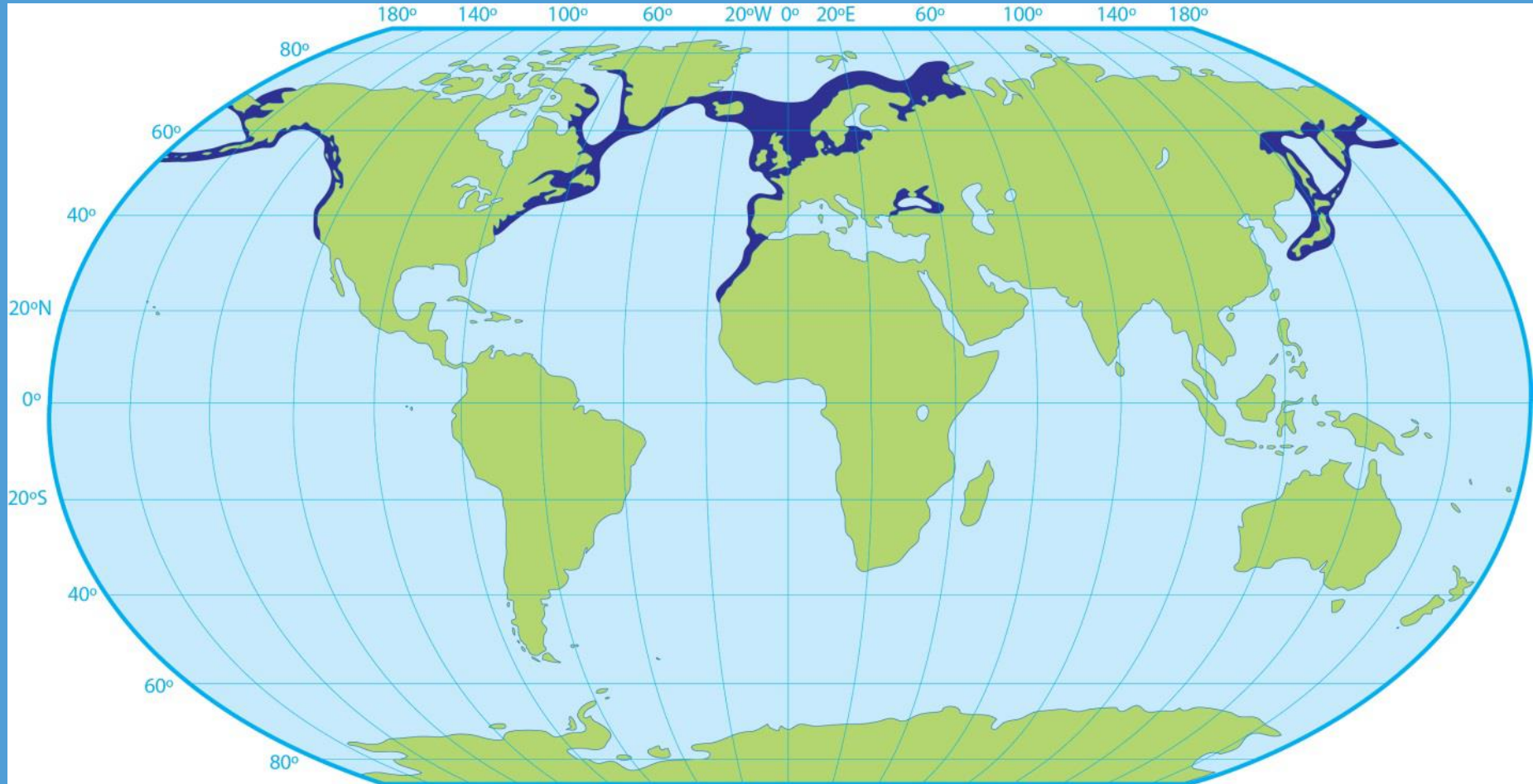


Is the Wadden Sea a warm bath or a dangerous desert for harbour porpoises?

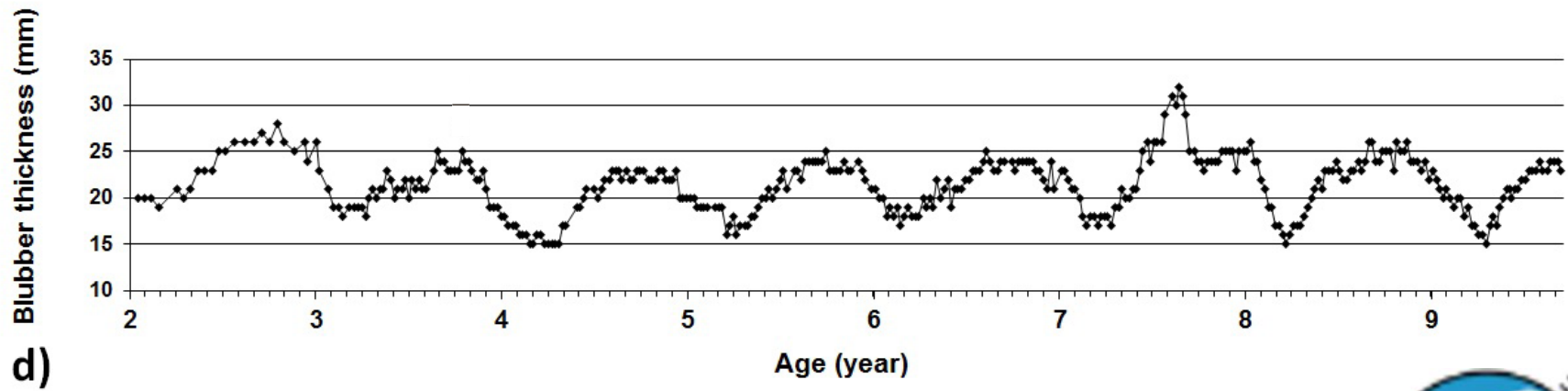
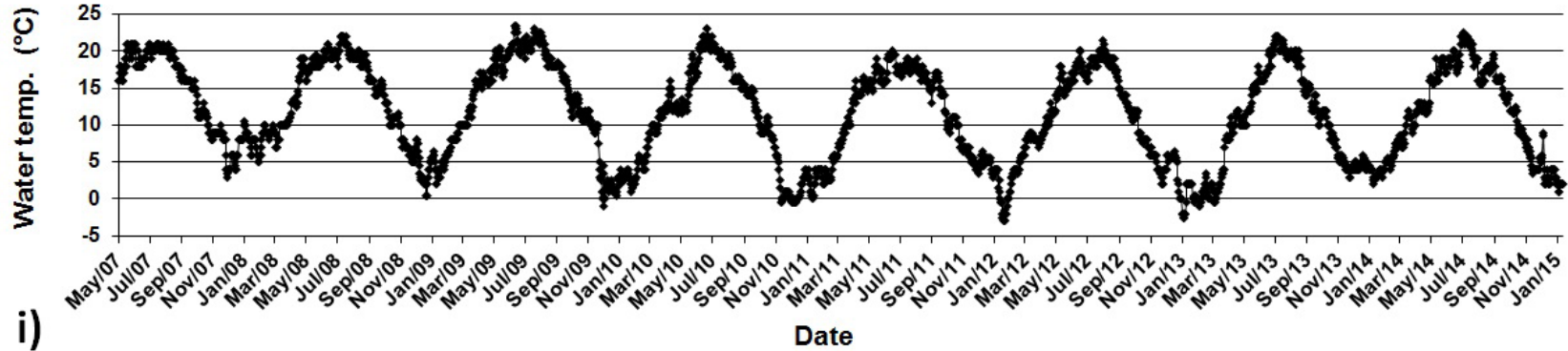
Mardik Leopold



Is a “warm bath” a good thing for porpoises?



Porpoises are leaner (and eat less) in summer



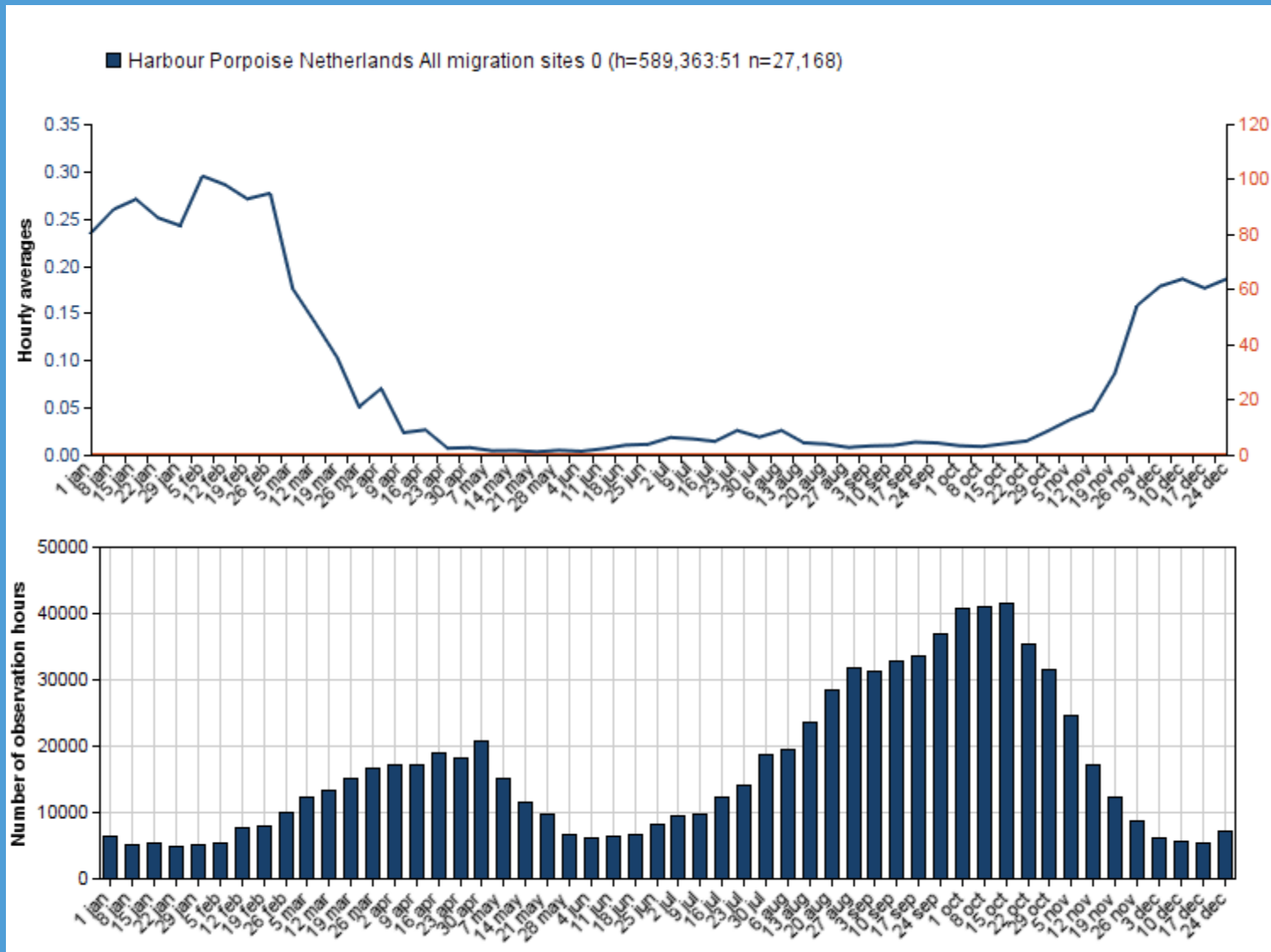
Leopold 2015, Porpoise diet studies:

In a multivariate assessment of prey composition against factors such as porpoise size, season and porpoise body condition, we found **in summer**:

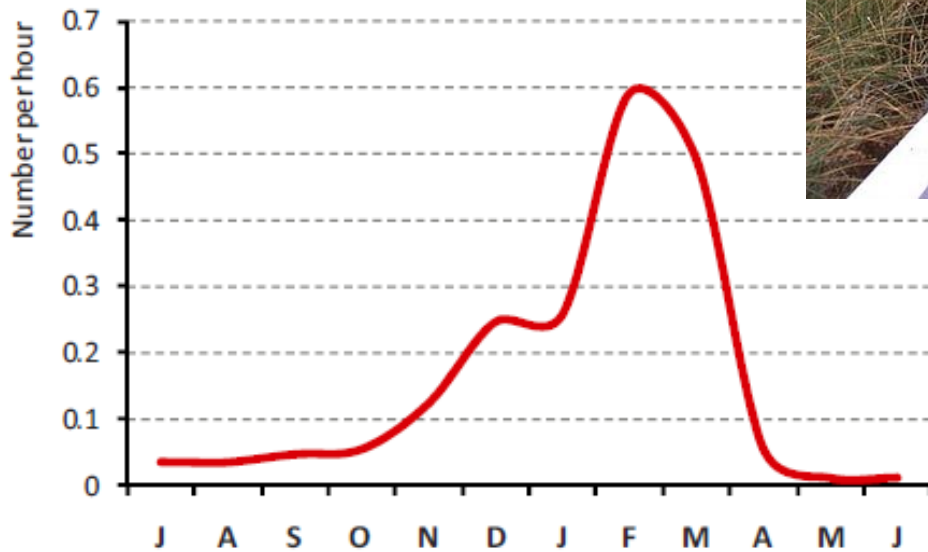
the **highest** proportion of empty stomachs,
the **lowest** reconstructed prey masses,
the **lowest** proportion of energy-rich prey.



www. Trektellen.nl: gone in summer

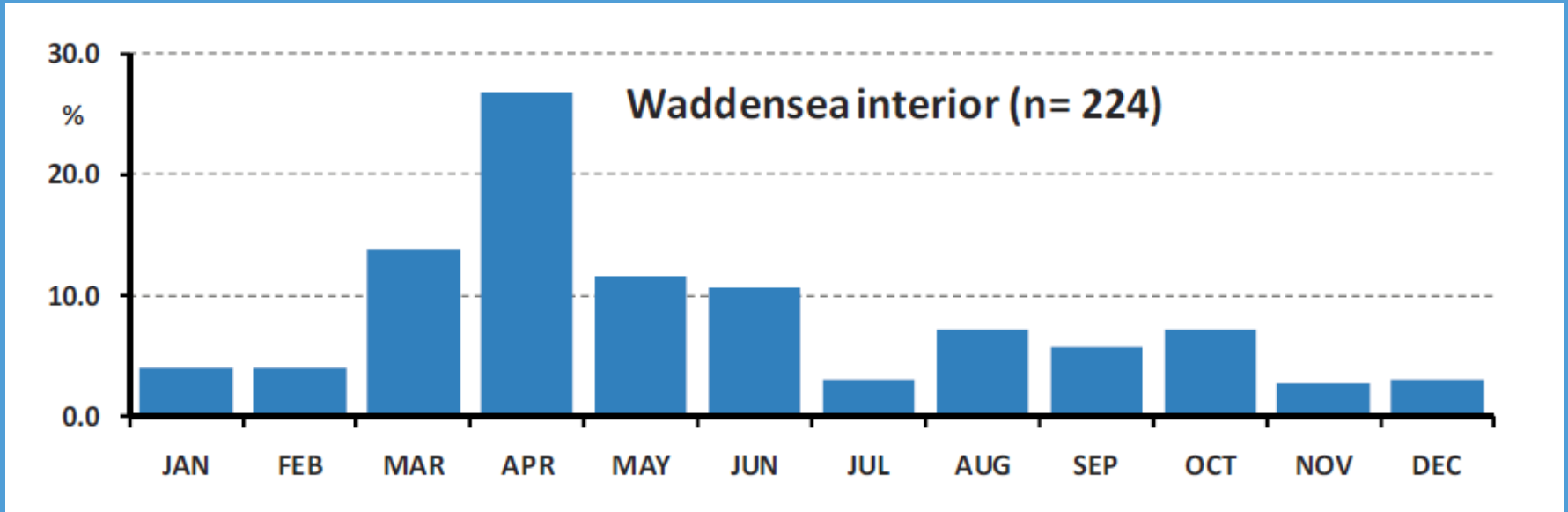


Seawatching Netherlands



Camphuysen & Siemensma 2011. Conservation plan for the Harbour Porpoise in The Netherlands

Strandings within the Dutch Wadden Sea



Camphuysen & Siemensma 2011. Conservation plan for the Harbour Porpoise in The Netherlands

Conclusion: warm waters and porpoises do not match



Where do they go in the Wadden Sea?

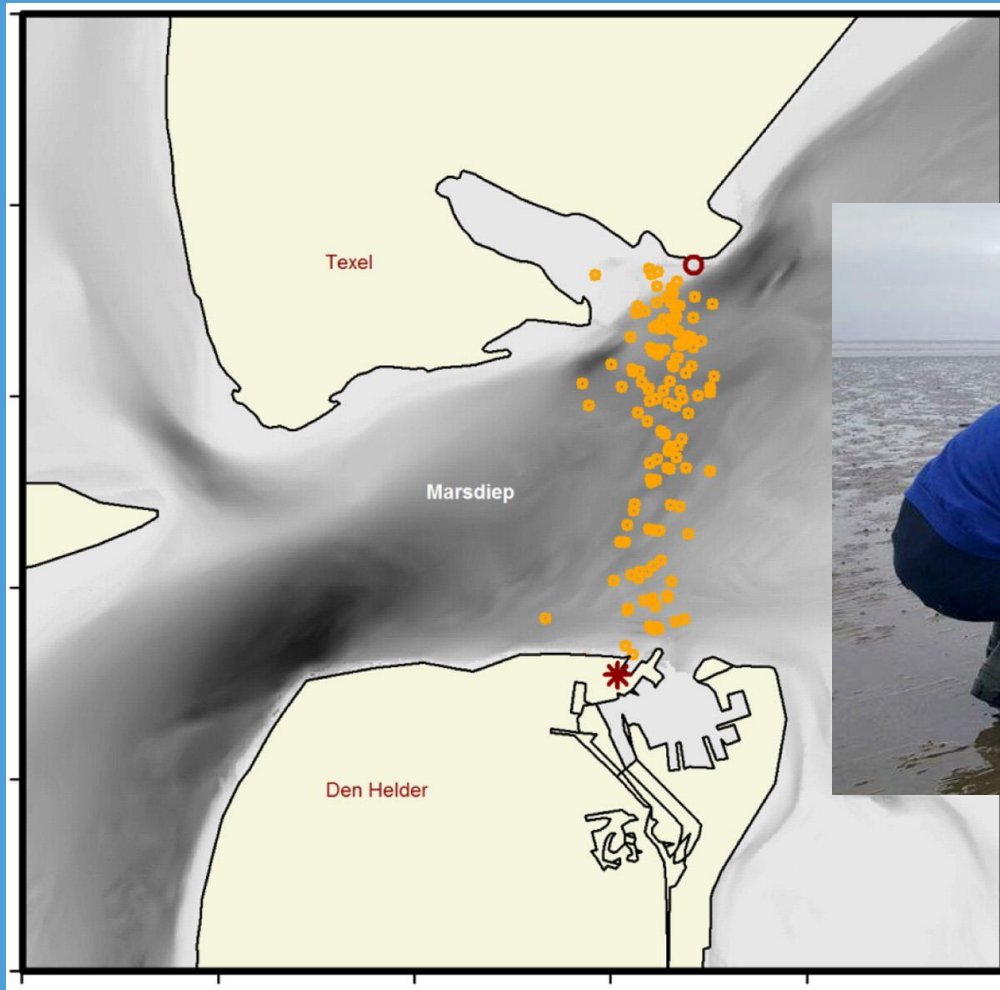


Photo: Ecomare-Texel



IJsseldijk et al 2015 Going with the flow-porpoises in the Marsdiep area

Schweinswal

relativ häufig

Phocoena phocoena

Säugetiere (Mammalia) Schweinswale (Phocoenidae) Art Native

Details Beobachtungen Namen **Karten** Fotos Stimmen

Verbreitungskarte

Intervall verwenden

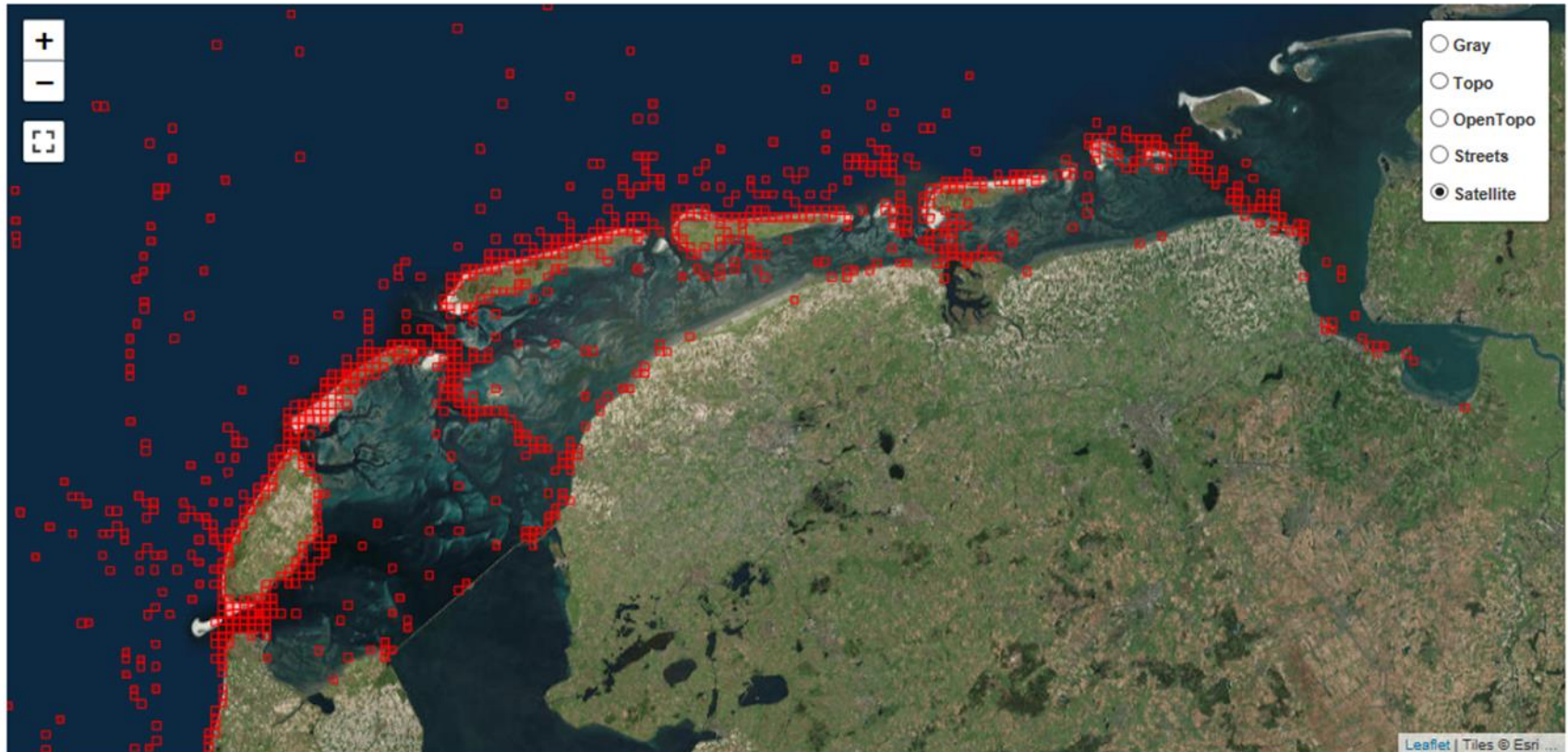
2009-04-10

2019-04-10

nur genehmigte

1km Raster ▾

Filter





Schweinswal - *Phocoena phocoena* (Linnaeus, 1758)

Artengruppe: Säugetiere (Mammalia) Familie: Schweinswale (Phocoenidae) Genus: Phocoena Status: einheimisch, Art Selten...

Unterart: *Phocoena phocoena ssp. nov.*

Unterart: Gewöhnlicher Schweinswal ssp relictica - *Phocoena phocoena relictica*

Unterart: *Phocoena phocoena phocoena*

alle

Karten

von bis

Aktivität *

Methode

sortiert nach Anzahl beobachteter Exemplare Beobachtungen Vorkommen

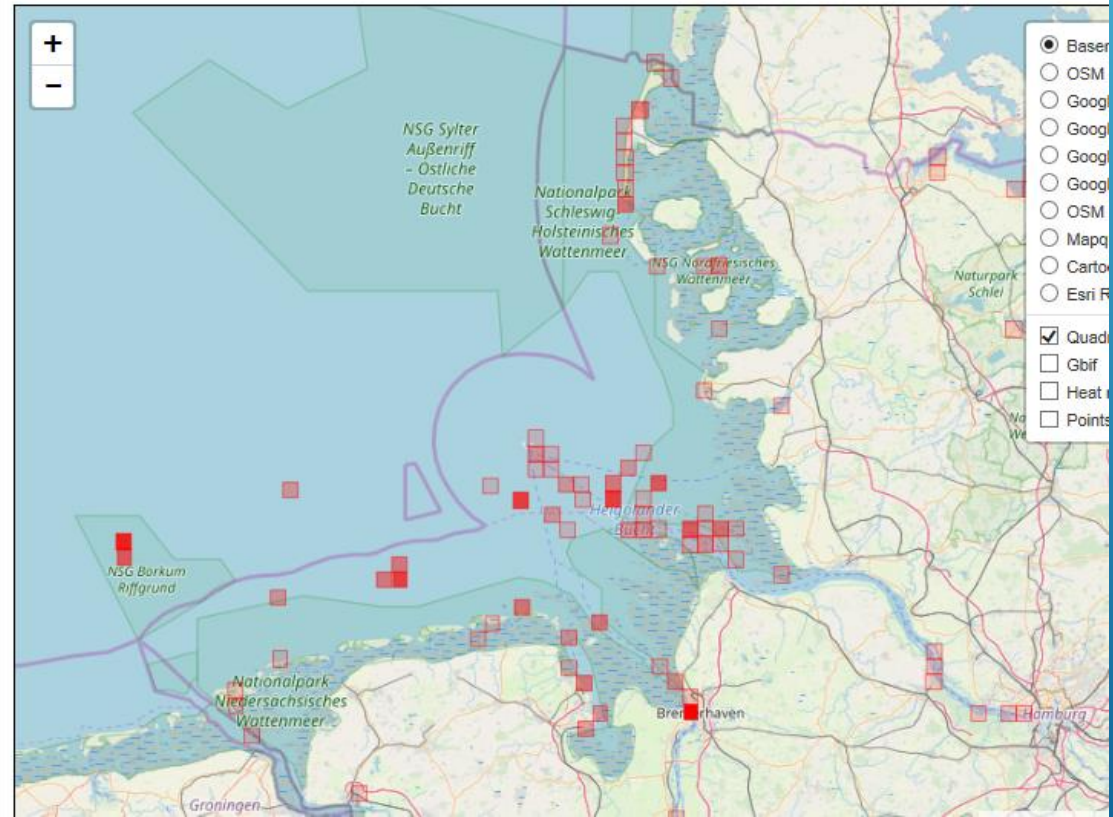
Raster

zusätzliche Art

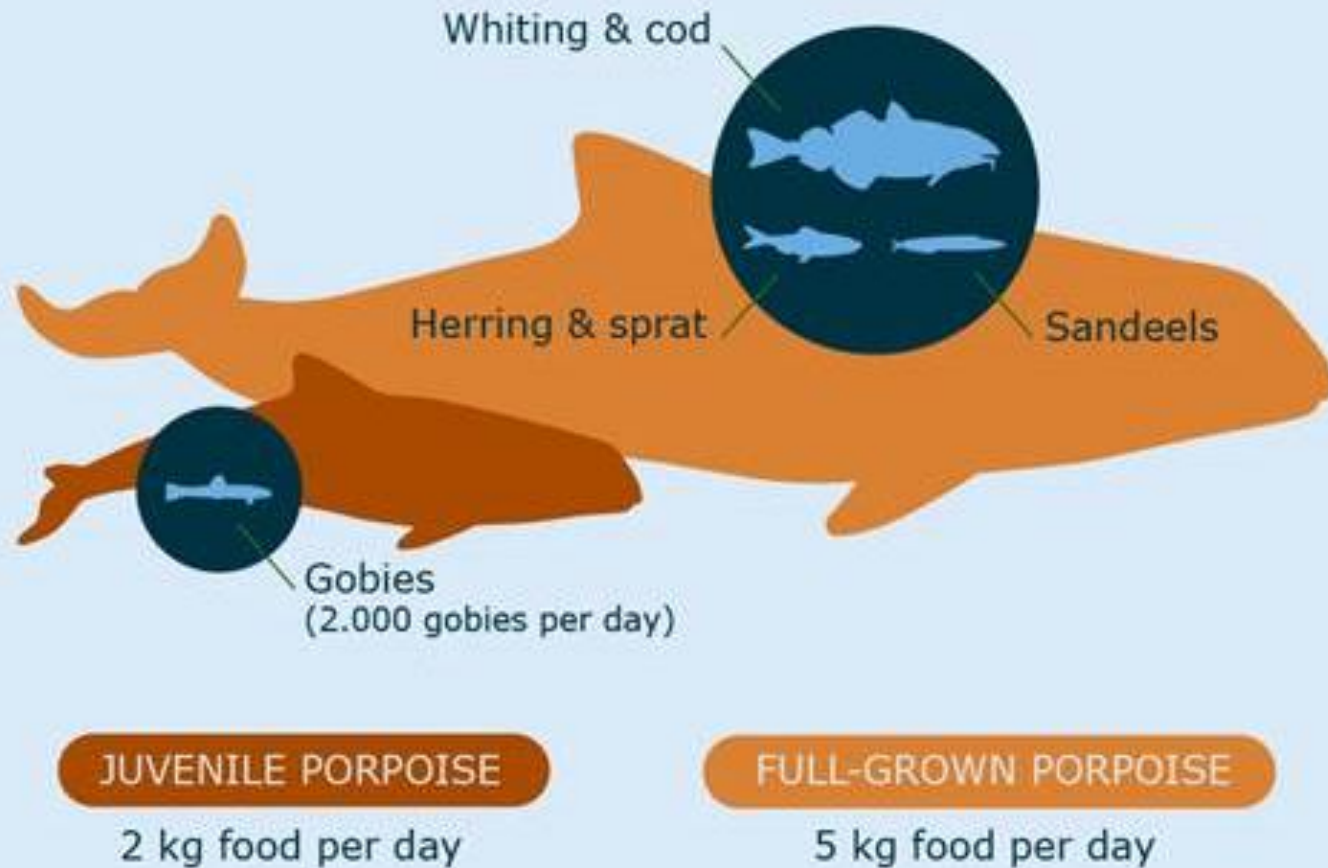
Heatmap anzeigen

Jahreszeiten

<https://germany.observation.org>

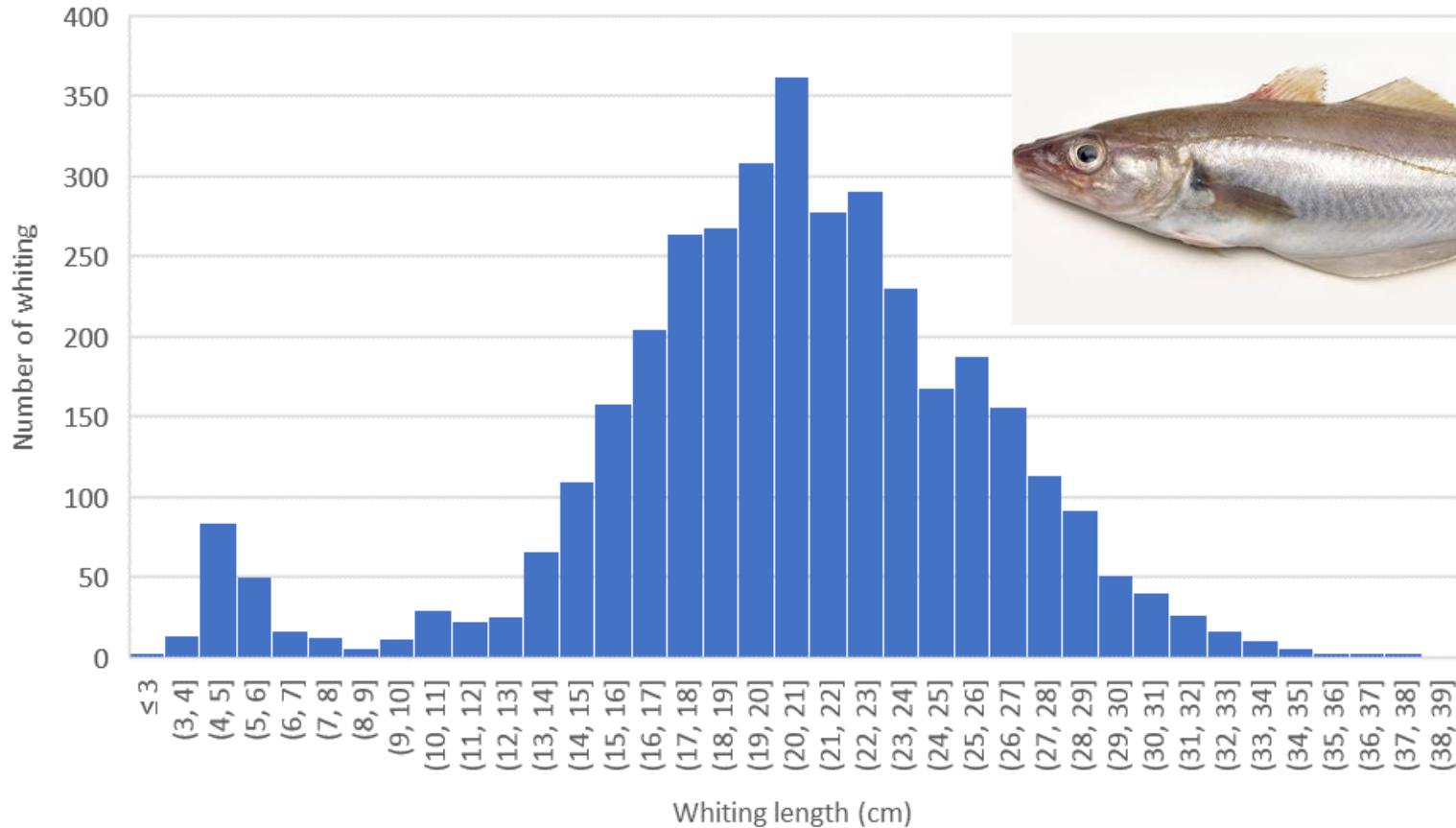


Porpoise diet in North and Wadden Seas

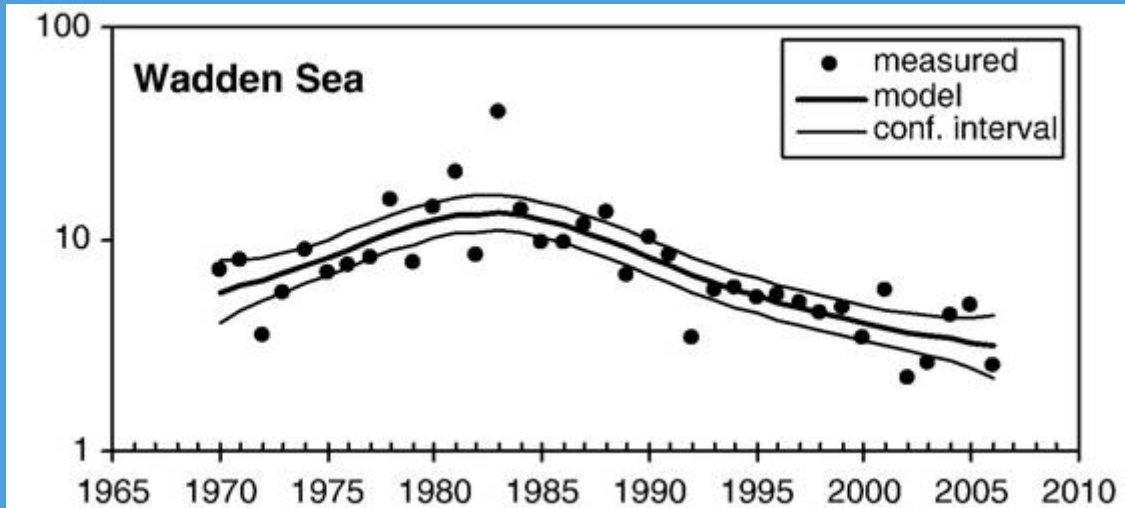


1-group whiting important for porpoises

Whiting length in porpoise stomachs

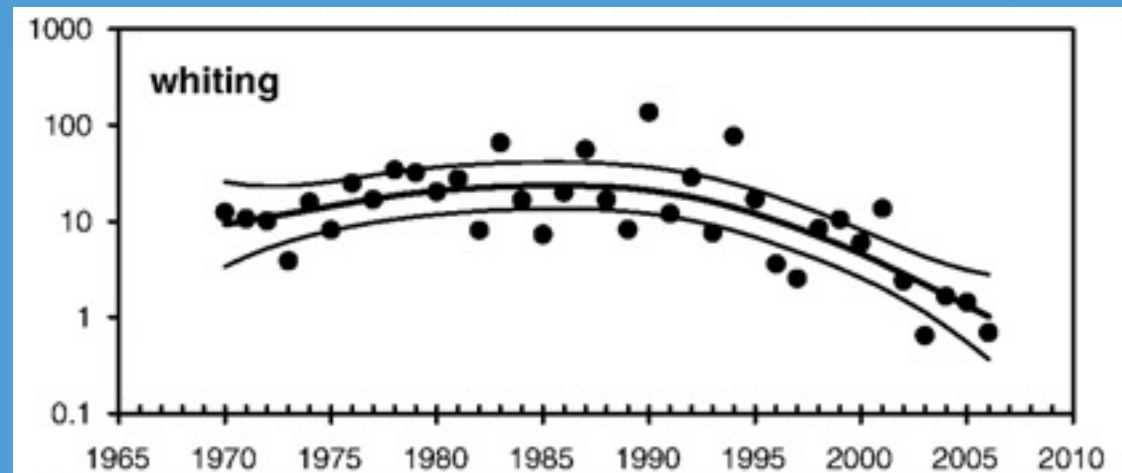


Fish in the Dutch Wadden Sea

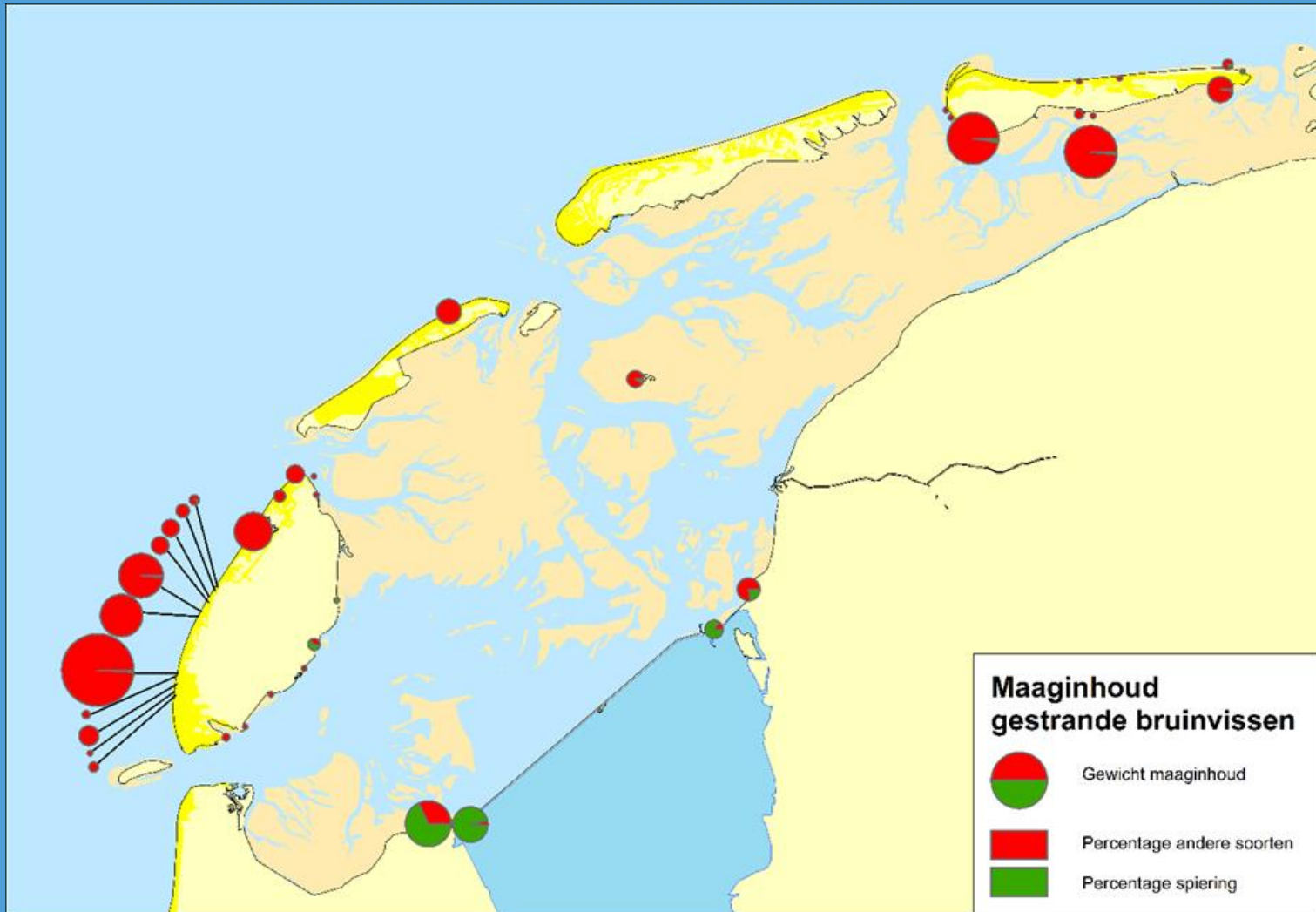


← total fish biomass (kg/ha)

Whiting densities (n/ha)



Smelt on the increase – and porpoises take them



Estuaries and Smelts are “popular” today

- **Weser:** Wenger & Koschinski (2012) *Mar. Biol. Res.* 8: 737-745
- **Ems:** Weel et al. (2018) *Lutra* 61: 137-152
- **Dutch Wadden Sea:** Mairo et al. (2017) *Zoogdier* 28-4: 8-9
- **Western Scheldt:** Leopold et al (2015) PhD thesis WUR



But...



Servivorschlag

And there is a bigger “but” in the Wadden Sea



Photo: Robert Lehmann (www.geo.de)

Leopold et al. (2015) Porpoises – from predator to prey



Photo: Jaap van der Hiele

Conclusion:

- The Wadden Sea is:
 - Shallow and very **warm** in summer
 - **Not rich** in prey
 - **Dangerous** for porpoises