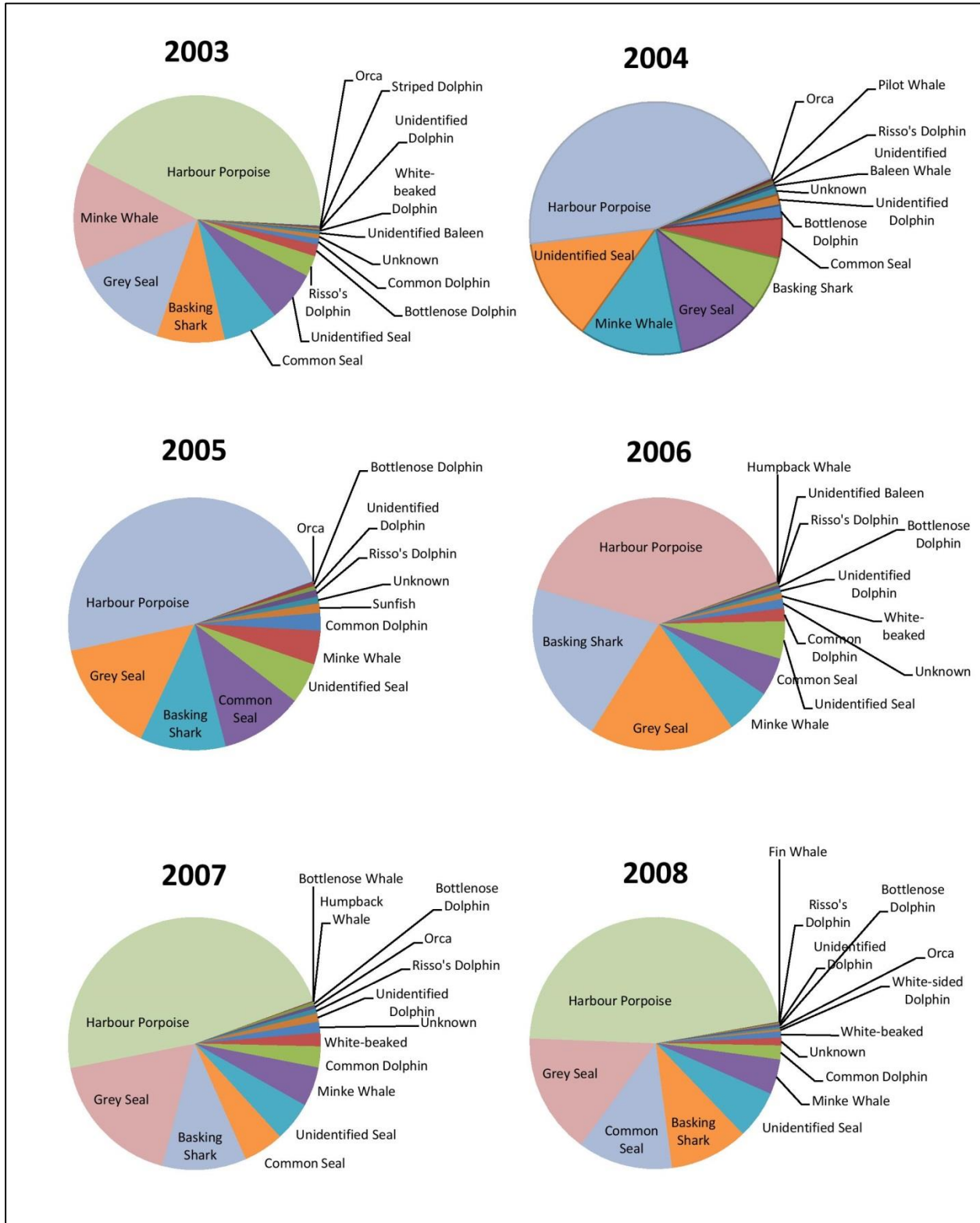
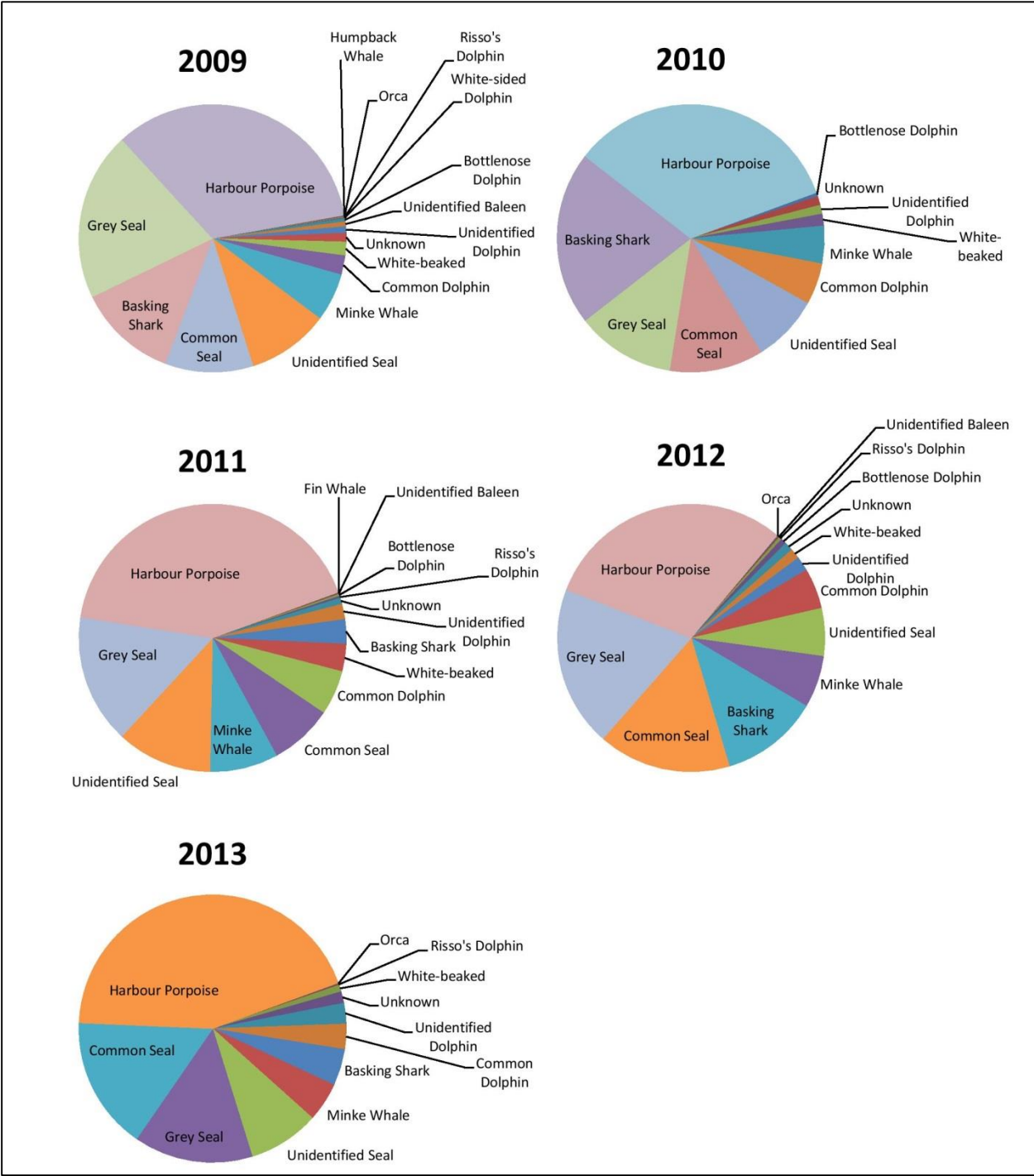


Fig. 3.21 acoustic effort 2013



Appendix 3: Sightings of species from Silurian 2003 – 2013:





Appendix 4: List of papers published and in progress in 2013; HWDT presentations

Papers

Accepted

- Beck, S., Foote, A.D, Koetter, S., Harries, O. R., Mandleberg, L., Stevick, P.T., Whooley, P. and Durban, J. (2013) Using opportunistic photo-identifications to detect a population decline of killer whales (*Orcinus orca*) in British and Irish waters. Journal of the Marine Biological Association of the United Kingdom, available on CJO2013. doi:10.1017/S0025315413001124.
- Cheney, B. et al. (2013). Integrating multiple data sources to assess the distribution and abundance of bottlenose dolphins *Tursiops truncatus* in Scottish waters. Mammal Review (43): 71-88.

In Preparation

- Makelainen, P., Esteban, R., Kunnigas, S., Nielsen, J., Samarra, F.I.P., Simila, T and Foote, A.D. (In prep). Variation in pigmentation patterns among North Atlantic killer whale (*Orcinus orca*) populations.

Grey Literature

Contract Reports

- Calderan, S., Wittich, A., Harries, O., Gordon, J. and Leaper, R. (2013) White-beaked dolphin and Risso's dolphin click characteristics and the potential for classification and species identification. Scottish Natural Heritage Commissioned Report 624, Scottish Natural Heritage.
- Harries, O.R. (2013) Report to Dalgleish Associates Ltd. on the marine mammal species and basking sharks occurring in the Inner Sound and Sound of Raasay study region. 27pp.

In Preparation

- Evans, P. and Harries. Report to Marine Harvest on the cetacean species occurring around Loch Shell and Loch Erisort, Isle of Lewis.

Academic Dissertations

- Hooper, E. (2013). Spatiotemporal patterns of marine megafauna distribution in coastal waters off the west coast of Scotland. BSc Thesis, University of Nottingham.

- Lawrence, J. (2013). Spatiotemporal distribution of marine mammals in the Great Race tidal system off the west coast of Scotland. MRes Thesis, Scottish Association for Marine Science.

In Preparation

- Abernethy, R. (In prep). BSc Thesis. University of Glasgow.
- Cunningham, E. (In prep). MSc Thesis. University of Bangor.
- van Geel, N. (In prep). PhD Thesis. Scottish Association for Marine Science.

Scottish Environment LINK Publications supported by HWDT during 2013

- LINK letter to Cabinet Secretary. Identifying a network of Marine Protected Areas.
- LINK letter to Linda Rosborough, Marine Scotland. Marine Protected Area identification and designation process.
- LINK Letter: 3 asks for Marine Protected Areas.
- ScotLINK Press release. Sealife protection plans need people power.
- LINK letter to Local Authorities. MPA Consultation.
- LINK Consultation response. Priority Marine Features.
- LINK Consultation response. National Marine Plan.

European Cetacean Society Conference 2013

- Calderan, S.V, Wittich, A., Harries, O.R, Gordon, J.C.D. and Leaper, R. (2013) White-beaked dolphin click characteristics and the potential for classification and species identification. Presented at European Cetacean Society Conference. Towards a Conservation Strategy for White-beaked Dolphins ECS Species Workshop, Setúbal, Portugal.
- Wittich, A., Calderan, S.V., Harries, O.R., Leaper, R., Macaulay, J. and Gordon, J.C.D. (2013) Identifying white-beaked dolphins from click characteristics. Presented at European Cetacean Society Conference. April 2013. Setúbal, Portugal.
- Wittich, A., Harries, O. R and Gillespie, D. (2013) Introduction to PAMGUARD Workshop. European Cetacean Society Conference, Setúbal, Portugal.

Data Provision

- Dolman, S. and Hodgins, N. (In prep) Photo identification of Risso's dolphin (*Grampus griseus*).

- Joint Nature Conservation Committee (JNCC) and Scottish Natural Heritage - detailed modelling of species density for Marine Protected Areas (MPA) project.
- Scottish Government Marine Protected Areas (MPA) workshop (VI).
- Scottish Salmon: Community Sightings Network; Sightings in the Sound of Raasay
- Weir, C. and Jefferson, T. (In prep) Global review of the distribution of Risso's dolphin (*Grampus griseus*).

Presentations

- Presentation on whales and dolphins of the Hebrides to boat users of the World Cruising Club, "Classic Malts Cruise", Kerrera, July 2013.

Newsletters

- HWDT (2013) Wave Autumn/Winter 2013. Hebridean Whale and Dolphin Trust.

Appendix 5: HWDT in the media in 2013

Medium	Publication	Content Summary	Date
TV	BBC1	The One Show ran a three-part mini-series on the West Coast Community, even documenting an attack on a harbour porpoise.	07/01/2013
Newspaper	The Herald	Article about the West Coast Community of orca and their critical status	10/01/2013
Website	Wildlife Extra	article about the West Coast Community following an appearance on The One Show	10/01/2013
Website	Underwater Times	article about the West Coast Community following an appearance on The One Show	10/01/2013
Magazine	BRISC (Biological Recording in Scotland)	Article by Olivia about the research undertaken by HWDT and the species present	01/04/2013
Website	BBC Glasgow & West Scotland	article about the sperm whale spotted in Oban Bay	01/04/2013
Website	STV News	article about the sperm whale spotted in Oban Bay	01/04/2013
Website	Digital Journal	Article about joining us aboard	18/04/2013
Website	Stornoway Gazette	Article about joining us aboard	18/04/2013
Website	International Whale Protection Organisation	Article about joining us aboard	18/04/2013
Website	One News Page	Article about joining us aboard	18/04/2013
Website	News Hour	Article about joining us aboard	18/04/2013
Website	Digital Journal	Article about joining us aboard	18/04/2013
Website	BBC Scotland	Article about joining us aboard	19/04/2013
Website	Ron Bury's Wildlife Blog	Article about joining us aboard	19/04/2013
Website	UK Wired News	Article about joining us aboard	19/04/2013
Website	Aberdeen News	Article about joining us aboard	22/04/2013
Newspaper	The Oban Times	Article encouraging people to join us aboard Silurian	25/04/2013
Magazine	Round & About	Article about the sperm whale in Oban Bay	01/05/2013
Radio	BBC Radio Scotland	Olivia (Science Officer) talked to presenter Kaye Adams about the sperm whale in Oban Bay	03/05/2013
Radio	Oban FM	Olivia (Science Officer) talked to presenter about the sperm whale in Oban Bay	04/05/2013
Radio	Classic FM	Gemma (Education Officer) talked to presenter about the sperm whale in Oban Bay	05/05/2013
Website	For Argyll	Highlighting HWDTs nomination for a Lottery Awards	19/05/2013
Magazine	Unterwasser	Included as an example of good eco-tourism - Biosphere marketing	12/06/2013
Website	UPI.com	Article about the first confirmed sighting HWDT has received of the WCC of orca	23/08/2013
Website	Manchester Wired	Article about the first confirmed sighting HWDT has received of the WCC of orca	23/08/2013
Website	BBC News (Highlands and Islands)	Article about the first confirmed sighting HWDT has received of the WCC of orca	23/08/2013
Website	Walk Highlands	Article about the first confirmed sighting HWDT has received of the WCC of orca	24/08/2013

Website	Newspoint Africa	Article about the first confirmed sighting HWDT has received of the WCC of orca	24/08/2013
Website	Passion for the Planet	Article about the first confirmed sighting HWDT has received of the WCC of orca	24/08/2013
Website	Afloat	Article about the first confirmed sighting HWDT has received of the WCC of orca	25/08/2013
Website	Wildlife Extra	Article about the first confirmed sighting HWDT has received of the WCC of orca	10/09/2013
Magazine	Scottish Biodiversity Forum Newsletter	Article about the sighting of the WCC off the east coast	30/09/2013
Newspaper	The Times	Article about the WBD research undertaken to determine if the populations found in the east and west are separate sub-species.	14/10/2013
Newspaper	Press and Journal	Article about the WBD research undertaken to determine if the populations found in the east and west are separate sub-species.	09/11/2013
Newspaper	Daily Record	Article about the WBD research undertaken to determine if the populations found in the east and west are separate sub-species.	09/11/2013
Website	BBC News	Article about the WBD research undertaken to determine if the populations found in the east and west are separate sub-species.	12/11/2013

Appendix 6: Staff, Board of Directors, Committee Members and Patrons in 2013.

Staff

Cally Fleming, Executive Director

Cally started at the Trust as Executive Director in 1998 and has since managed HWDT's development and co-ordinated the wide variety of operations in the Trust. Work includes a vast range of management responsibilities, fundraising and raising the profile of the Trust. Cally left the Trust early in 2013 and the post is being filled on a locum basis.

Olivia Harries, Science Officer

Olivia has responsible for delivering the research programme at HWDT, including the monitoring work conducted onboard *Silurian*. Her work also included working with the Scientific Committee and HWDT's many collaborative partners to develop the research outputs of the Trust. She has taken a sabbatical in 2014 after three seasons on *Silurian*. Olivia was succeeded by Kerry Froud in November 2013.

Gemma Paterson, Education Officer

Gemma delivers the education and outreach programme at HWDT, which involves making school visits by land and on the floating classroom and organising and attending events. Gemma is involved in the fundraising activities at the Trust, and helps to maintain the website and the Visitor Centre. Gemma began maternity leave in September 2013.

Morven Russell, Volunteer Coordinator and Marketing Officer

Morven's main role at the Trust is to recruit and coordinate HWDT's volunteers and raise the profile of HWDT through marketing. Her varied role extends to overseeing the 'Friendship' and 'Sponsorship' schemes, assisting with events and maintaining the website and the Visitor Centre. Morven began maternity leave in November 2013.

Mark Whitaker, Finance and Administration Officer

Mark is responsible for the wide range of finance and administration operations at the Trust, and also helps to run the shop.

Tom Reade, First Mate

Tom was the First Mate onboard *Silurian* in 2013.

HWDT is also fortunate to have a pool of experienced Skippers who take *Silurian*'s helm each season.

The trustees are grateful to all of these people without whom the charity would not be able to deliver its mission.

Board of Directors and Charity Trustees

Chair: Prof. Denis Mollison

Directors: David Govan, Jonathan Gordon, Peter Evans, and Tom Walmsley. February 2013 saw Jacqui Fereday step down as Chair of HWDT. The Trust would like to thank her for all of her hard work and support. Phillip Cheek have been newly invited on to the board (November 2013).

Consultants

HWDT also works with consultants Susannah Calderan, Nienke Van Geel and Laura Mandelberg who provide expertise in key areas.

Committee Members:

Scientific Committee: Jonathan Gordon, Susannah Calderan, Peter Evans, Russell Leaper, Nienke Van Geel, Jack Matthews, Ben Wilson, Olivia Harries and Cally Fleming. Cally left the Committee upon her departure from the Trust early in 2013.

Education Committee: Jack Matthews, Denis Mollison, Andrew Simpson, Leanne Blair, Gemma Paterson and Cally Fleming. Cally left the Committee upon her departure from the Trust early in 2013.

HWDT Patrons

Richard Balharry and Jack Matthews.