

Diet effects on chick development of Lesser Black-backed Gulls

Alejandro Sotillo



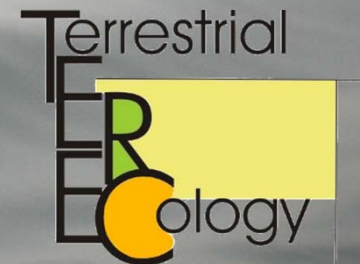
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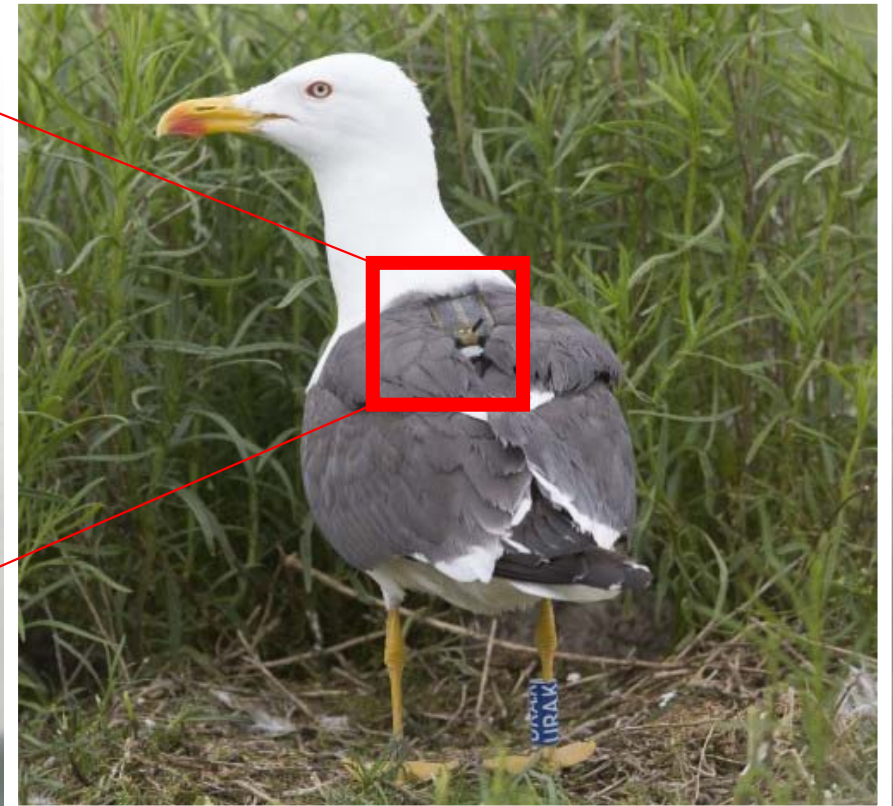
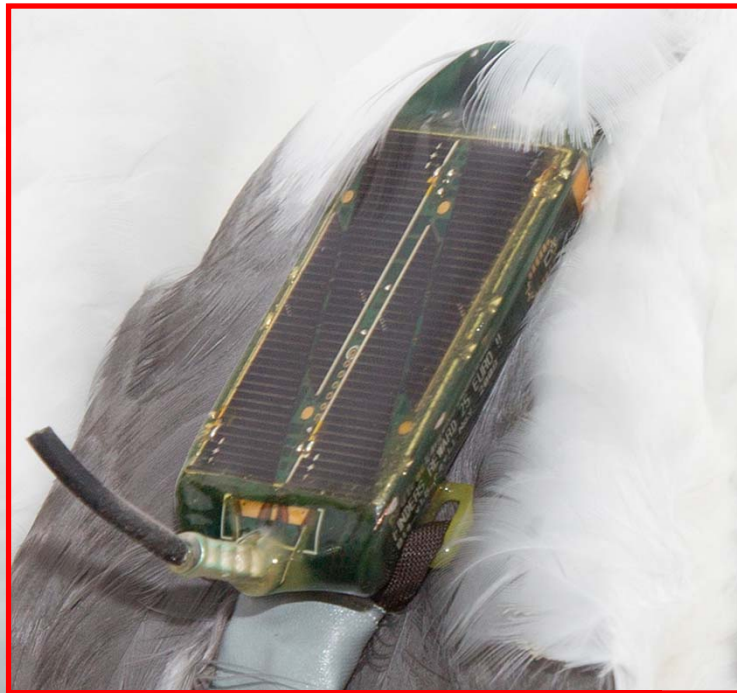
Co-authors: Cátia Santos, Marta Monteiro, Susana Loureiro, Wendt Müller, Liesbeth de Neve, Luc Lens



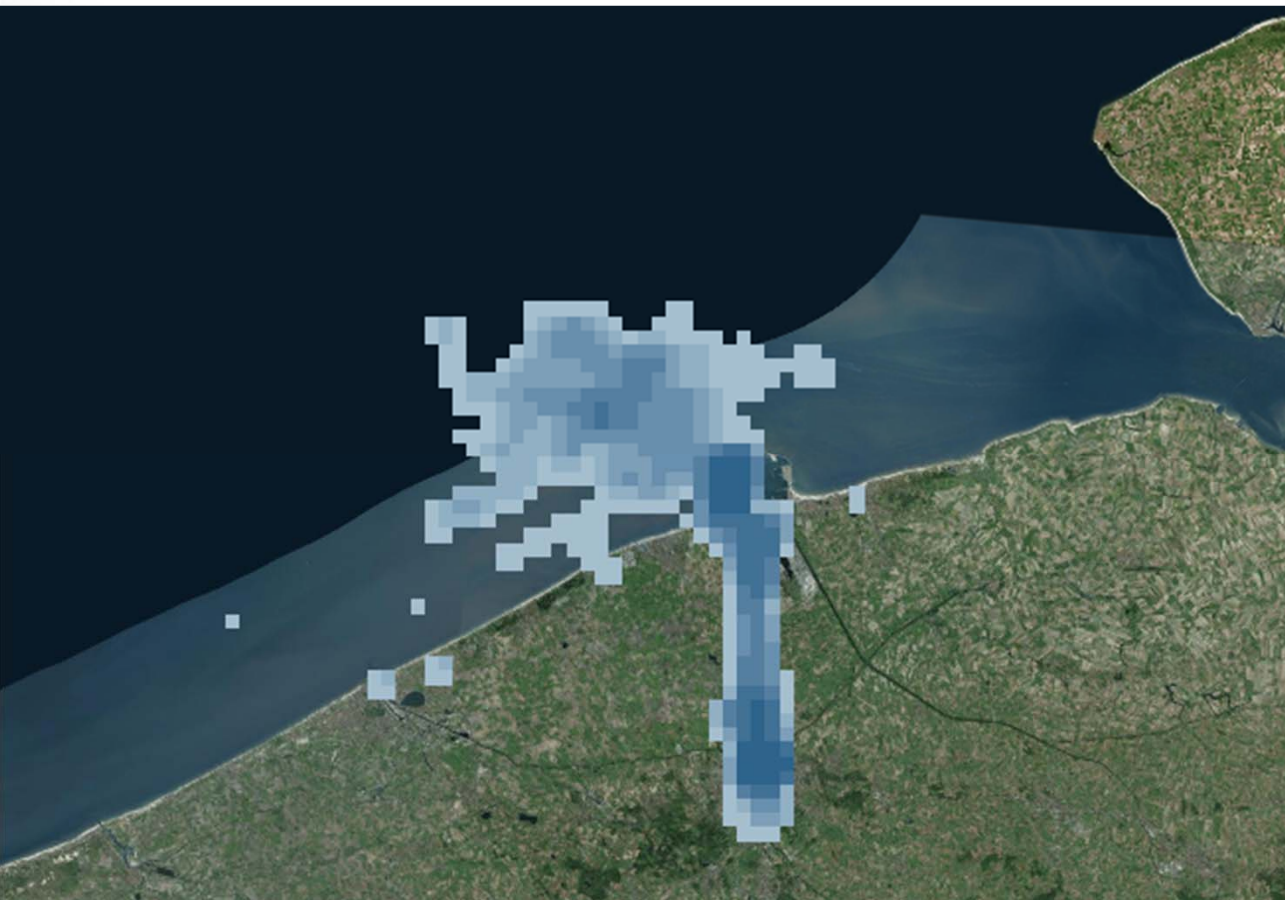
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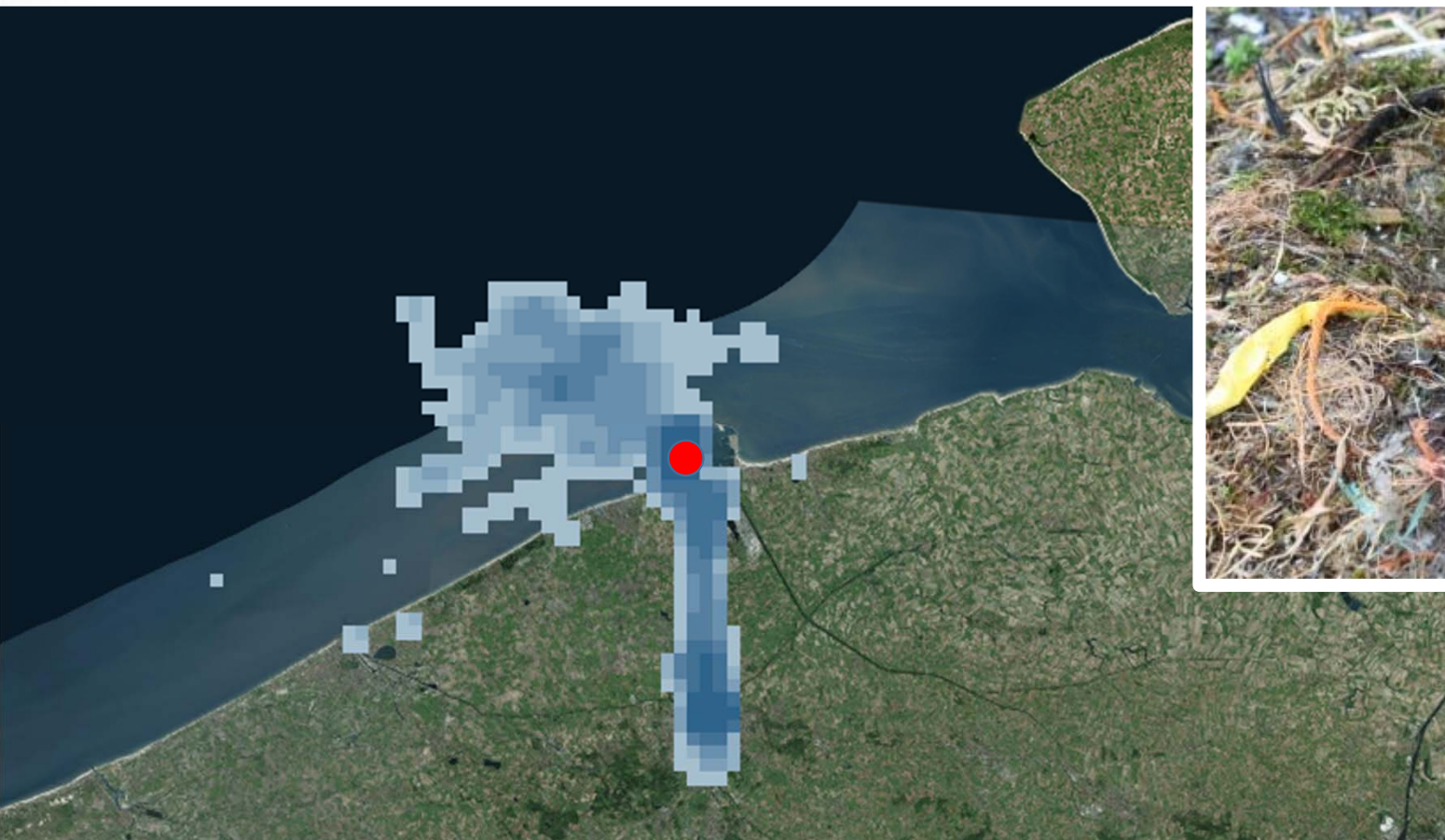
Meet Hans the Lesser Black-backed Gull



Meet Hans the Lesser Black-backed Gull



Meet Hans the Lesser Black-backed Gull



Meet Hans the Lesser Black-backed Gull



Image: Ziko-C

Meet Hans the Lesser Black-backed Gull



Hans has a problem

New EU fisheries discard ban gets underway

By Jason Holland, Contributing Editor reporting from London

Published on Monday, January 04, 2016

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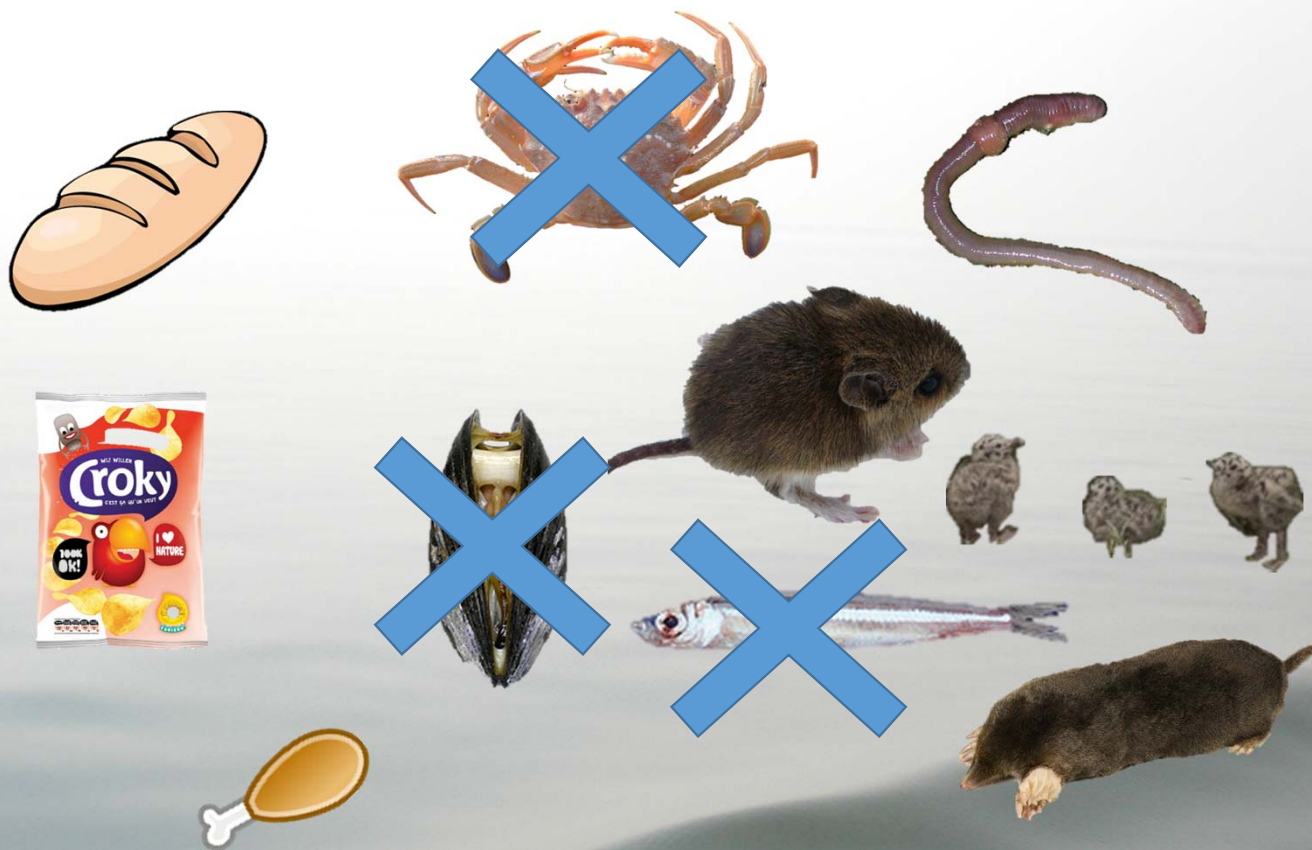


European fishermen targeting certain demersal species such as haddock, sole and plaice must now land their entire catch following the introduction of the next phase of the wider EU landing obligation, or “discard ban,” whether or not it fits their allocated quota.

Implemented on 1 January, the demersal discard ban is the second such measure to be introduced by EU member states in a bid to end the wasteful practice of discarding non-quota catch at sea. A pelagic landing obligation was introduced a year ago for those fishermen targeting mid-water species such as blue whiting, herring and mackerel.

To support industry and to help fishermen adapt, the ban is being gradually introduced along with a number of flexibilities such as more freedom to bank

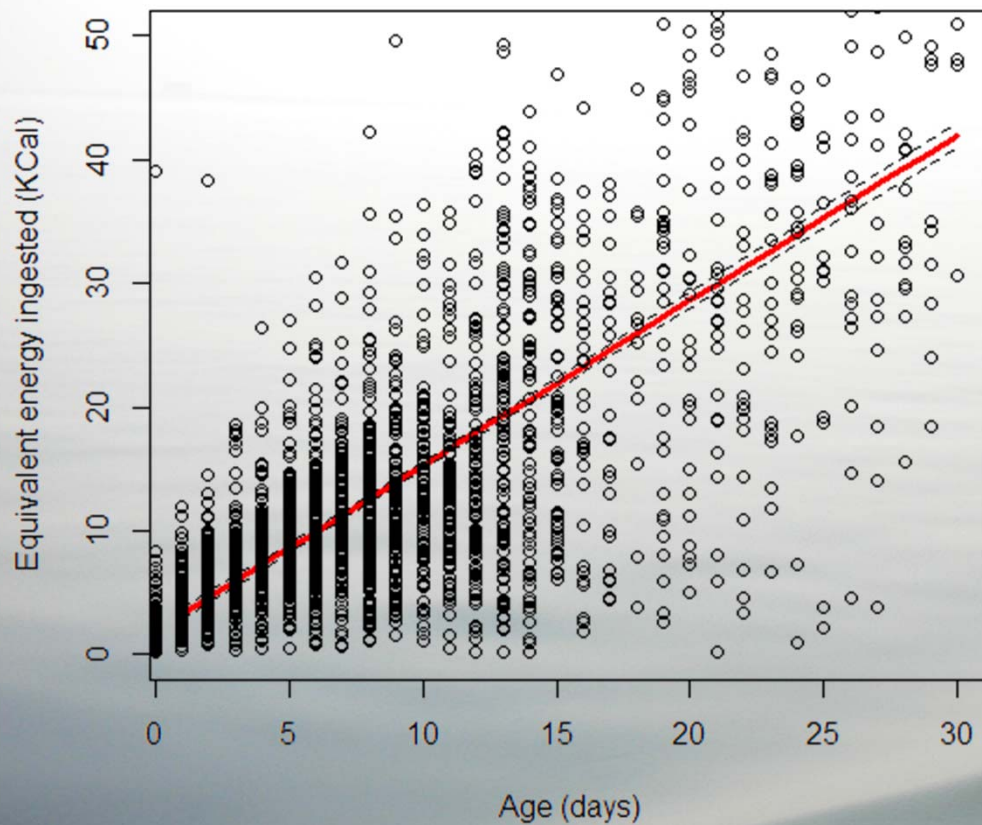
Alternatives to discarded fish?



2014: energy demand of a gull chick



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2015: Are mixed or terrestrial diets possible?



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2015: Are mixed or terrestrial diets possible?

- 20 chicks Terrestrial food:

- 10 *ad libitum*
- 10 restricted (based on 2014 results)



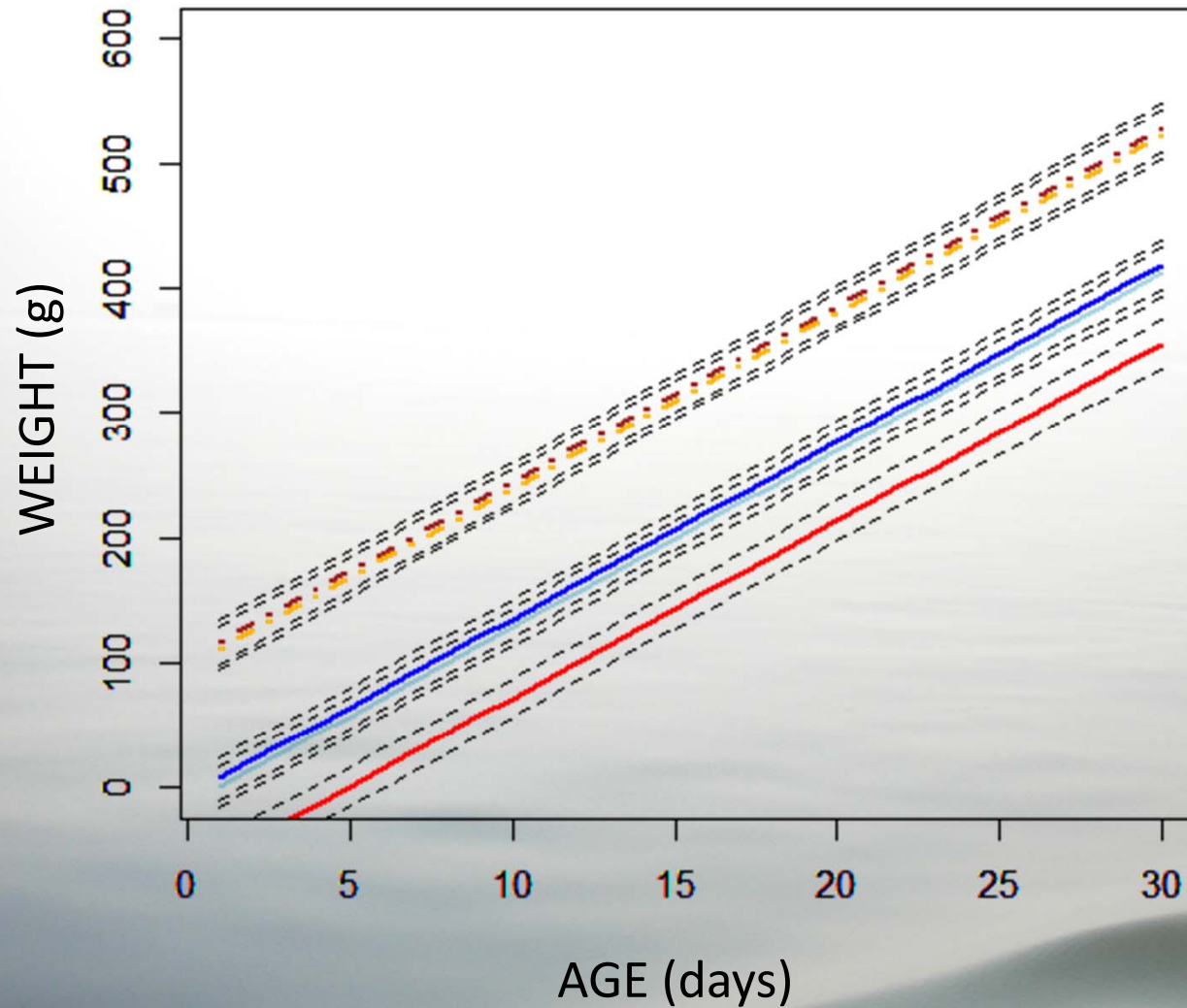
- 10 chicks Mixed (terrestrial + fish)

- All *ad libitum*

- 20 chicks Fish:

- 10 *ad libitum*
- 10 restricted



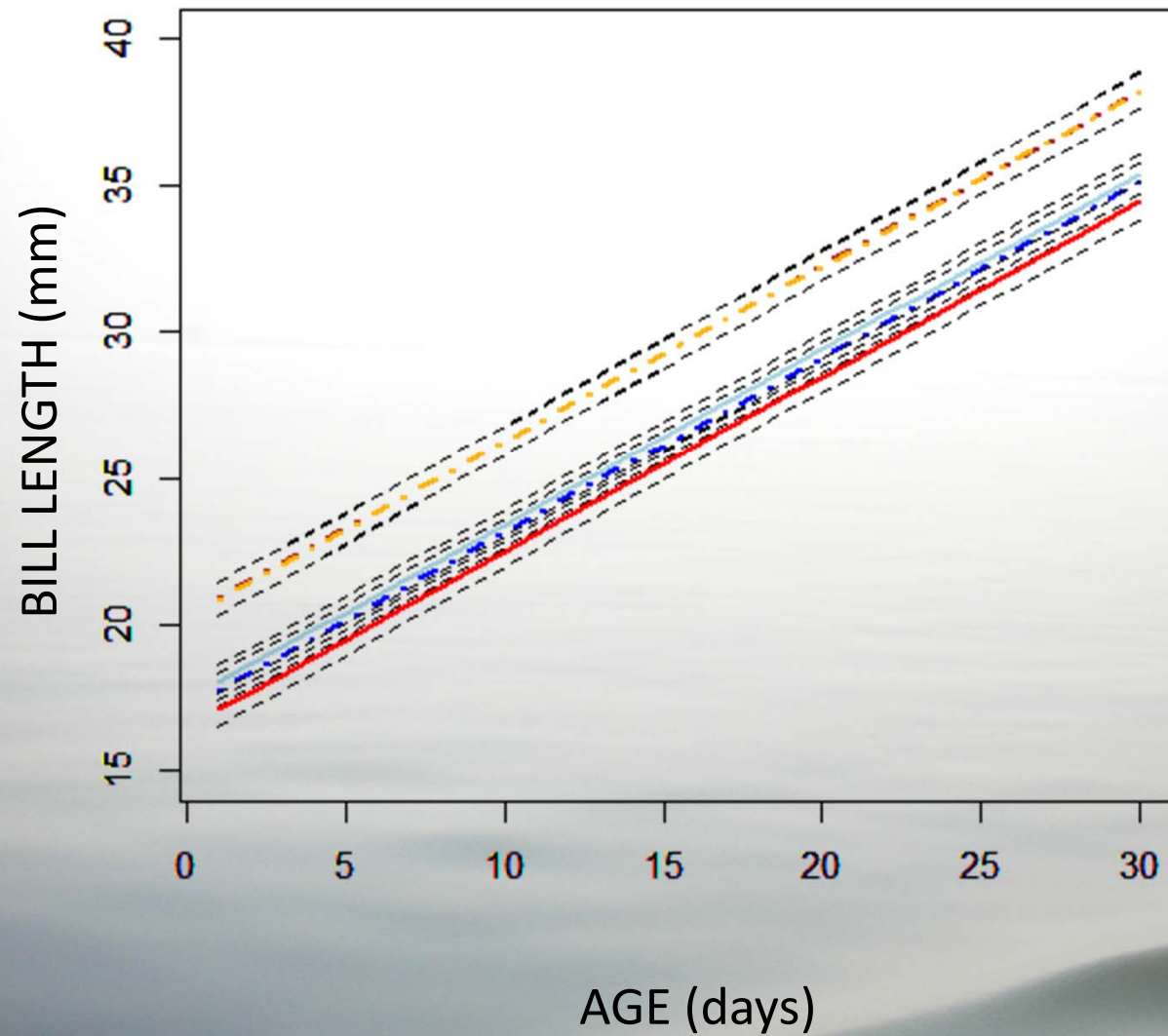


Terrestrial high and Mixed

Marine high and marine low

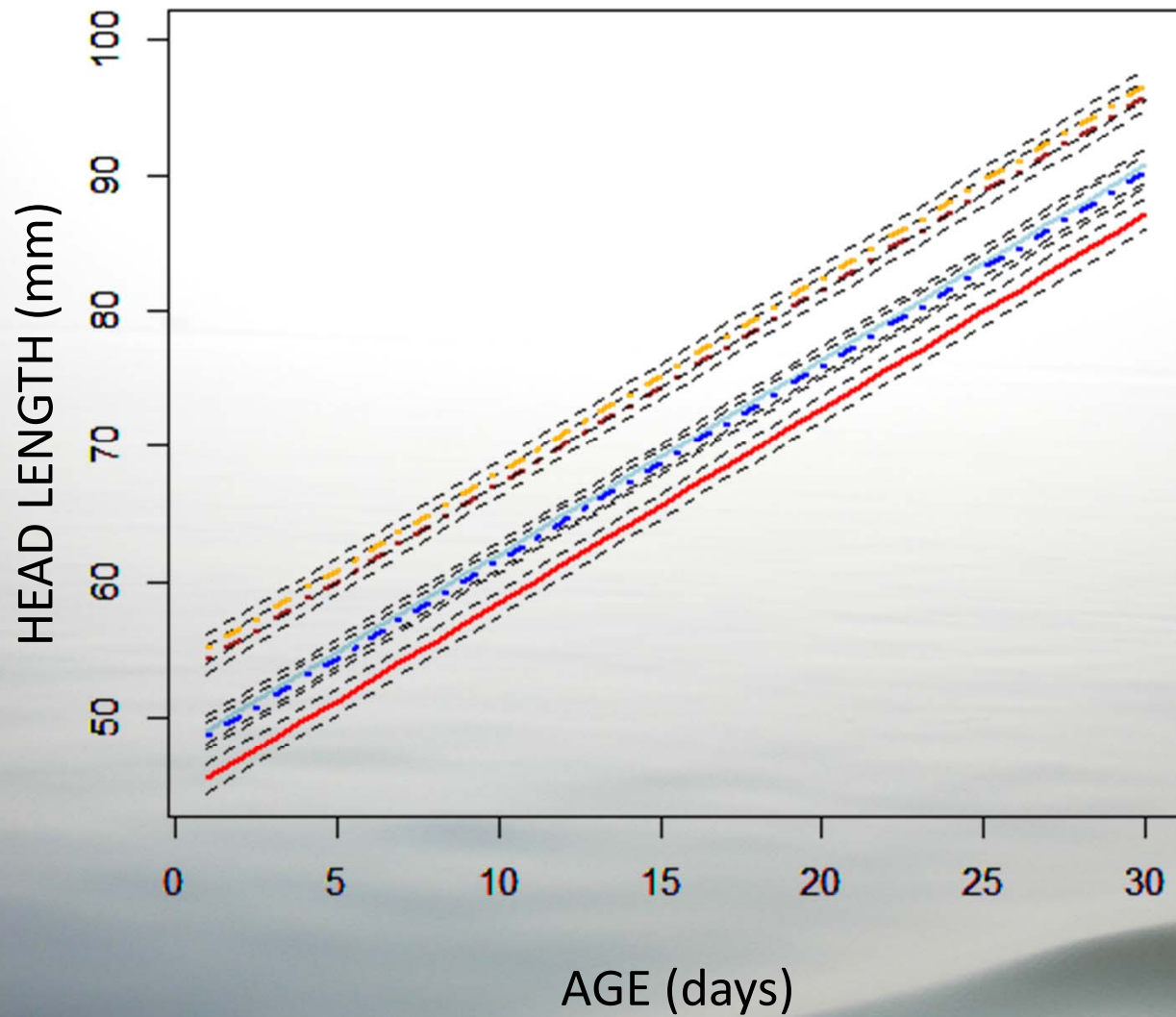
Terrestrial low



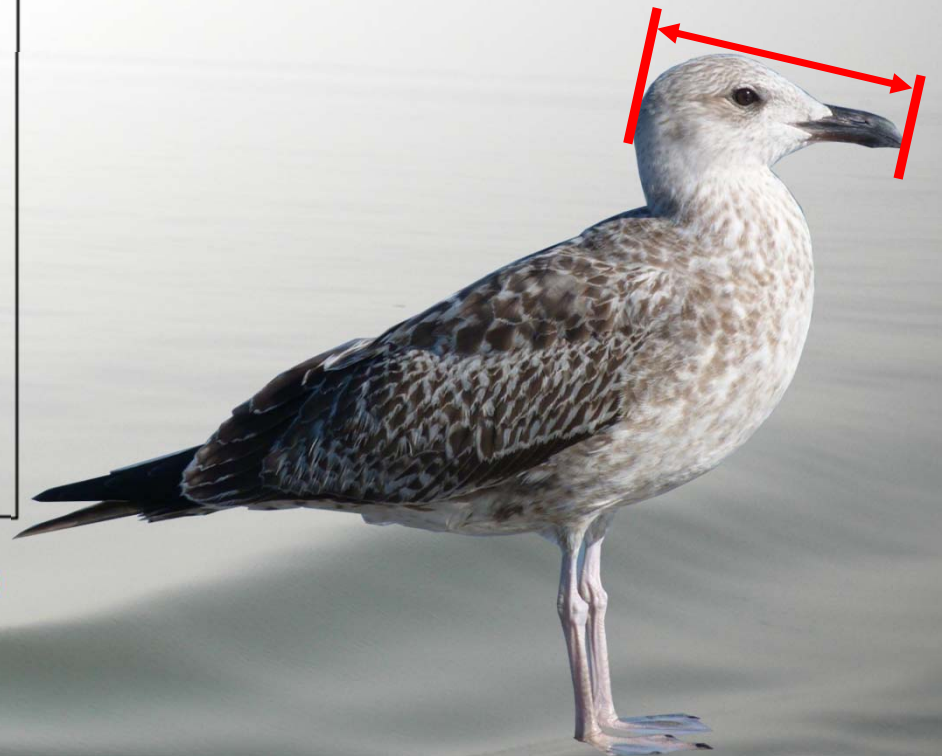


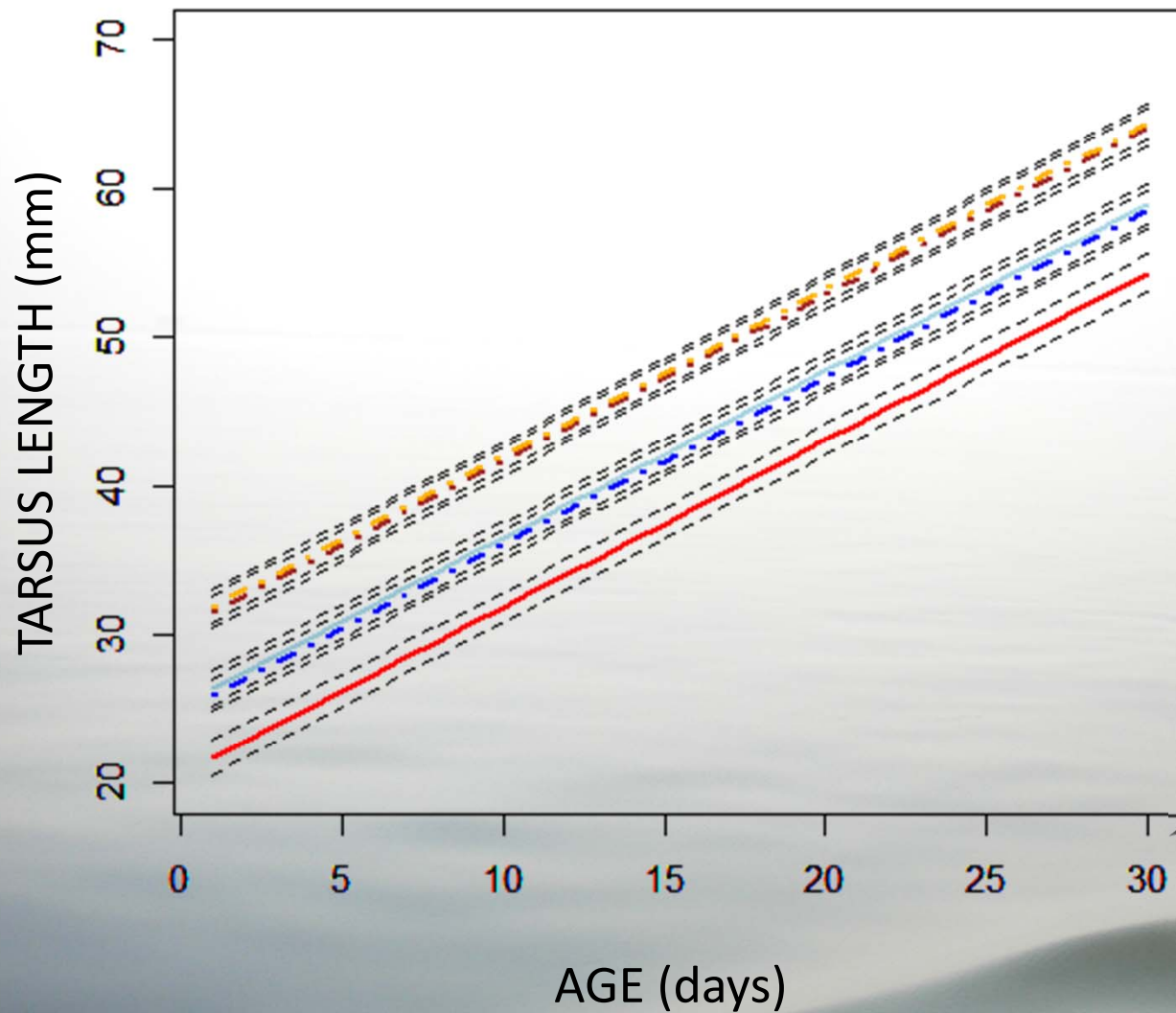
Terrestrial high and Mixed
Marine high and marine low
Terrestrial low



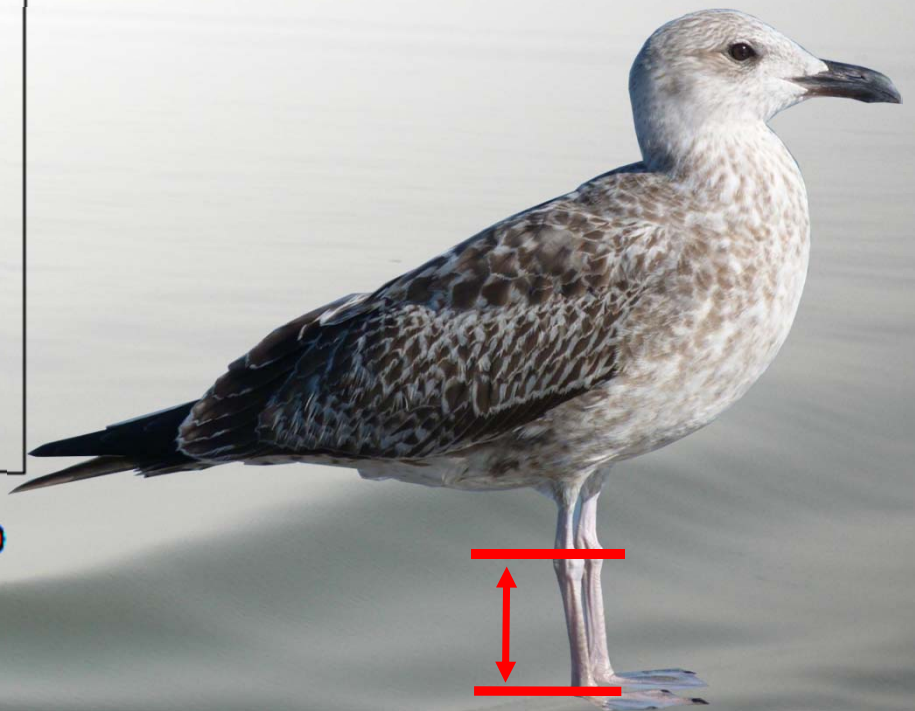


Terrestrial high and Mixed
Marine high and marine low
Terrestrial low





Terrestrial high and Mixed
Marine high and marine low
Terrestrial low



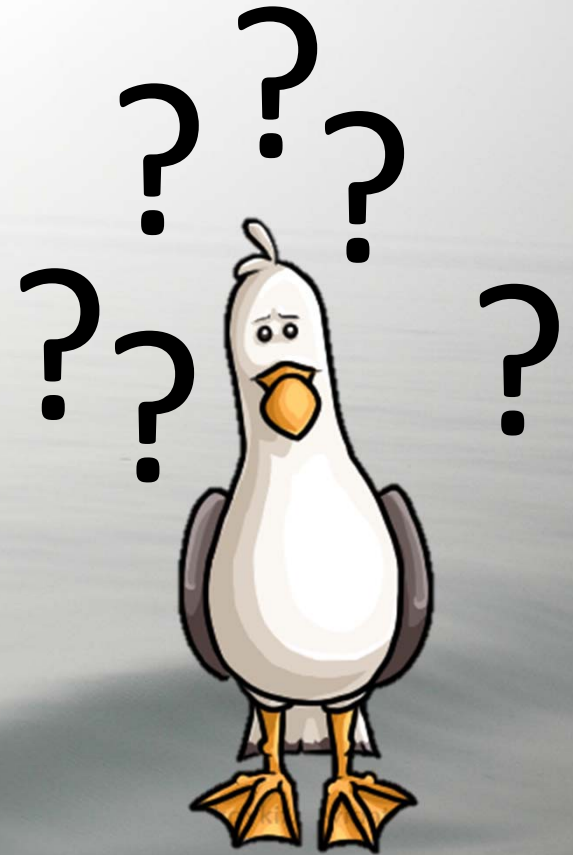
Are mixed or terrestrial diets possible?

- No : Terrestrial food is more energy rich than fish, but lacks nutrients



Still plenty of data to analyze

- Behavioural experiments: development of nervous system
- Toxicology: mercury & POPs
- Nutrient profile of diets
- Digestibility of diets



Thank you

- Co-authors:

- Cátia Santos, Marta Monteiro, Susana Loureiro, Wendt Müller, Liesbeth de Neve, Luc Lens

- Collaborators:

- Hans Matheve, Marwa Kavelaars, Liesbeth Verlinden



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- Students:

- Trisha Gupta, Sam Durnez, Sergio Delgado, Wendy Baetens