

# **The Ecology of the harbour porpoise in the south west**

**What we know & What we don't know**

**Developing an accessible story**



## The IDEA - What do we know? – What don't we know?

**Example:** Porpoises (it could have been ... sunfish or Manx shearwaters etc)

**Making the meetings work harder** The idea is that we use the collective expertise (resource) in the room and at the meeting and other contacts to develop an accessible narrative that highlights what we know and what more we need to know

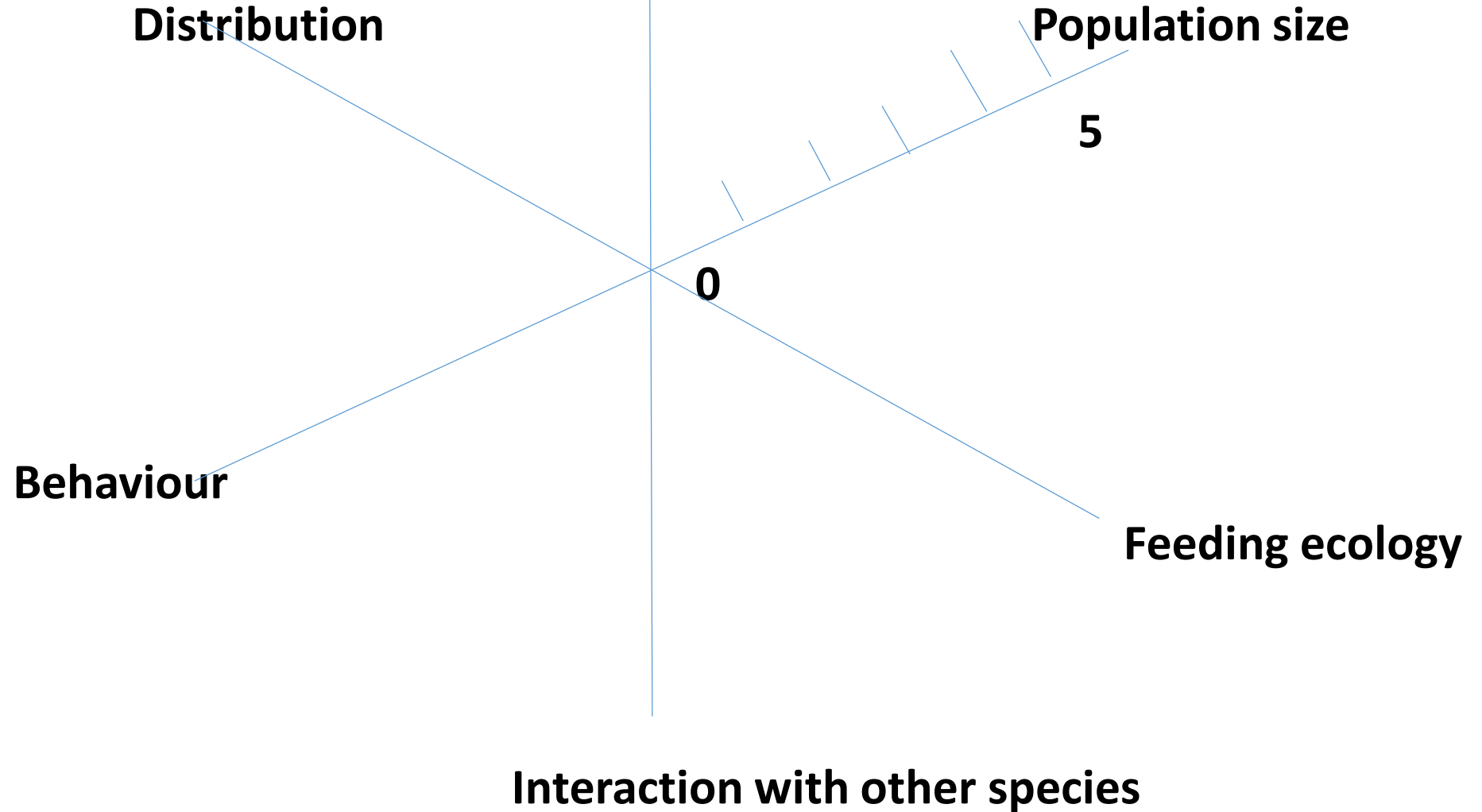
**Pulling information together** A reality is that often our records and observations are made in isolation – geographically – by different methods – this a device for pulling information together in a systematic way (ie not *ad hoc*)

The paper will be developed by a number of authors in an iterative way – and stored in an accessible archive

**What we don't know** drives innovation and often new studies and methodologies

Example Basking sharks MCS 1990

Seasonal movements (migration)



# **Headings – Draft paper in the Delegate Note – The first version**

**Description of the species**

**Methodologies (on shore, near shore – offshore)**

**Geographic distribution re the south west (Expectations)**

**Population size** (Relative abundance How many? How do the animals we see relate to the wider population?)

**Population movements** (Migrations? Seasonality)

**Breeding ecology** (courtship and social interactions)

**Feeding ecology and interactions with physical environment** (seabed topography and oceanography)

**Interaction with other species** (Bottlenose dolphins, seals, co-feeding)

**Interactions with man**

**References and links**

## Geographic distribution South Devon – a contrast to Cornwall

There are no porpoises in the photograph – or none that I saw

In over 50 hours – of sea watching from cliff locations (Bolt Head, Bolt Tail, Prawle Point and Start Point, Berry Head) .... I've not seen a single porpoise

I've seen them with Dave Jenkins 3/3 on the north Devon coast, and off Strumble Head in 2014 saw many, the first within 5 minutes of setting up

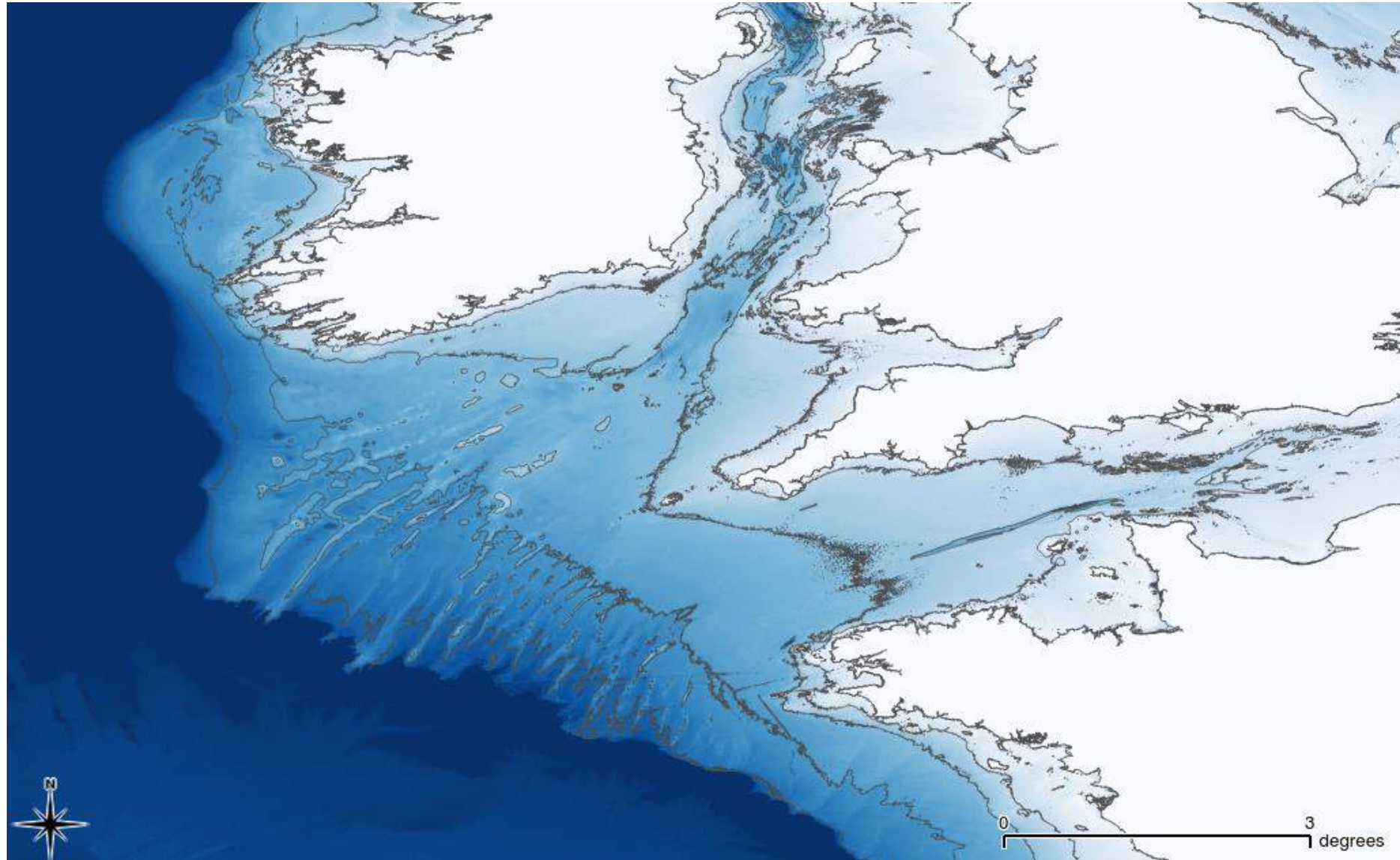
Questions: At what point is zero sightings / hour real ....

If this is a genuine absence – Why? Are they off in Lyme Bay having fun?

Strandings data from Devon Biological Records centre .....



# What do we mean when we talk about the South West?

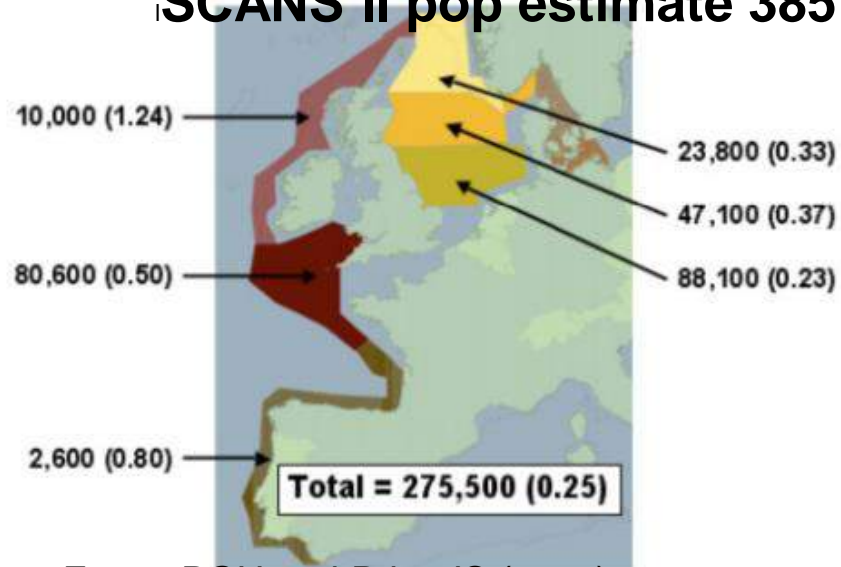


# World population and how the South West UK population fits

IUCN world pop estimate 700 000

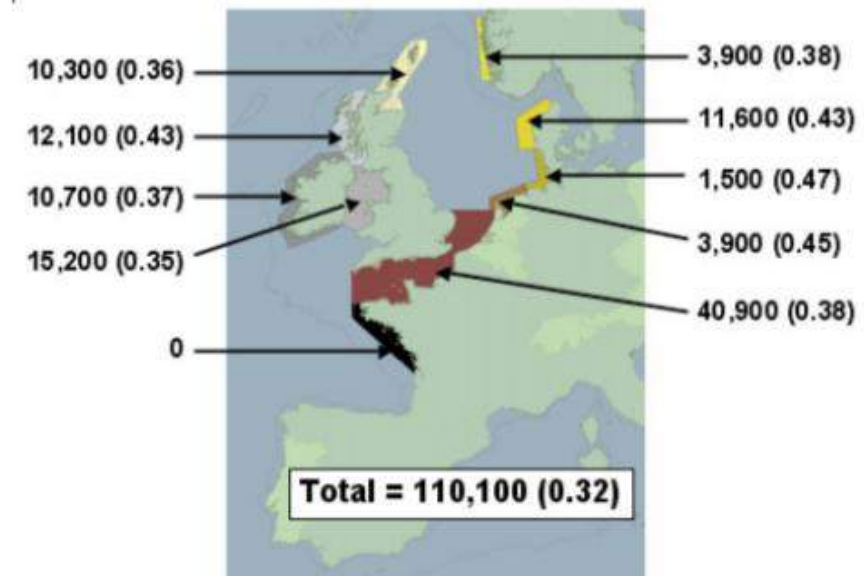
328,200 total UK pop estimate European Environment Agency

SCANS II pop estimate 385 617



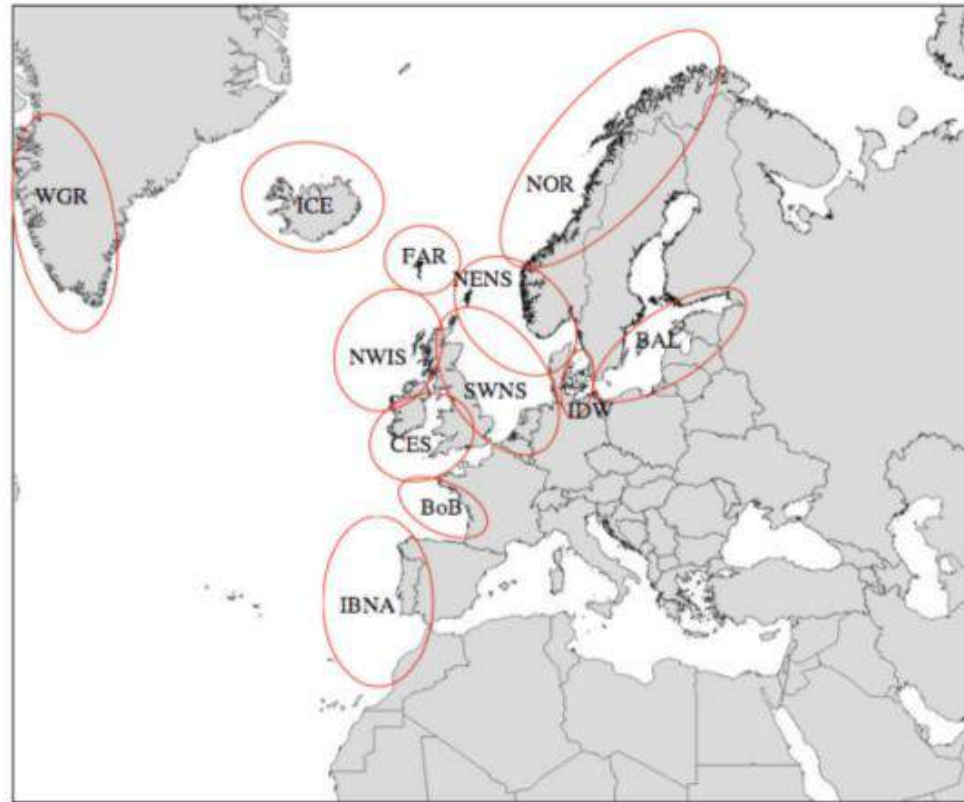
Evans PGH and Prior JS (2012)

**Figure 3a.** Abundance estimates (and CVs) for harbour porpoises from the SCANS II shipboard survey (July 2005)<sup>xii</sup>



**Figure 3b.** Abundance estimates (and CVs) for harbour porpoises from the SCANS II aerial survey (July 2005)<sup>xii</sup>

# Management Units



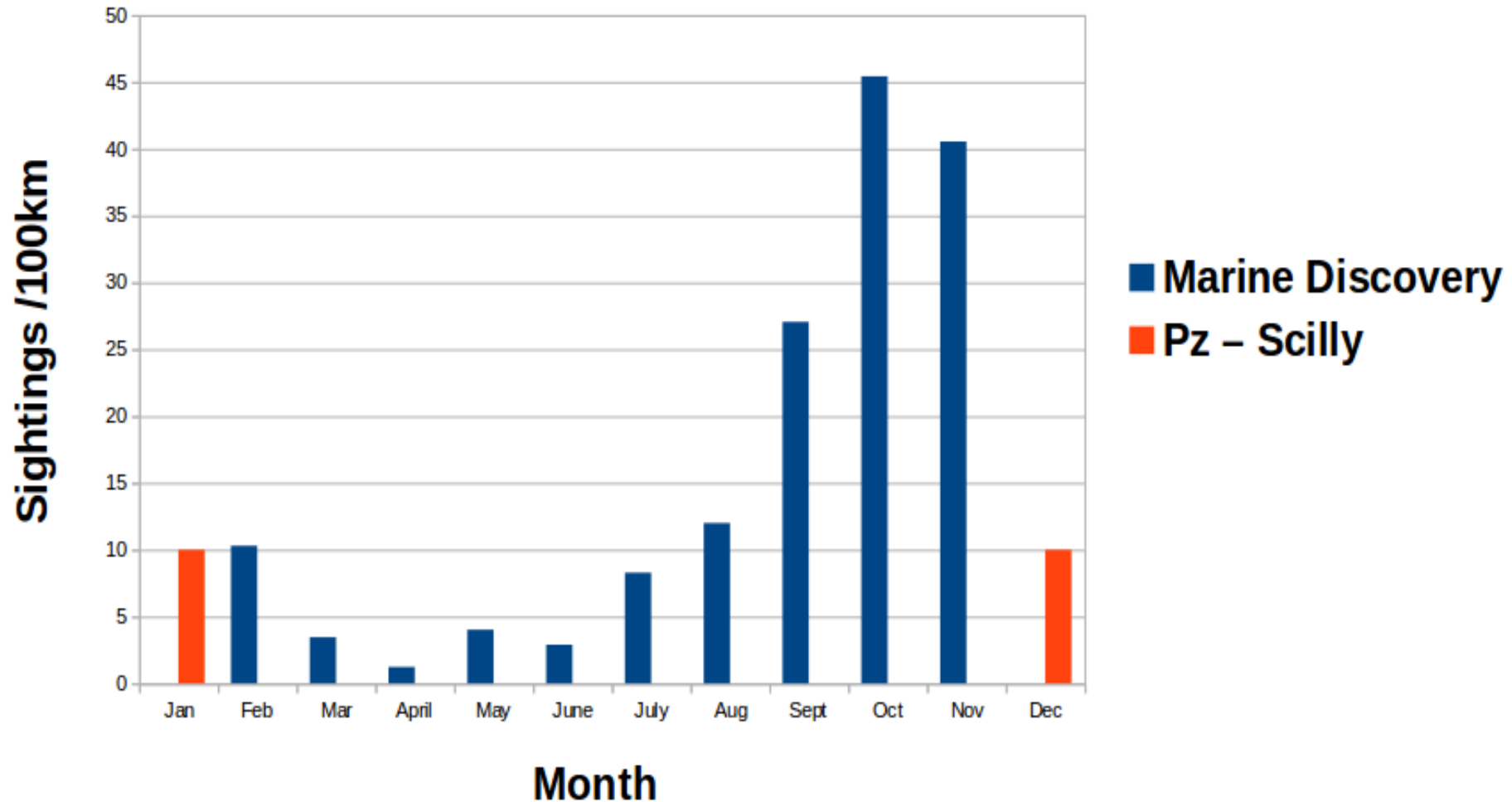
**Figure 4.** Map showing recommended Management Units for harbour porpoise in the ASCOBANS Agreement Area and Environs<sup>xxvii</sup>

Evans PGH and Prior JS (2012)



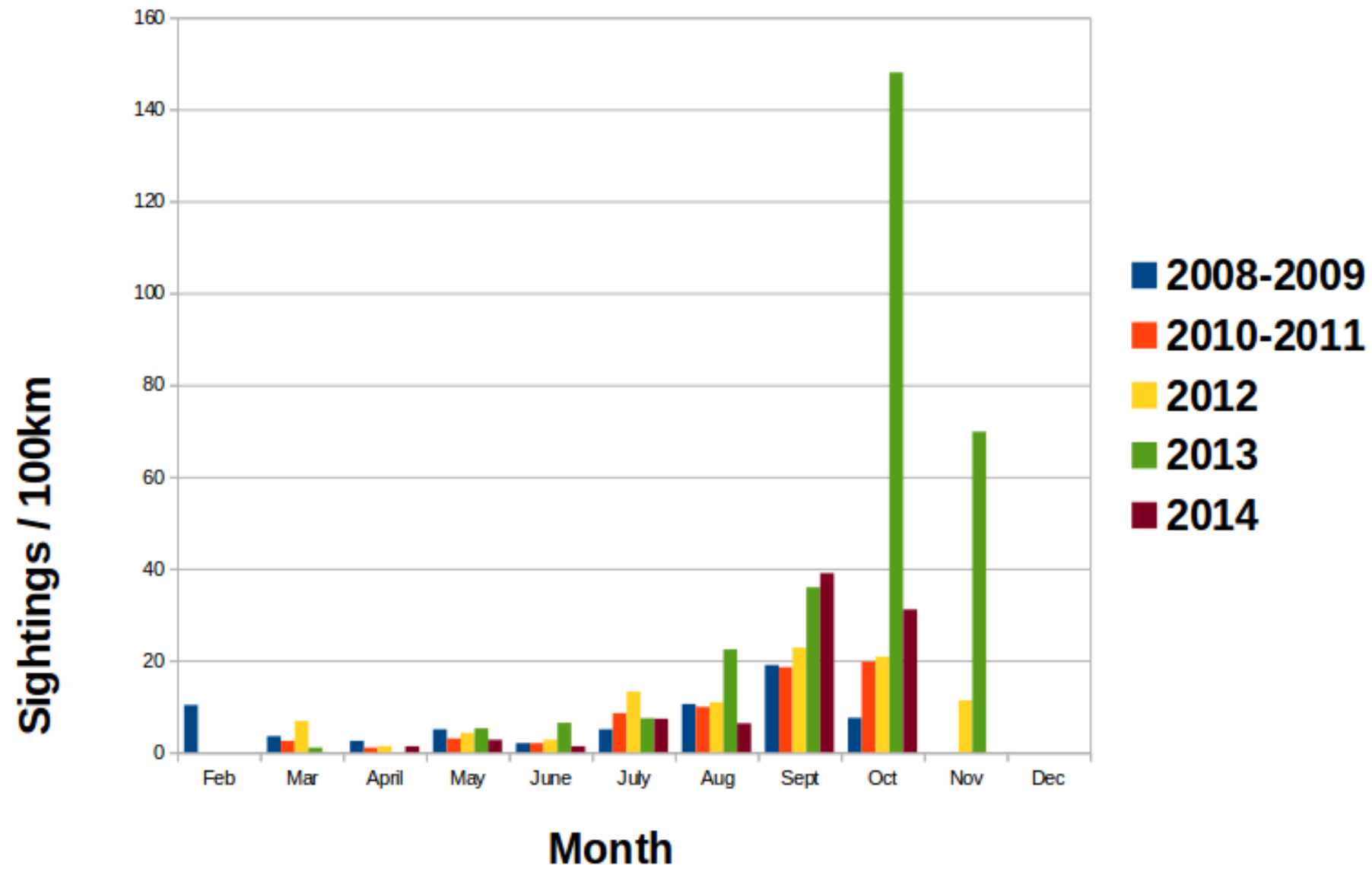
# Abundance and seasonal variation in Mount's Bay

Marine Discovery 2008-2014 and Penzance – Scilly surveys  
2007 average monthly abundance



Pz – Scilly survey on board Gry Maritha, Surveyor : Marijke de Boer

## Index of abundance



# Abundance and seasonal variation

↳ Sightings of harbour porpoises during shipboard and aerial surveys during SCANS II in July 2005

↳ Hammond P (2006)

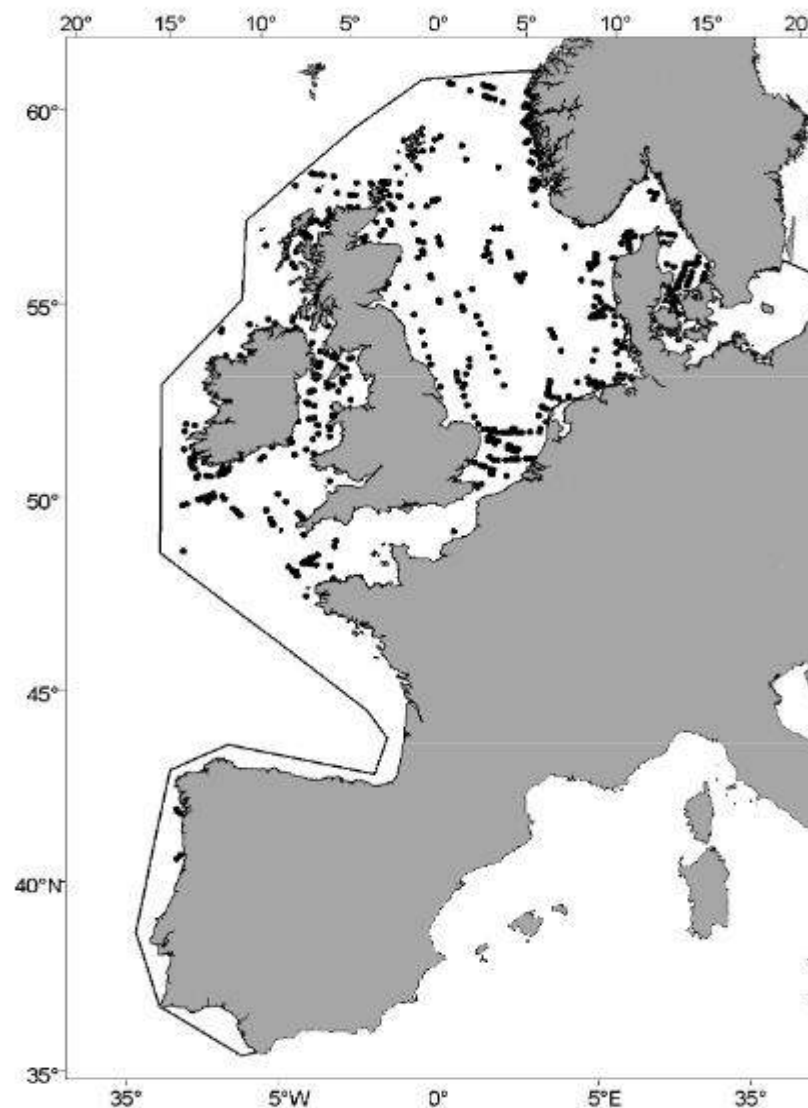
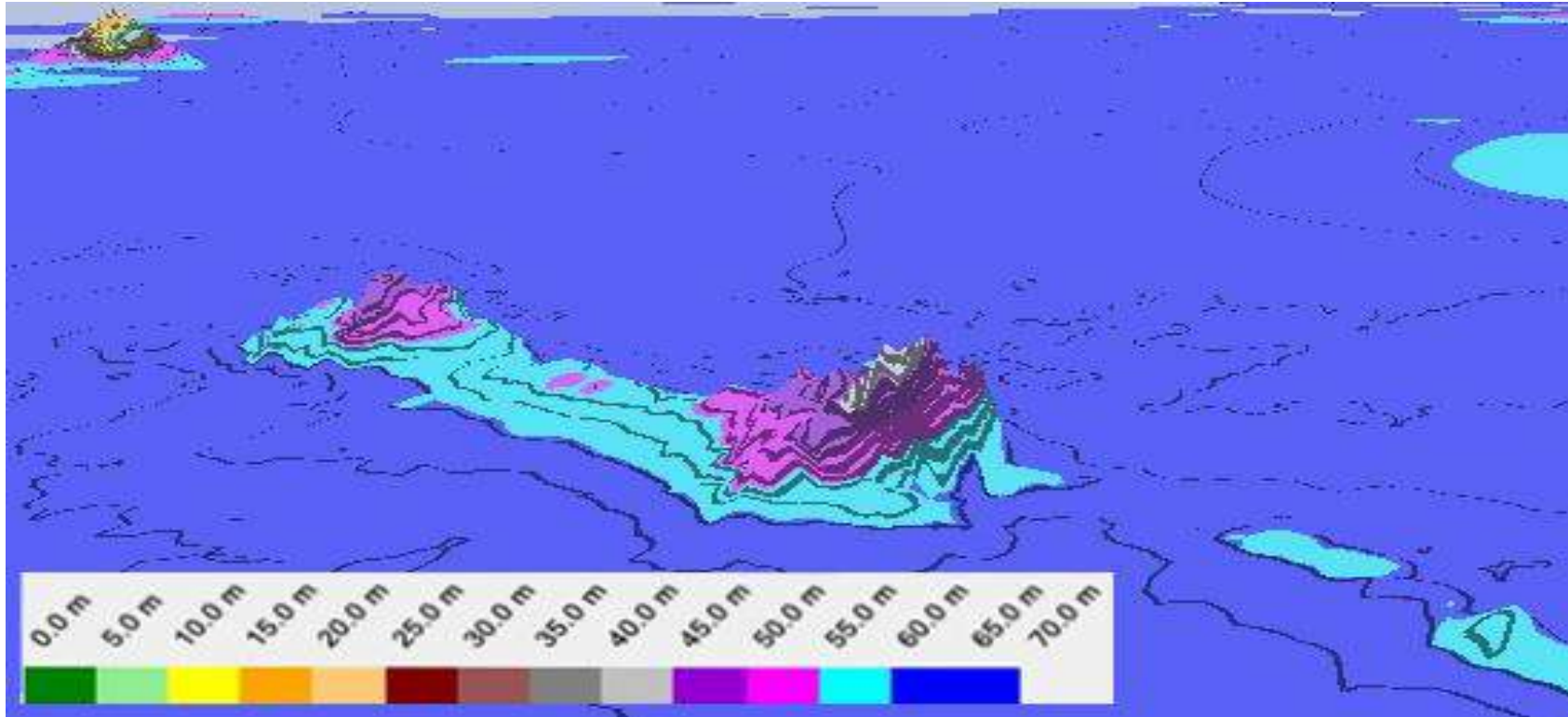


Figure 3: Sightings of harbour porpoise during the shipboard and aerial surveys.

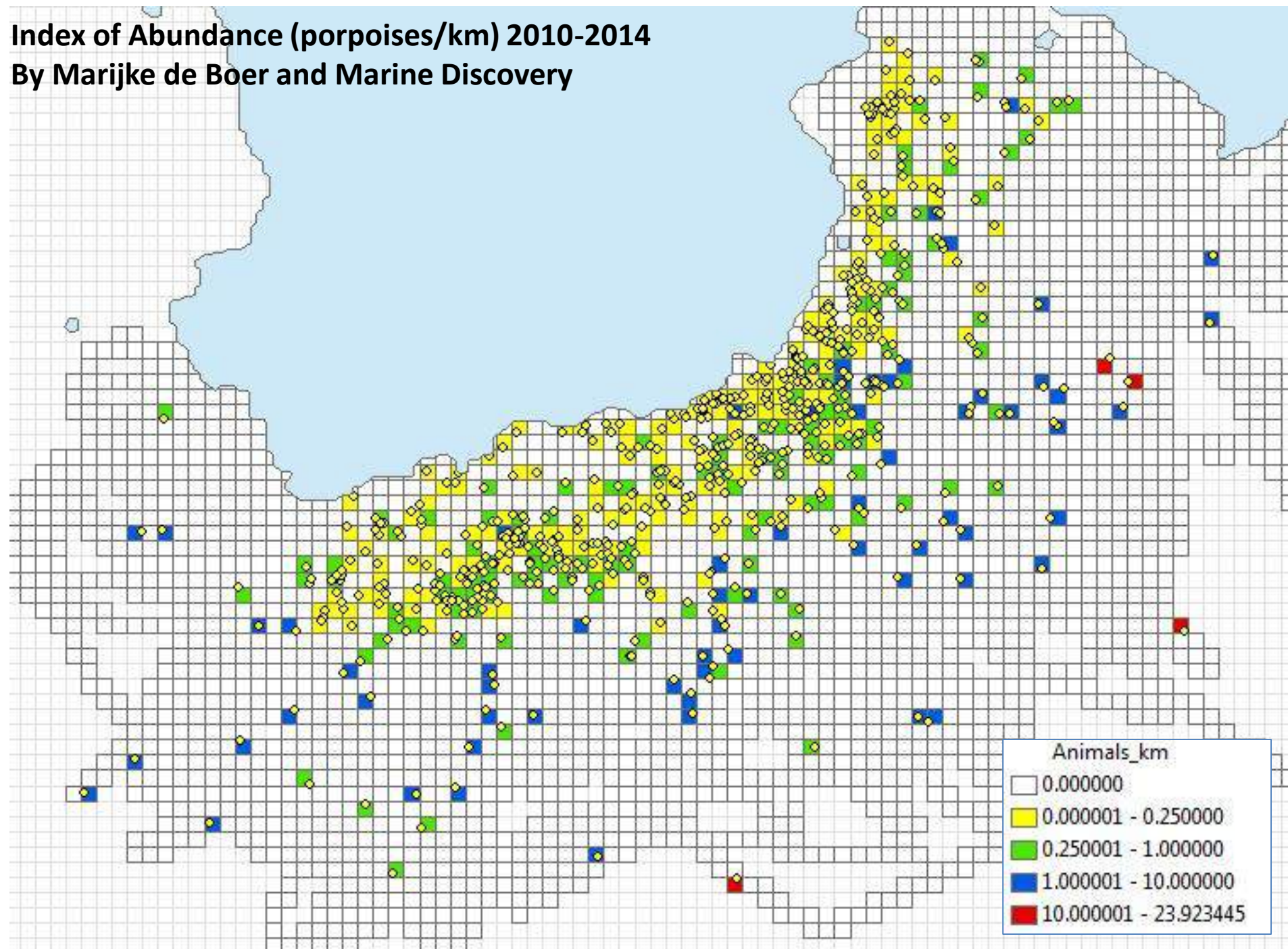
# Foraging techniques relating to pod size and hydrography



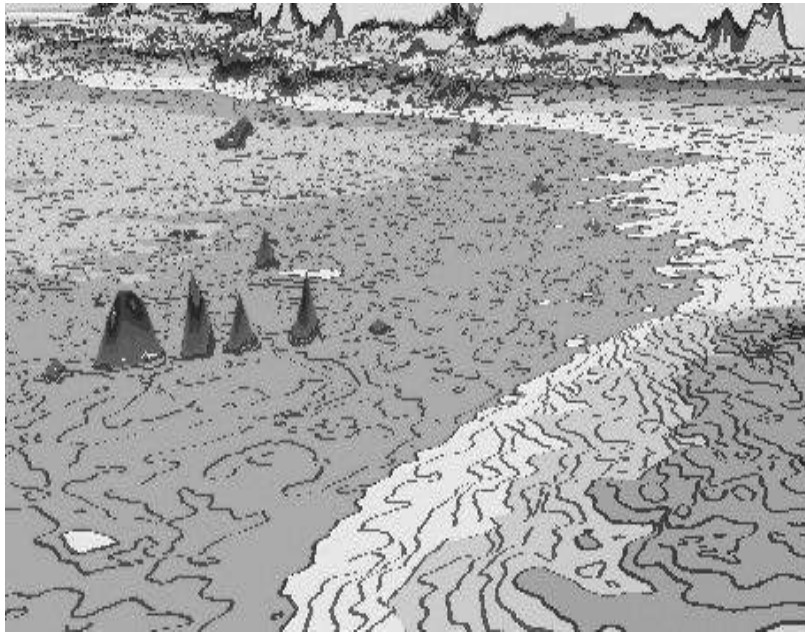
Underwater pinnacles 'Eric's Patch' key porpoise foraging habitat



**Index of Abundance (porpoises/km) 2010-2014**  
**By Marijke de Boer and Marine Discovery**







**Above : Mulberry Dock – Wreck**



**Right :  
Epsom Shoal**

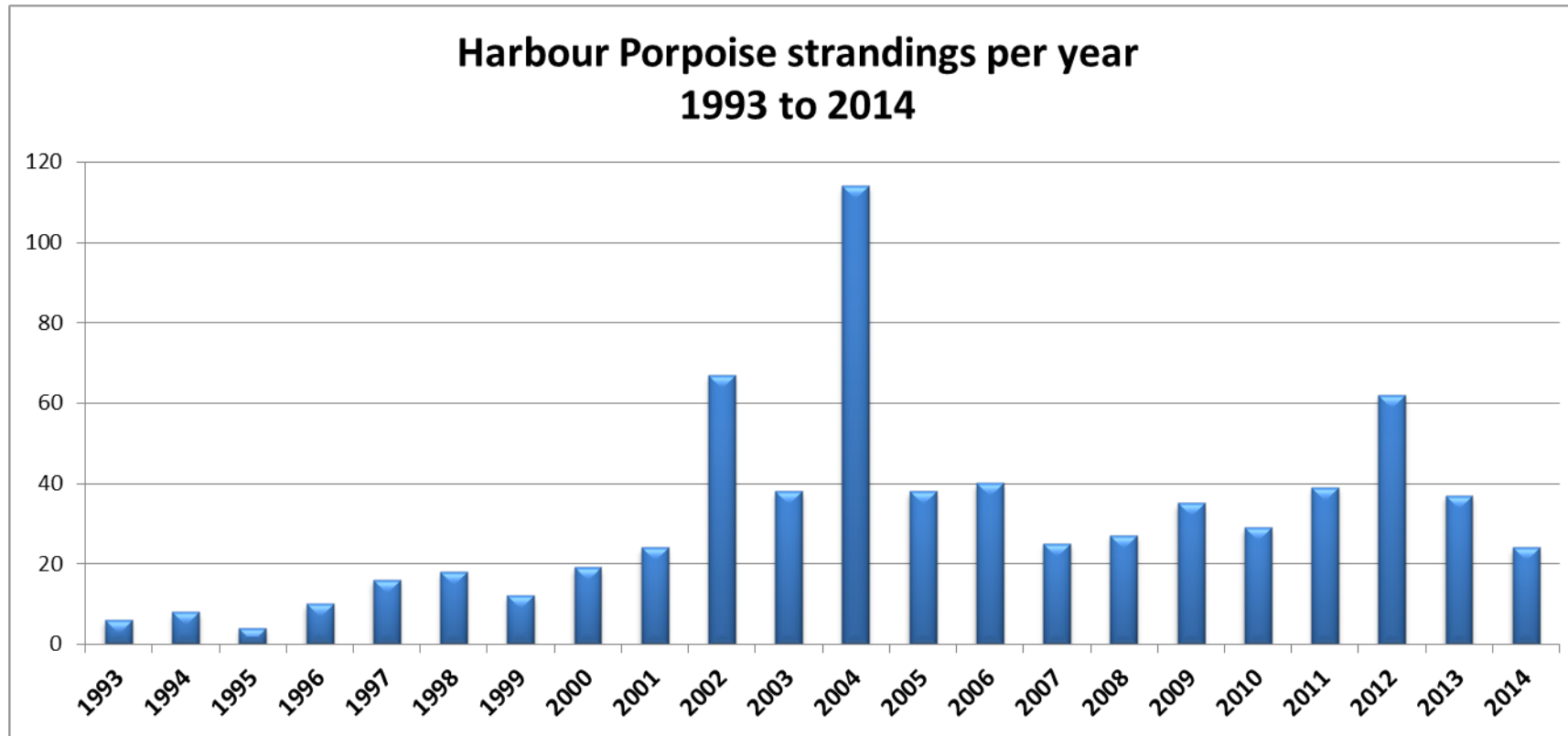
**40 metre high**

**pinnacle**

North Devon – Dave Jenkins – the presence of feeding gannets almost always signifies that porpoises are feeding in the inshore reefs - co-feeding



# CWT Marine Strandings Network

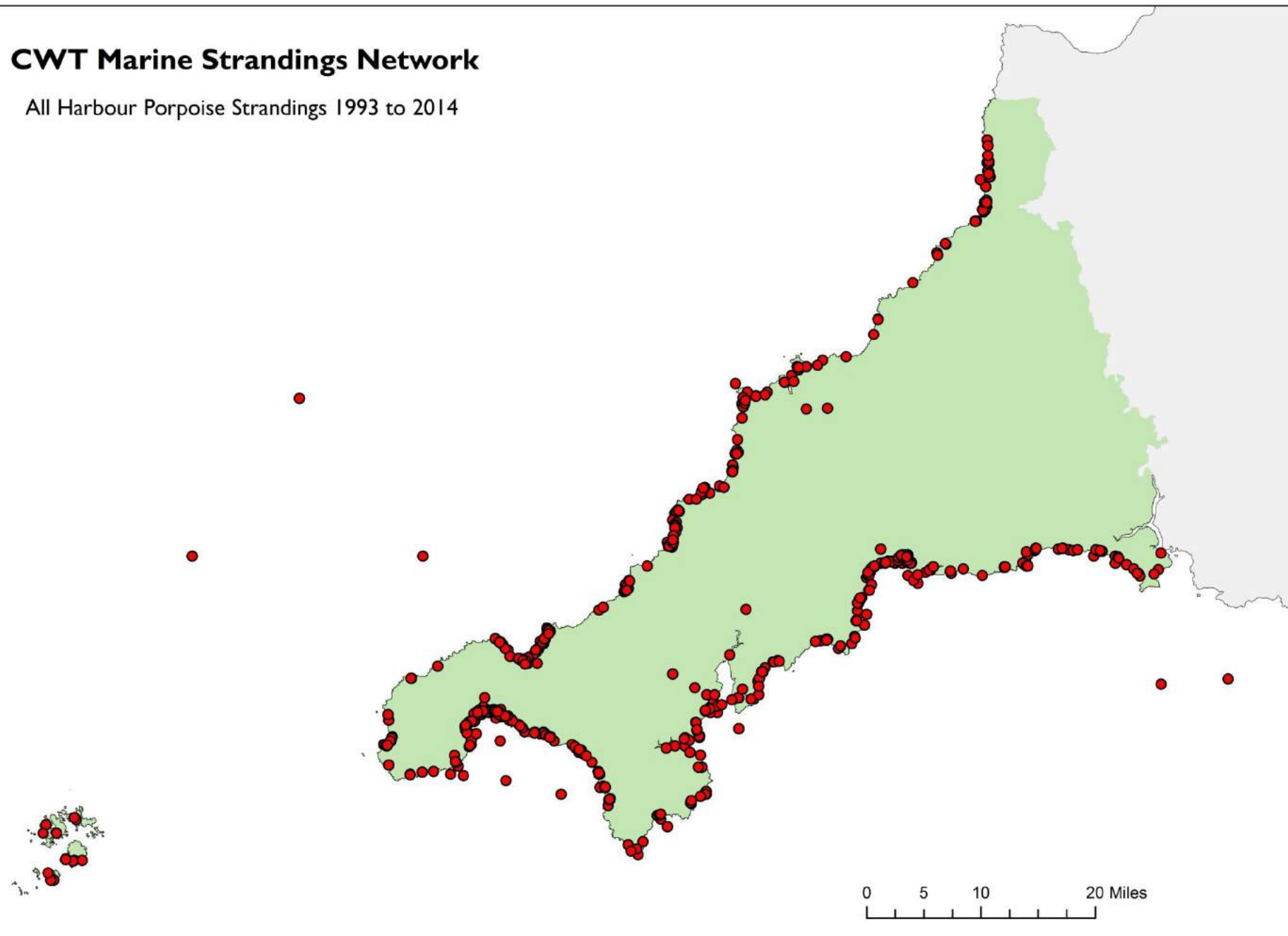


The total number of harbour porpoise dead strandings reported to MSN since it's founding in 1993.

*Source: CWT Marine Strandings Network, hosted by ERCCIS*

## CWT Marine Strandings Network

All Harbour Porpoise Strandings 1993 to 2014

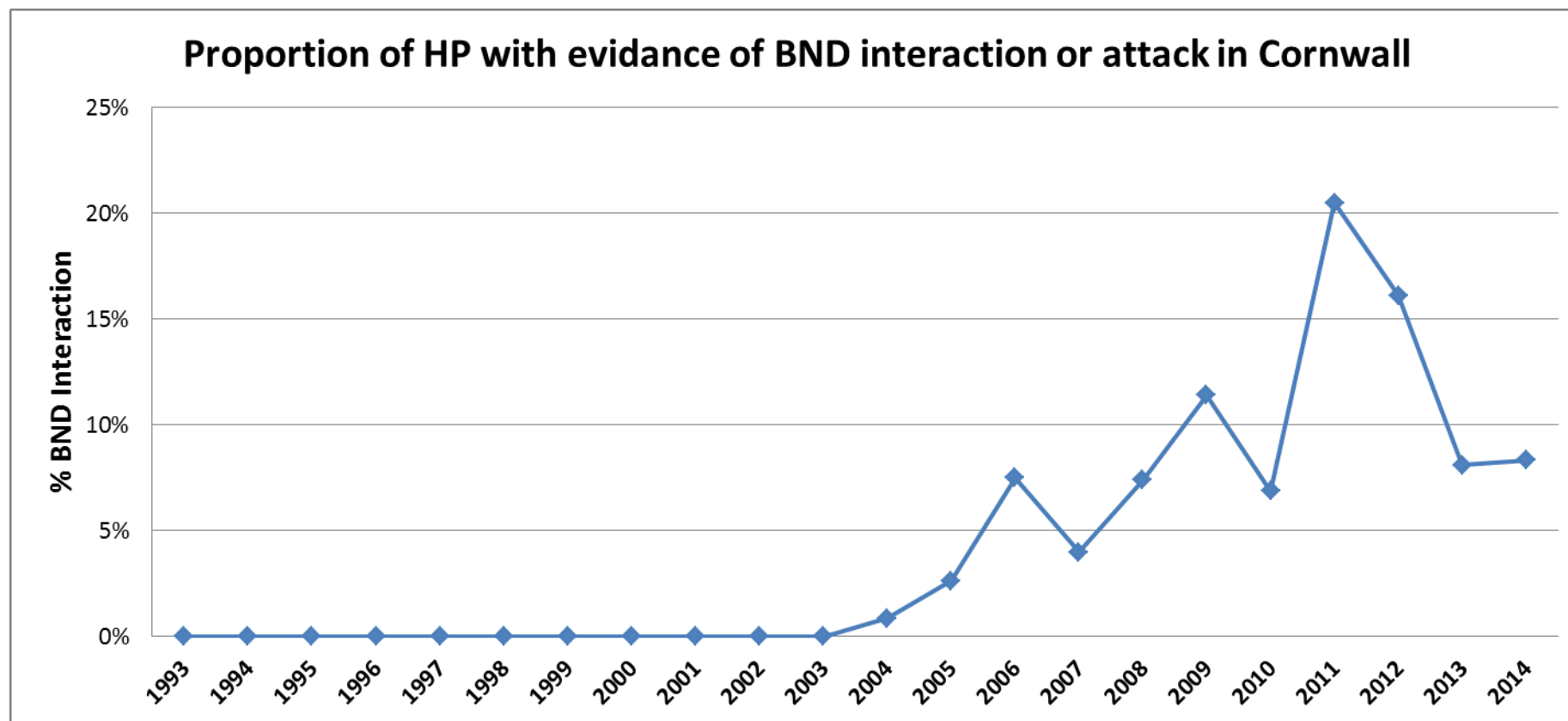








# CWT Marine Strandings Network

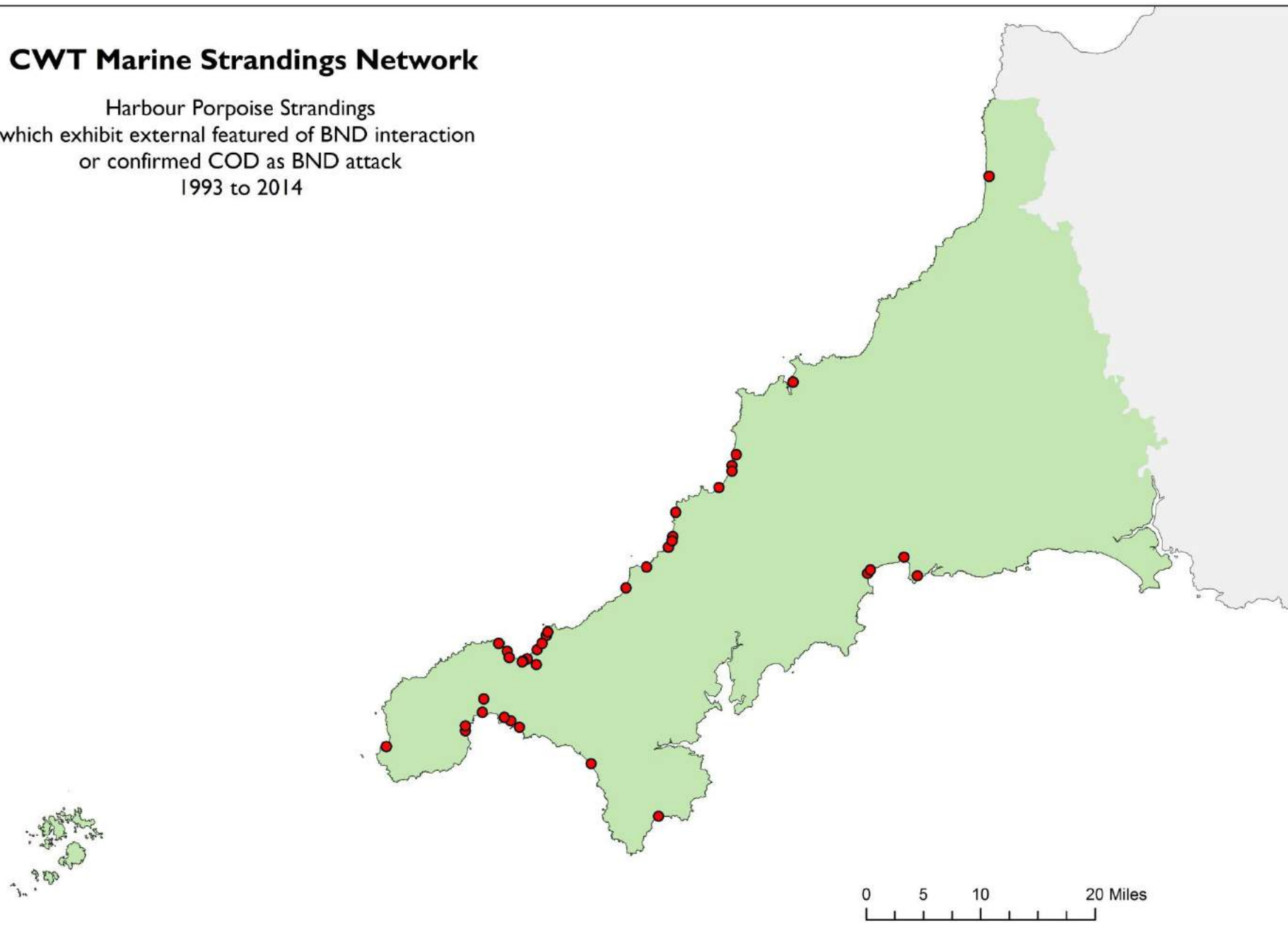


The proportion of harbour porpoise dead strandings reported to MSN since it's founding in 1993, which exhibit external evidence of Bottlenose Dolphin interaction, or COD was confirmed as a Bottlenose Dolphin attack.

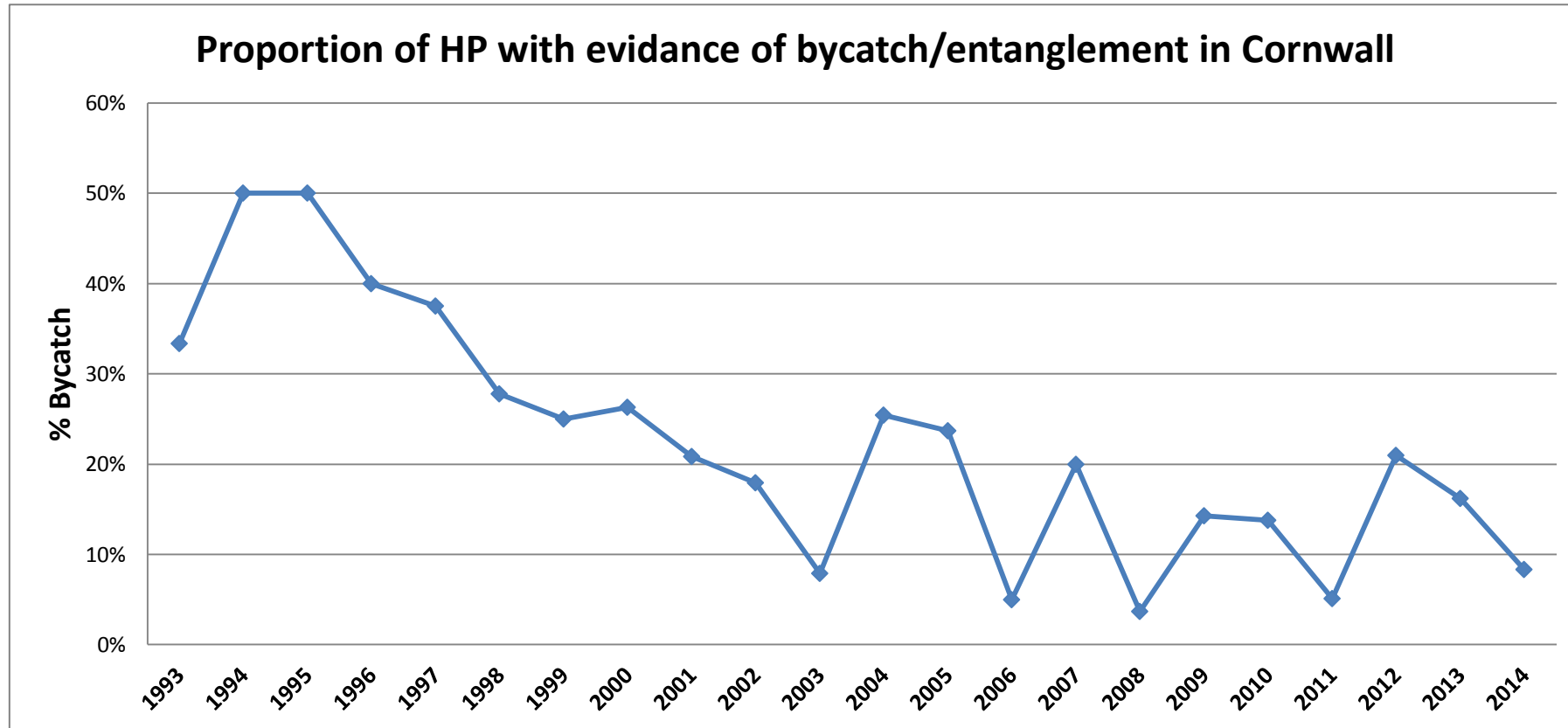
*Source: CWT Marine Strandings Network, hosted by ERCCIS*

## CWT Marine Strandings Network

Harbour Porpoise Strandings  
which exhibit external features of BND interaction  
or confirmed COD as BND attack  
1993 to 2014



# CWT Marine Strandings Network

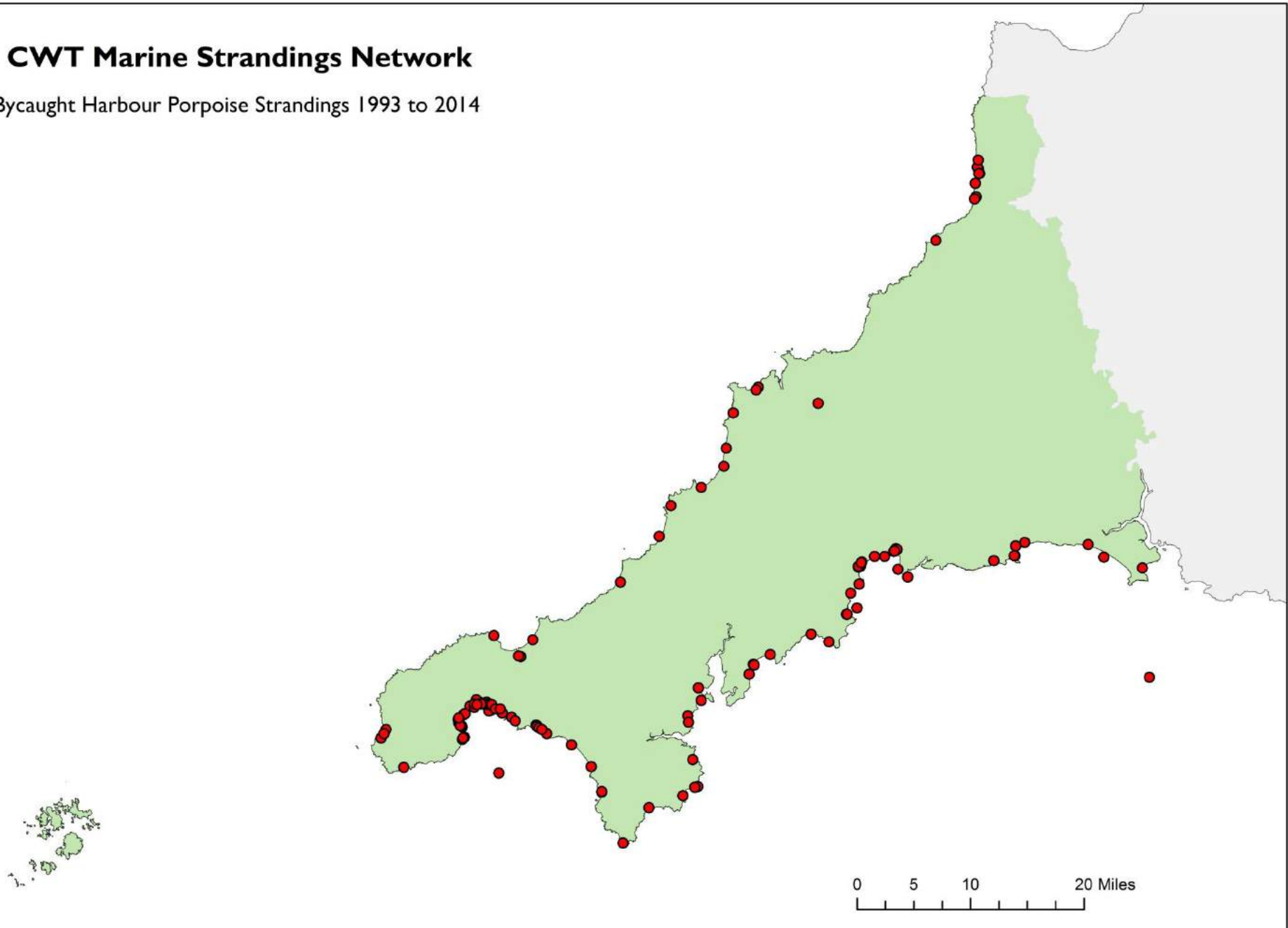


The proportion of harbour porpoise dead strandings reported to MSN since it's founding in 1993, which exhibit external evidence of bycatch/entanglement, or COD was confirmed as a bycatch.

*Source: CWT Marine Strandings Network, hosted by ERCCIS*

## CWT Marine Strandings Network

Bycaught Harbour Porpoise Strandings 1993 to 2014



# Breeding ecology

When

Where

Behaviour

Dave Jenkins, North Devon





# References

1. Evans PGH and Prior JS (2012) Protecting the Harbour Porpoise in UK seas. WWF UK  
[http://assets.wwf.org.uk/downloads/protecting\\_the\\_harbour\\_porpoise\\_in\\_uk\\_seas\\_aug2012.pdf](http://assets.wwf.org.uk/downloads/protecting_the_harbour_porpoise_in_uk_seas_aug2012.pdf)
2. de Boer M and Saulino J (2009) Southwest England Cetacean Survey
3. Hammond P (2006) Small Cetaceans in the European Atlantic and North Sea (SCANS – II) [http://biology.st-andrews.ac.uk/scans2/documents/final/SCANS-II\\_final\\_report.pdf](http://biology.st-andrews.ac.uk/scans2/documents/final/SCANS-II_final_report.pdf)
4. NOAA/NEFSC (2010) HARBOR PORPOISE (*Phocoena phocoena phocoena*): Gulf of Maine/Bay of Fundy Stock.  
[http://www.nefsc.noaa.gov/publications/tm/tm219/165\\_HAPO.pdf](http://www.nefsc.noaa.gov/publications/tm/tm219/165_HAPO.pdf)

**End**

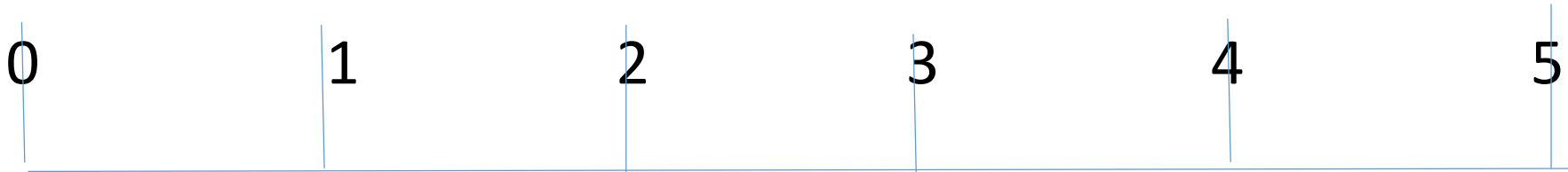
# Courtship and social interaction



## What do we know? – What don't we know?

Nothing

A full picture?



The lower the score the bigger the research potential

**The lower the score for important headings .... The bigger the challenge**