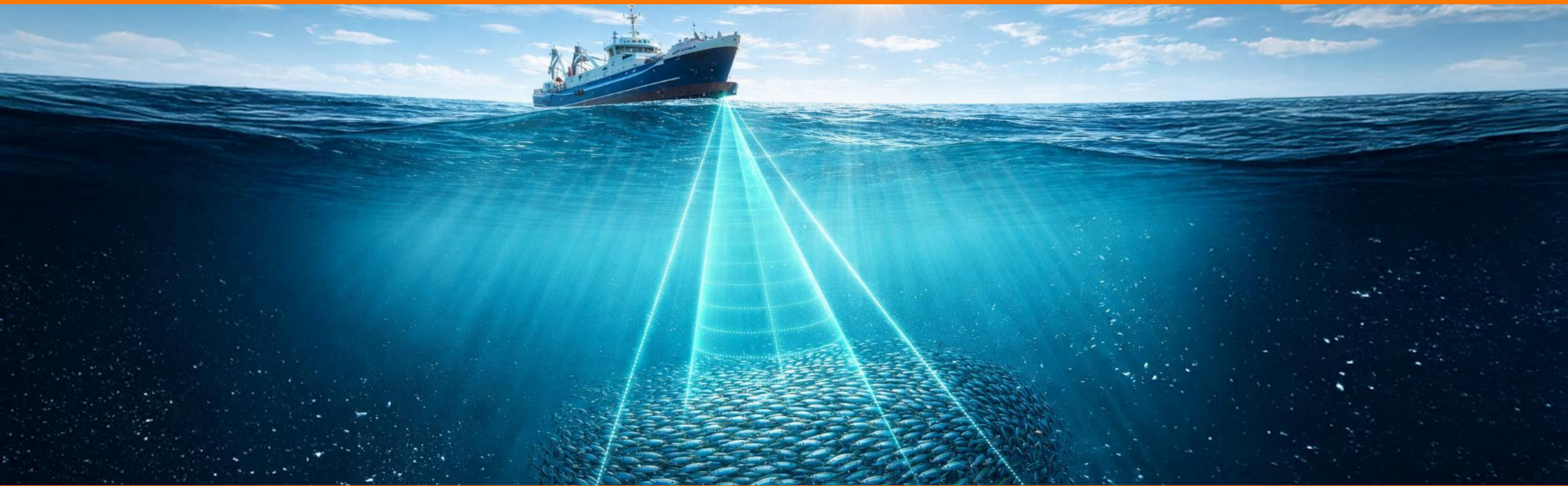


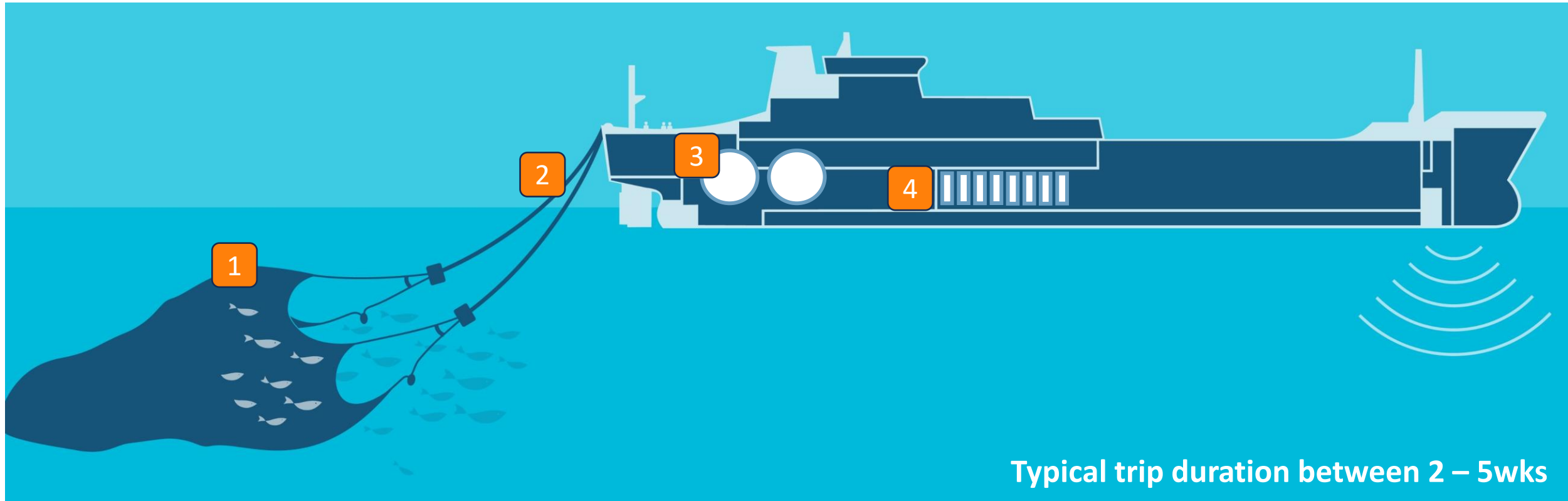
How routine **semi-structured interviews** with skippers help us better understand the ecosystem and **find the needle in the data-haystack**



N.T. Hintzen, L. de Nijs, M. Kraan, N.A. Steins

May 2026

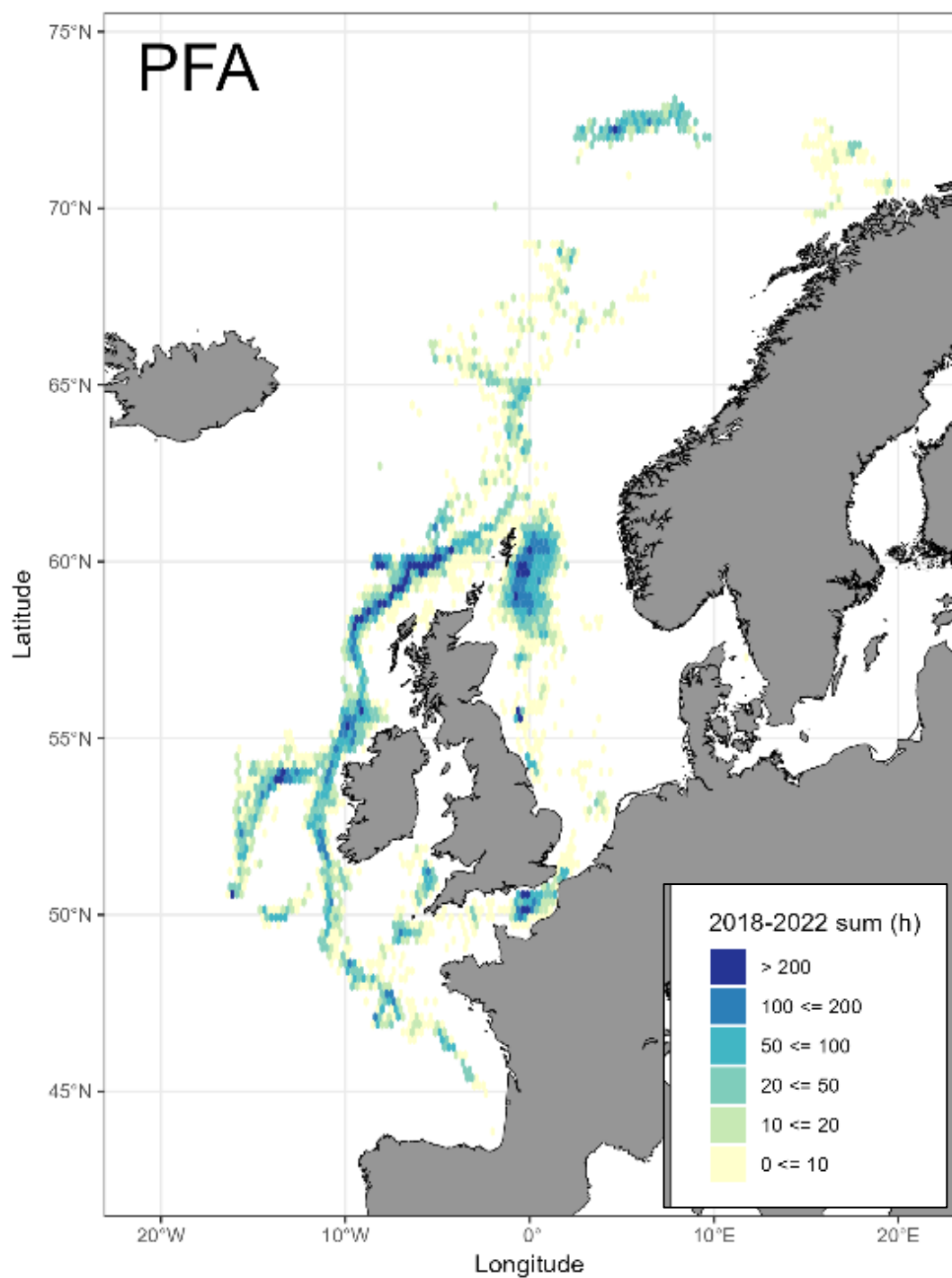
## Trawling using a freezer trawler



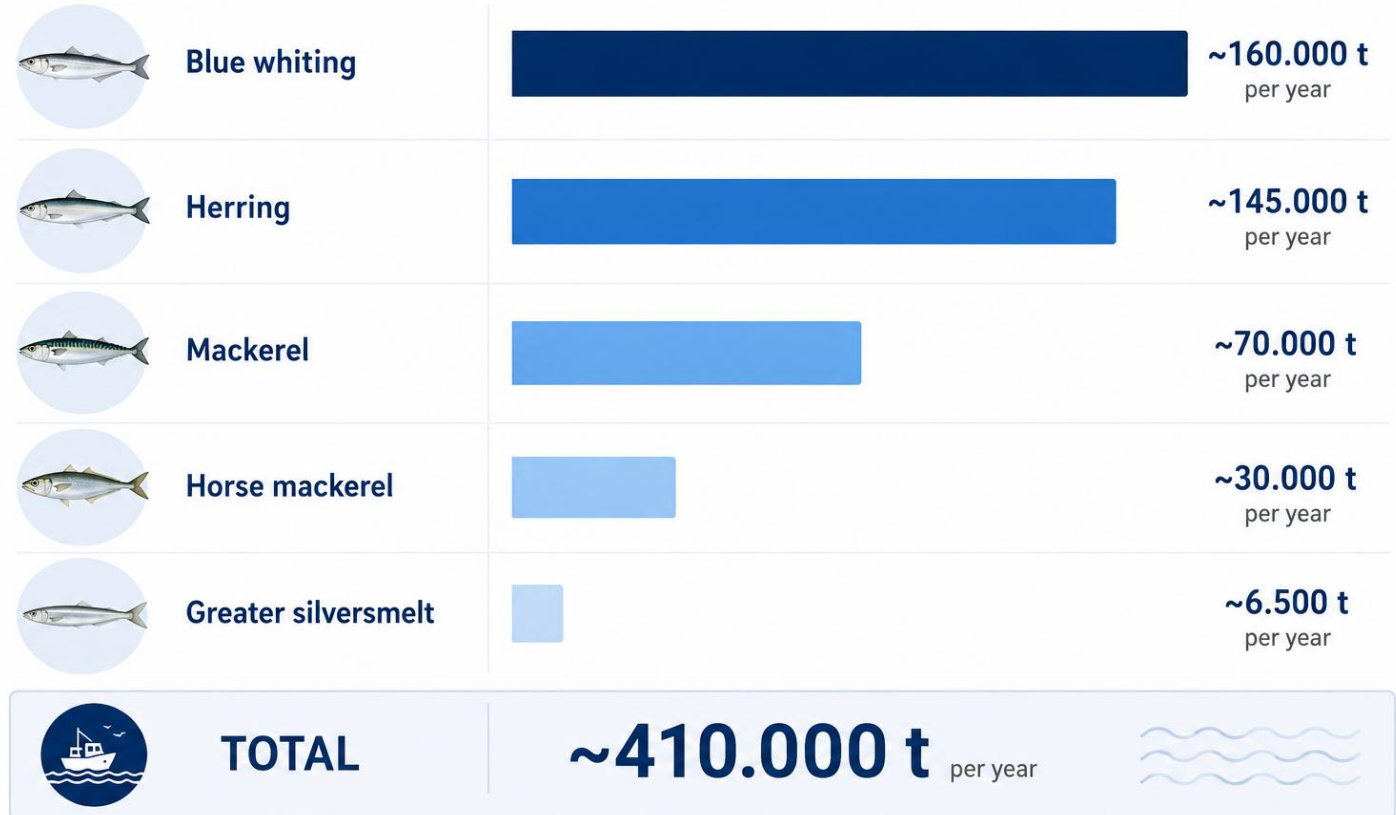
Typical trip duration between 2 – 5wks

- 1 Capturing fish
- 2 Pumping fish onboard

- 3 Temporarily storing fish
- 4 Freezing fish



## Where do the PFA vessels operate?



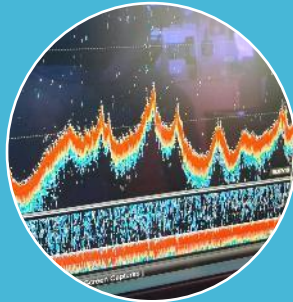
# Self-sampling programme on PFA vessels



1.  
Self sampling



2.  
Biological  
sampling



3.  
Vessel  
acoustics



4.  
Camera  
monitoring



5.  
Automatic  
measurement



6.  
Reducing  
bycatch



7.  
Welfare



8.  
Reducing fuel  
use

2015 – 2026: Self-sampling haul, gear, environmental information, biological characteristics of the catch, length frequency  
+2024 – 2026: Semi-structured interviews with skippers after the trip

# Semi-structured interview template

## Vessel Visit – Interview Protocol

Trip Details		Researcher	
Date		✓ Niels	▢
Vessel		✓ Lina	▢
Trip Code		🔍 Target species	
Skipper name			

**Items to follow up / feed back**

🔗 Notes from previous visit or commitments to report back on:

1. How did the trip go?

2. What was different this trip? (compared to other trips / last year / longer ago)

Fishing Area	Catch
Where did you fish? (probe for detail: search strategy, tow duration)	CPUE? By-catch? (specifically ETP species)

Environment	Innovation
Sea state? Waves? Wind? Water temperature?	Are you working on an innovation? Grid? Cameras in net? Other: .....

3. Is there anything you are concerned about?

**Researcher's notes**

🗨 Notable observations from this conversation (remarkable answers, unexpected topics, etc.)

- Room for in-depth questions during the interviews
- Room for feedback by skippers on large range of (unrelated) topics
- Interviews take approx. 1 – 1.5u
- 73 interviews to date, 106 species/trip combinations (~20% of all trips)
- Ability to perform interview depends on landing harbour, time to off-load catch and planning to go out to sea

# Impact of wind on blue whiting CPUE

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SK

Lot of bad weather — every few days we had to heave to

09:17

SK

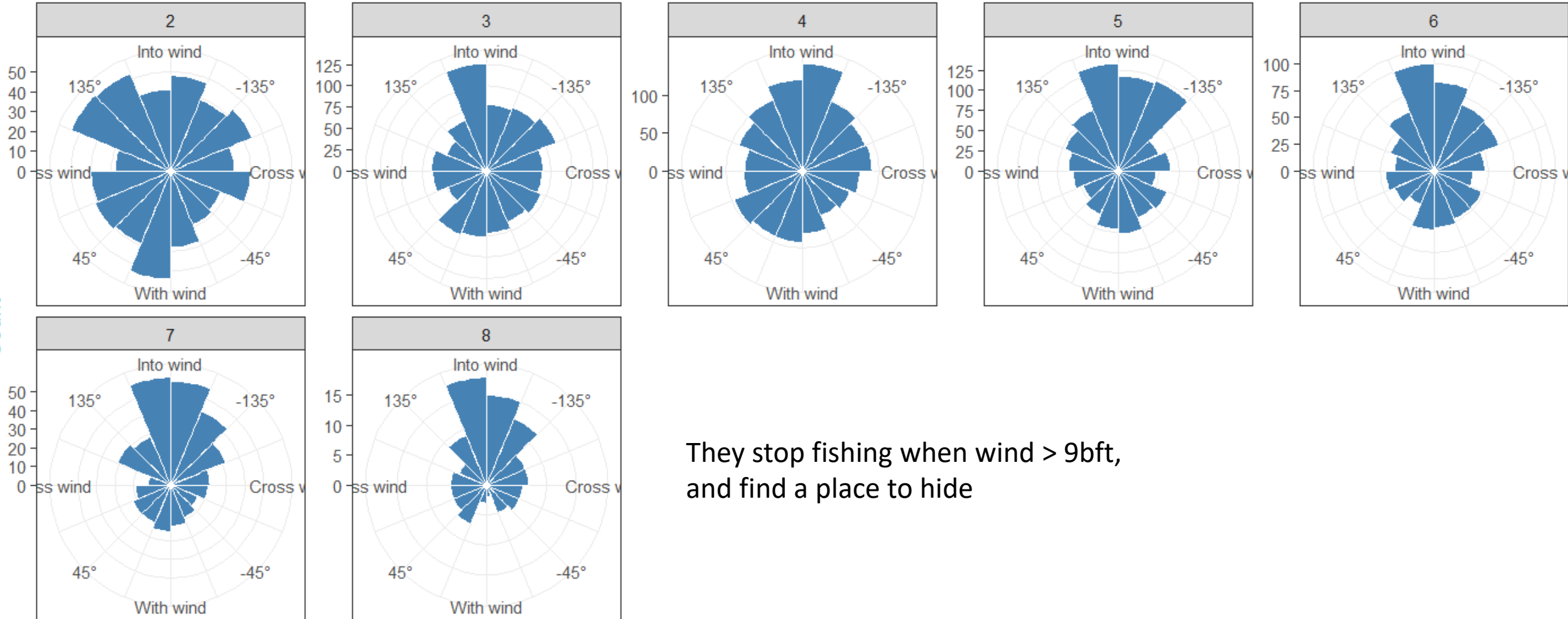
Beastly weather... Had to shelter from storm Eowyn, lost about 9 days all in all, really a lot of wind — caused massive swells.

11:43

# Impact of wind on blue whiting CPUE



## Haul direction relative to wind, by wind force

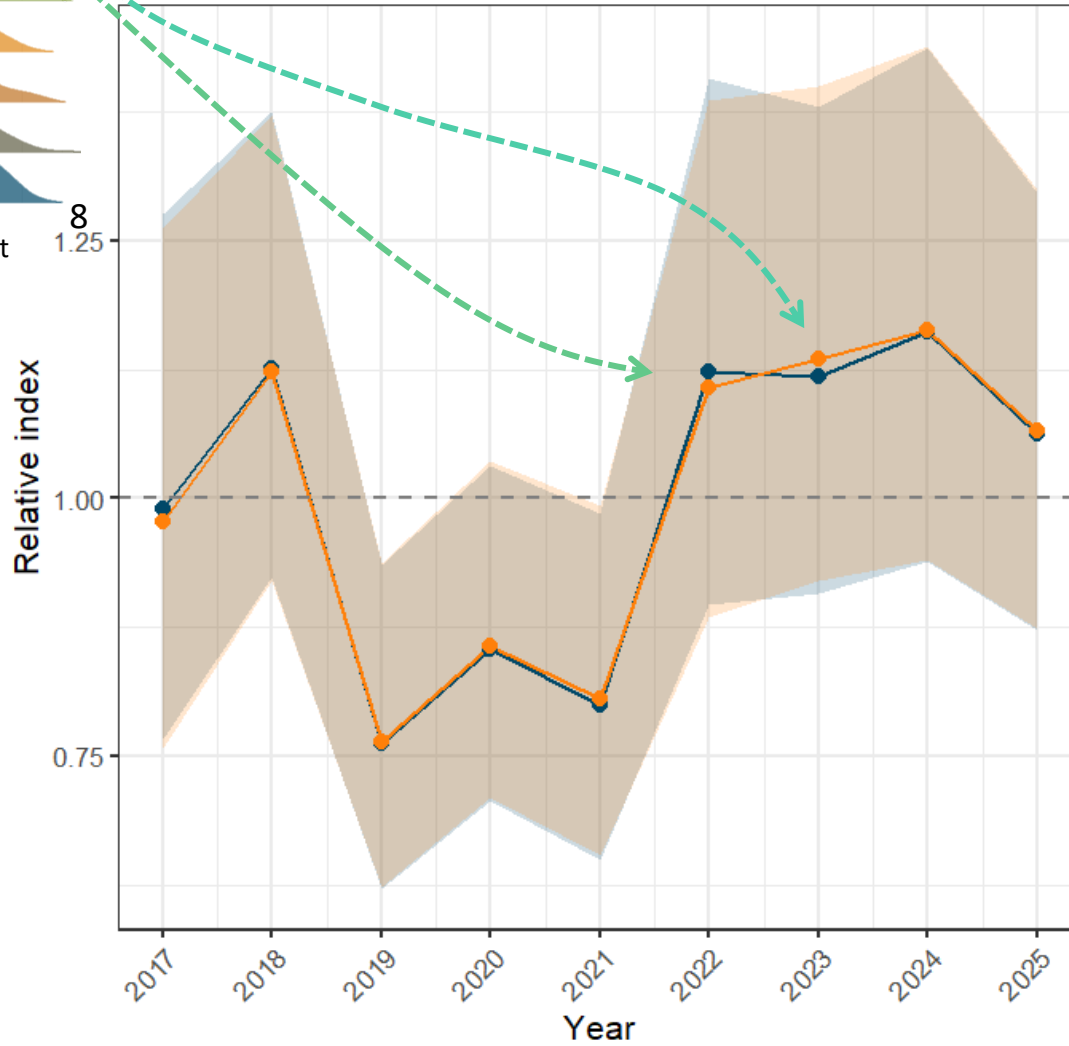


They stop fishing when wind > 9bft, and find a place to hide

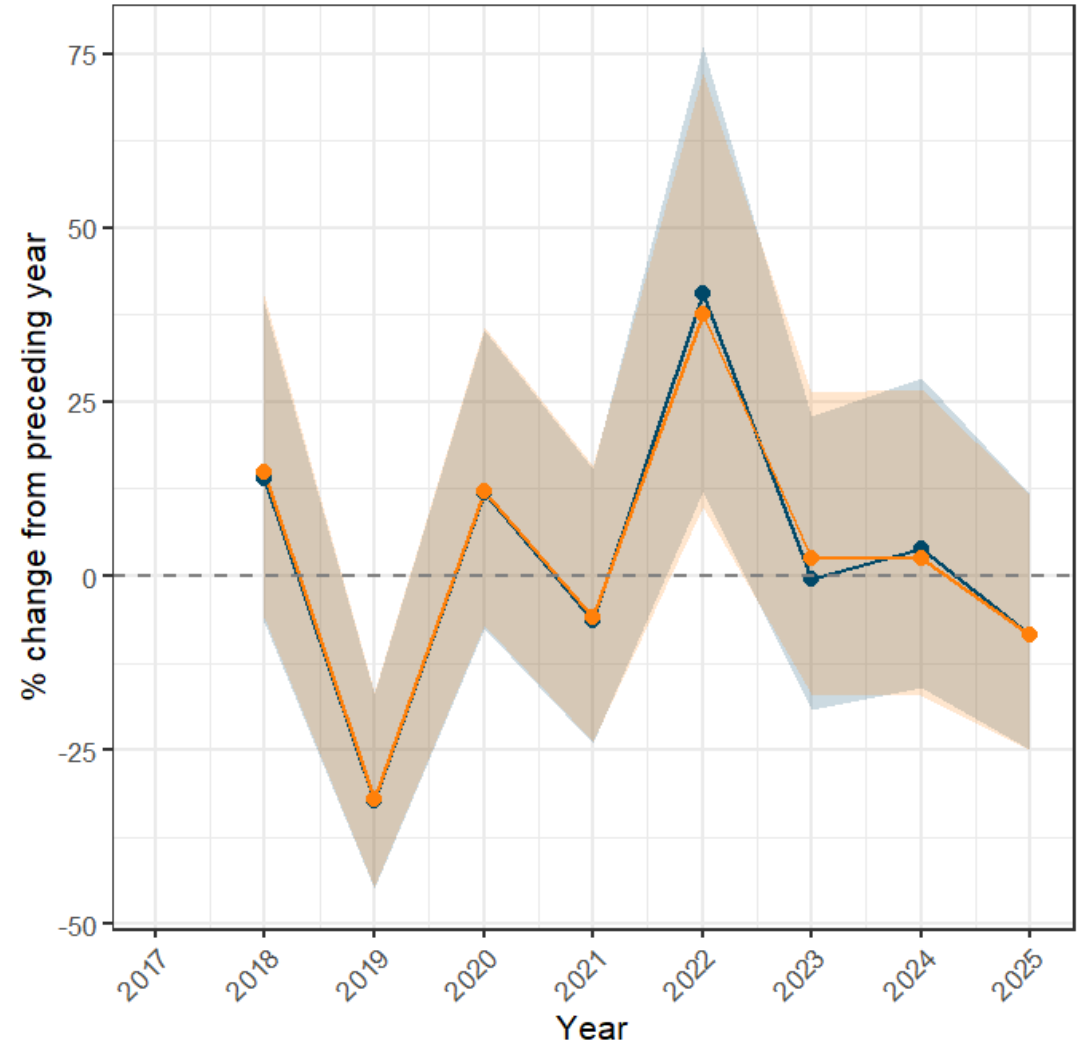
# Impact of wind on blue whiting CPUE



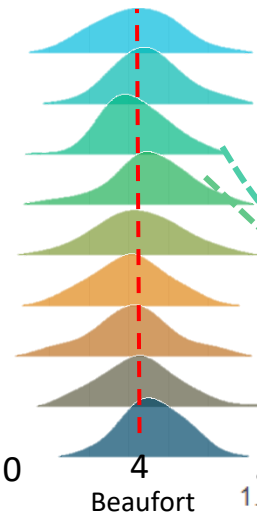
Year effect on WHB catch per haul vs SSB  
Normalised to mean = 1



Relative change in WHB catch per haul vs SSB  
% change relative to preceding year



With windforce Without windforce



# Moon cycle on horse mackerel fishery

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**The moon really  
affects the horse  
mackerel fishery!**



SK

Clearly a strong influence from the lunar cycle. During spring tides fishing is really good, and towards new moon it's noticeably much worse. It's all down to the current.

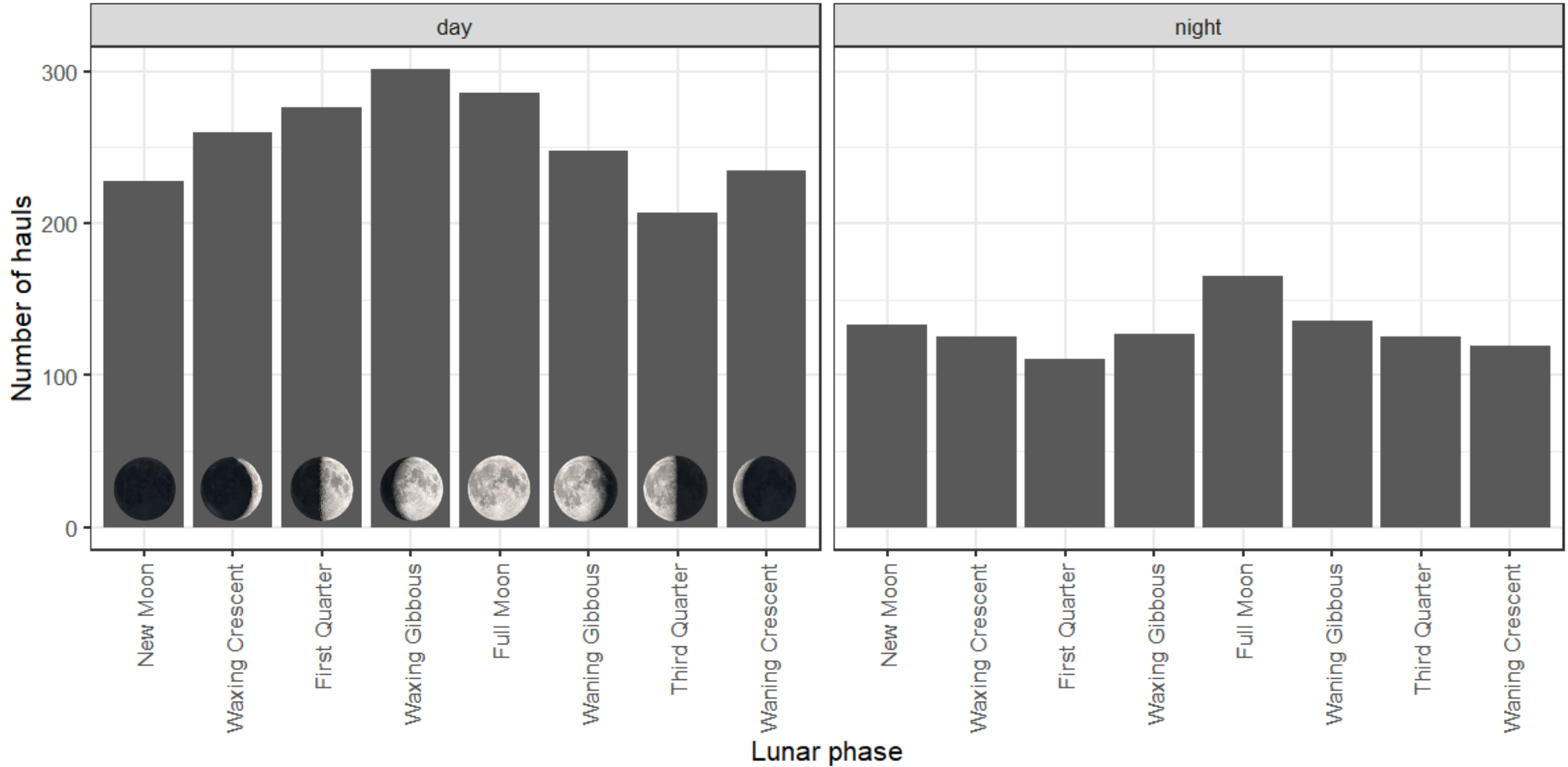
14:02

SK

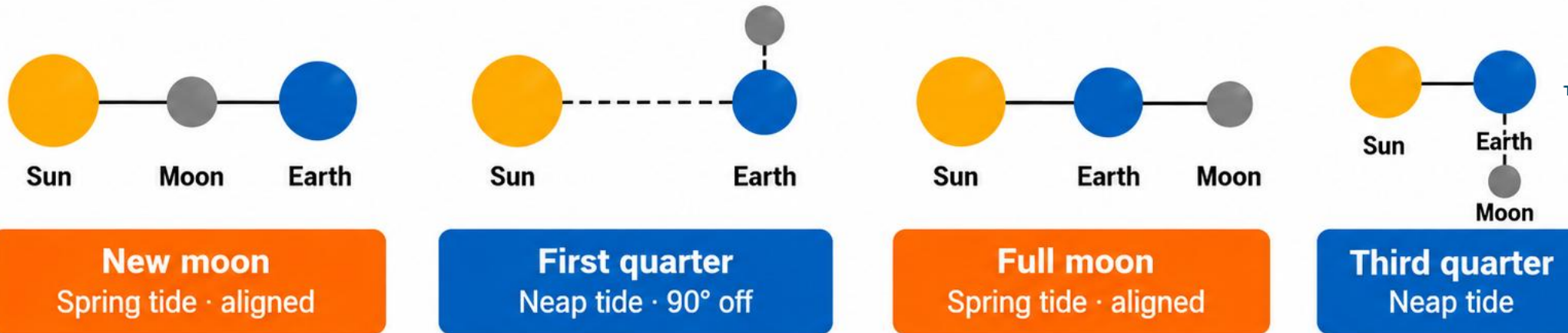
Horse mackerel fishing afterwards was decent enough. But it's clear that moon phases have an enormous influence on horse mackerel behaviour. It was incredibly hit or miss whether they'd let themselves be caught.

14:09

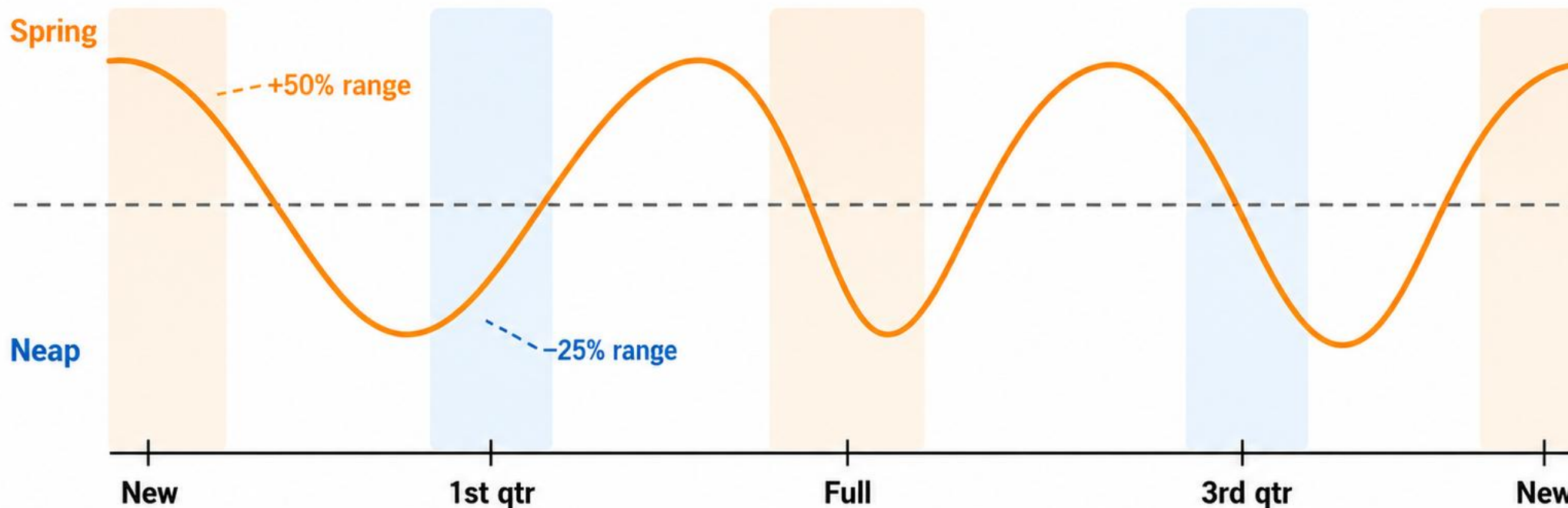
# Moon cycle on horse mackerel fishery



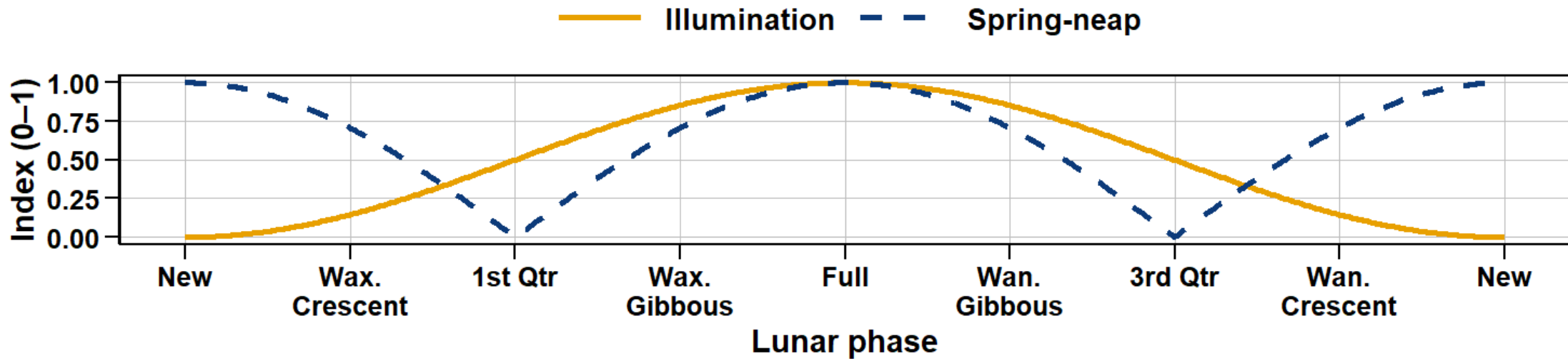
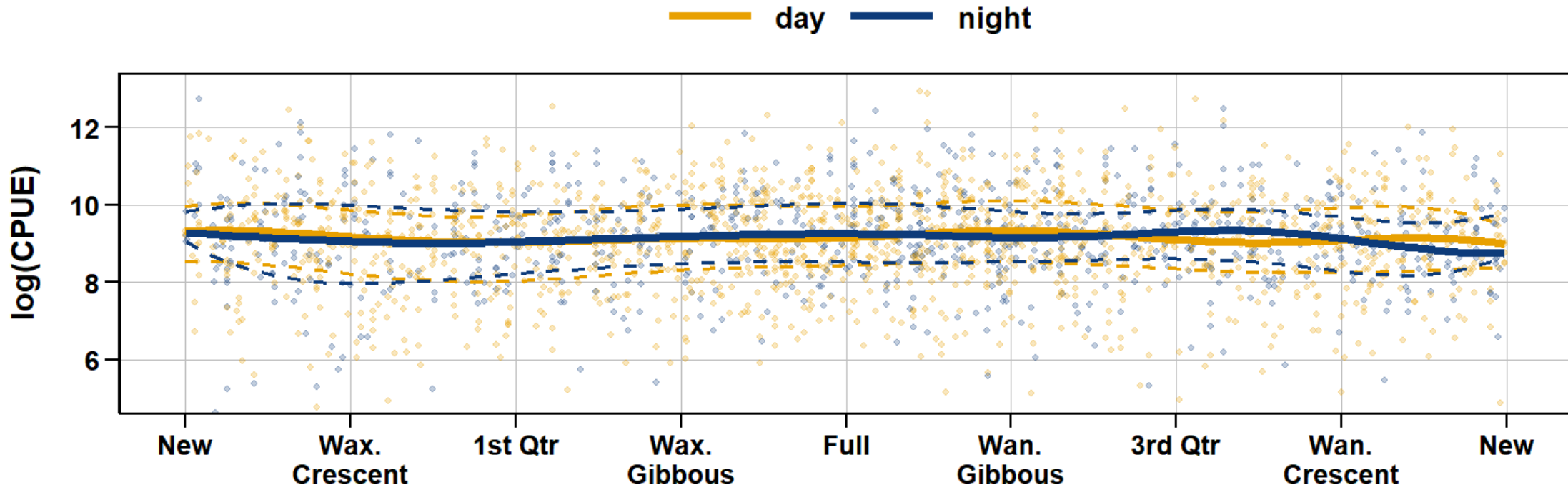
# Moon cycle on horse mackerel fishery



Tidal range over one lunar month (29.5 days)



# Moon cycle on horse mackerel fishery



# Survey design optimization

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RVT

RV Tridens

Today we had the same situation as seeing no herring but catching herring. Would it be possible to ask for a snapshot of what these vessels are seeing on echograms?

16:34

SK

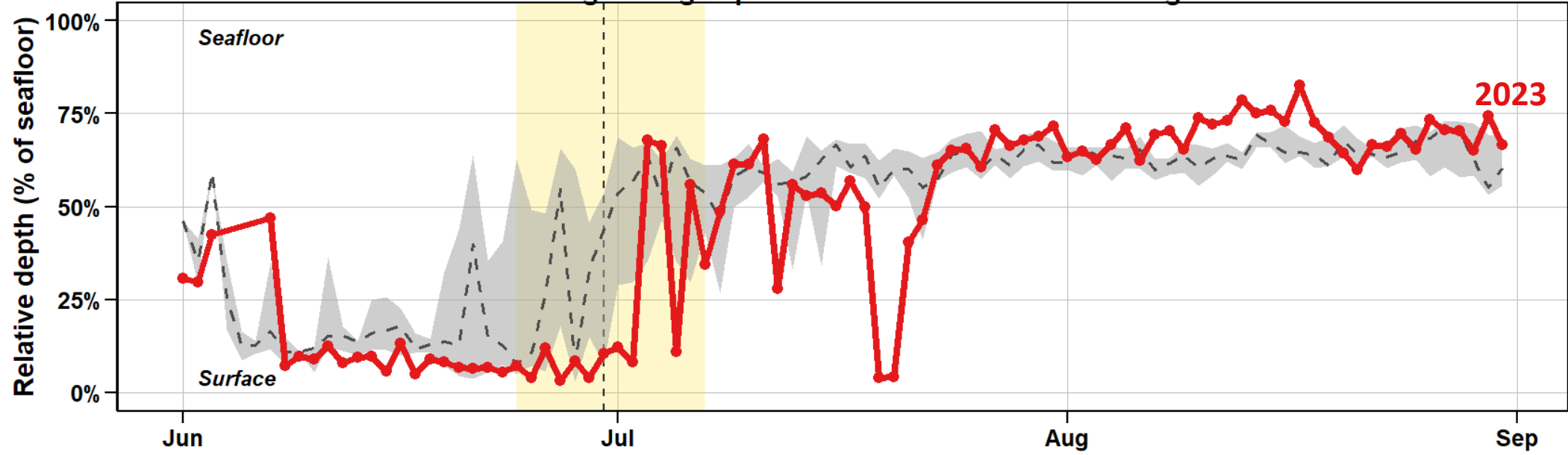


11:43

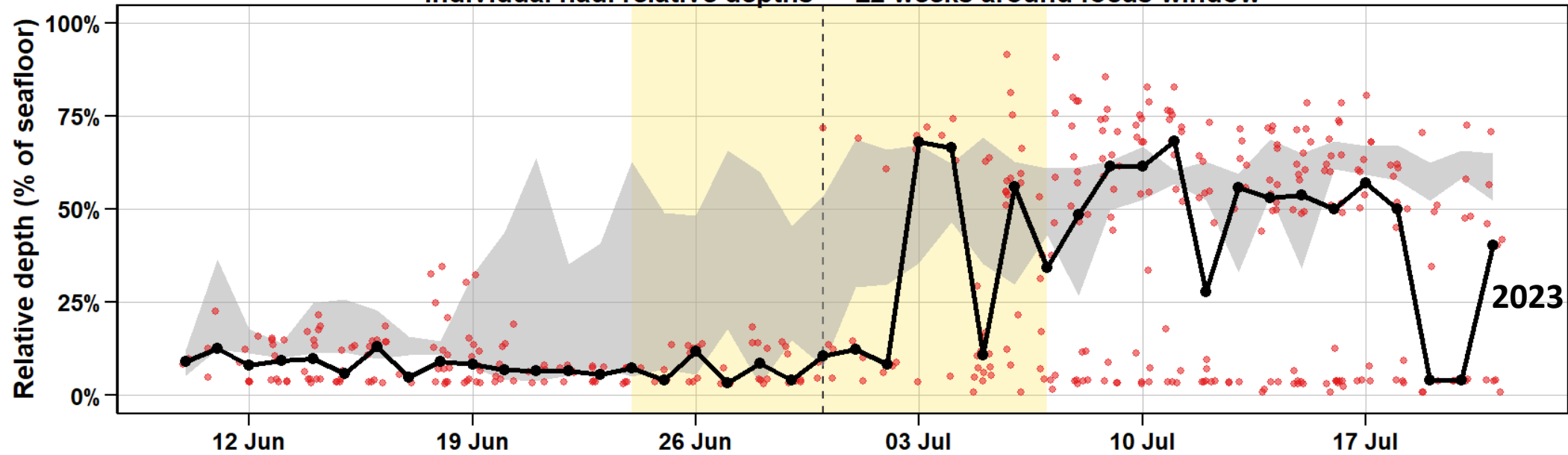
# Survey design optimization – herring spawning grounds



## Herring fishing depth relative to seafloor — Jun–Aug



## Individual haul relative depths — ±2 weeks around focus window





01

**Fishers are among the first to detect changes**

Useful to consider their views when engaging in research surveys



02

**Interviews are a great addition to routine monitoring**

Provide a wider perspective not easily captured through data analyses alone



03

**Most fishers tell the exact same story**

Great overlap in responses



04

**Worthwhile to follow-up with fishers when data analyses show contrasting outcomes**






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 linadenijs

