



Bycatch studies in the Swedish Baltic



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- **Is there a problem?**

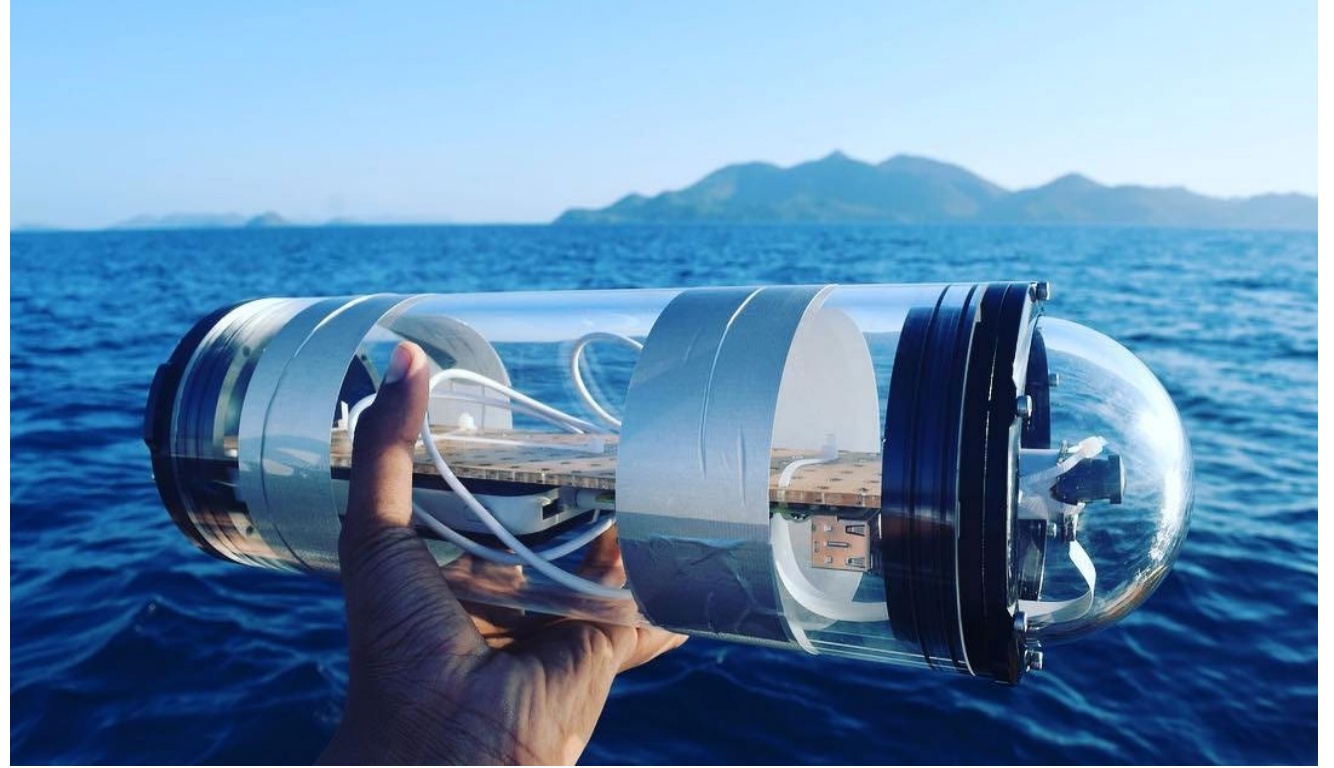
- Estimating bycatch numbers (ICES, Helcom, Ospar)
- Monitoring
- Maps of Bycatch risk

What should we do about it?

- Decrease effort
- Alternative fishing gear
- Modifying traditional fishing gear
- Marine protected areas

Is there a problem?

Monitoring



Pilot project with onboard observers 2017 to 2019, **few trips....high variation**

Pilot project on voluntary electronic monitoring 2020 to 2021



- 10 fishermen

- What can cameras be used for?

Birds?

Marine mammals?

Fish?

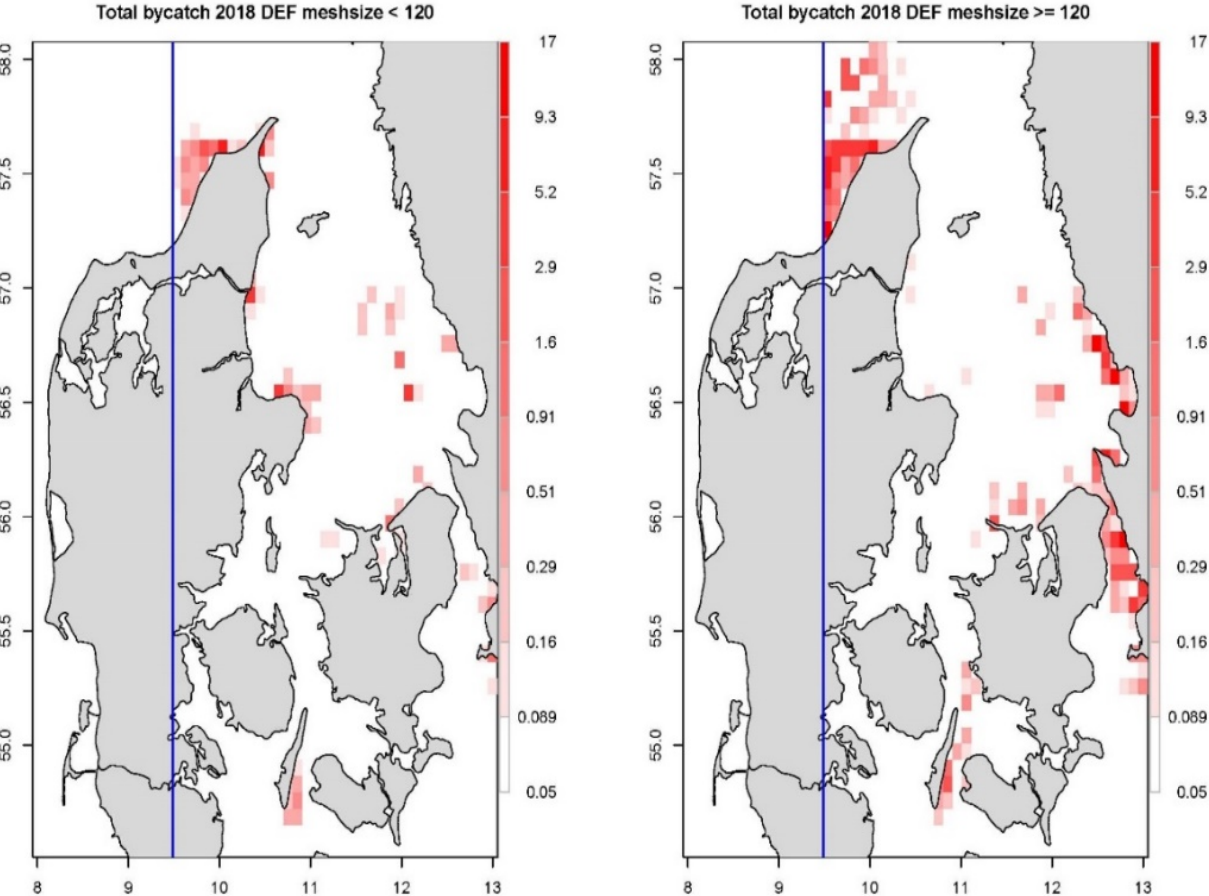
- Do voluntary datacollection work?

- Include data in EUmap

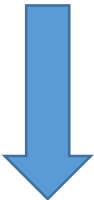




Maps of Bycatch risk



- AIS data, detailed logbook data
- Harbor porpoise distribution data



Bycatch riskmaps



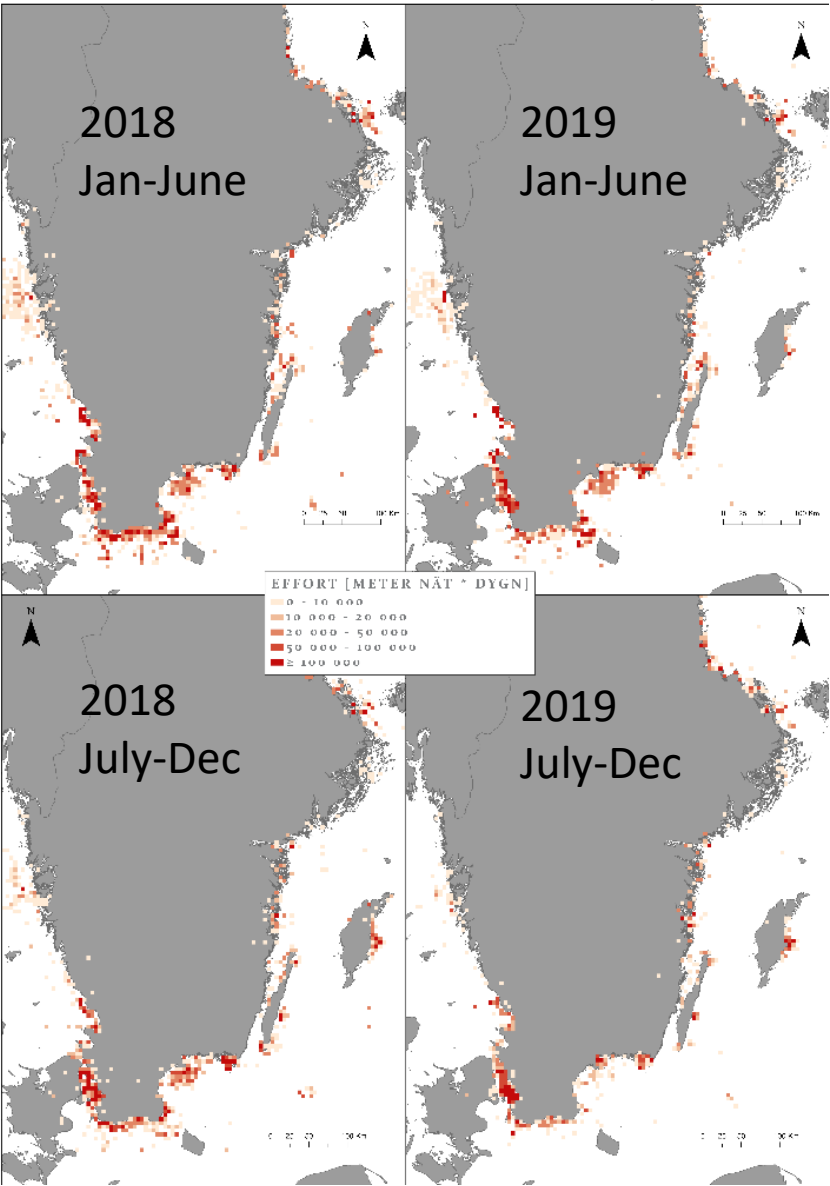
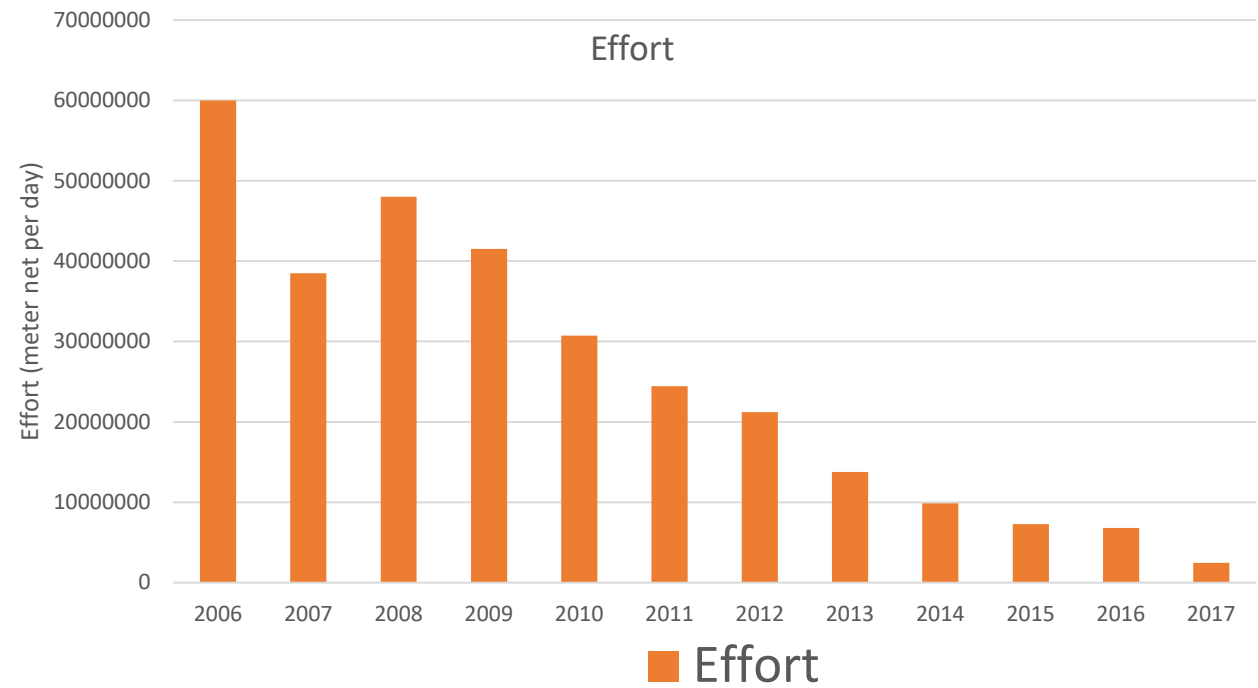
In collaboration with DTU Aqua!!





What should we do about it?

Analysing fishing effort



Gillnet effort decrease in the South Baltic 2006-2017

Gillnet effort distribution



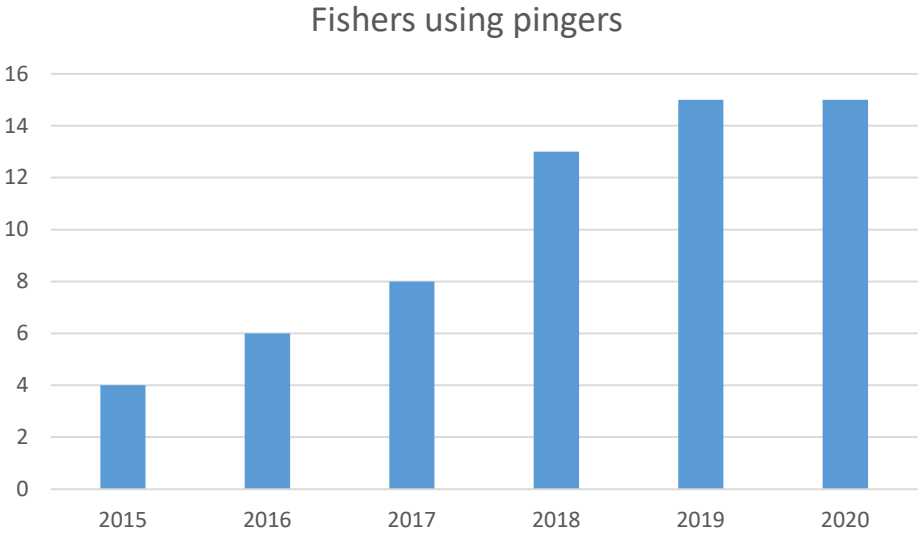
Alternative fishing gear under development





Modifying traditional fishing gear

Voluntarily pinger use

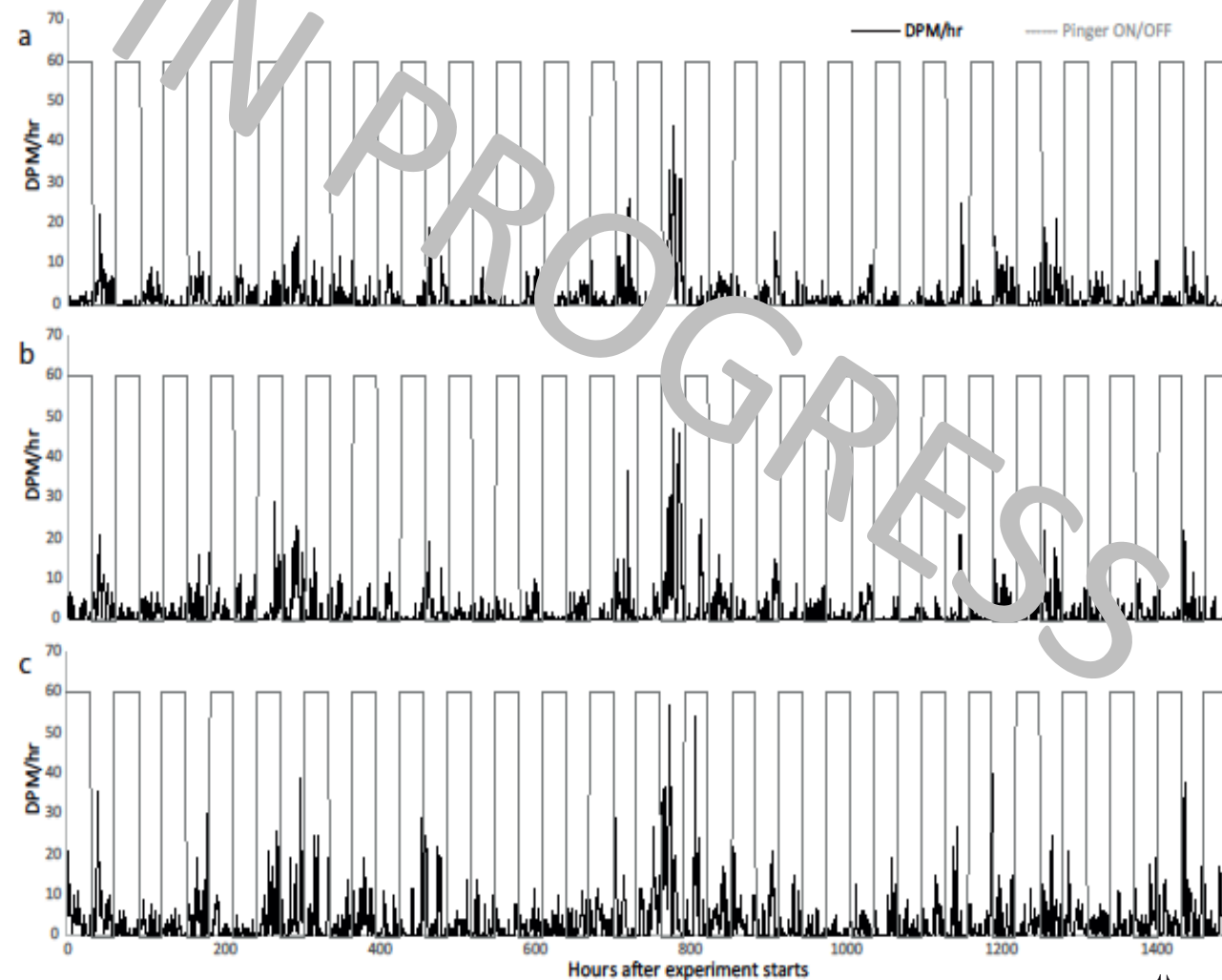
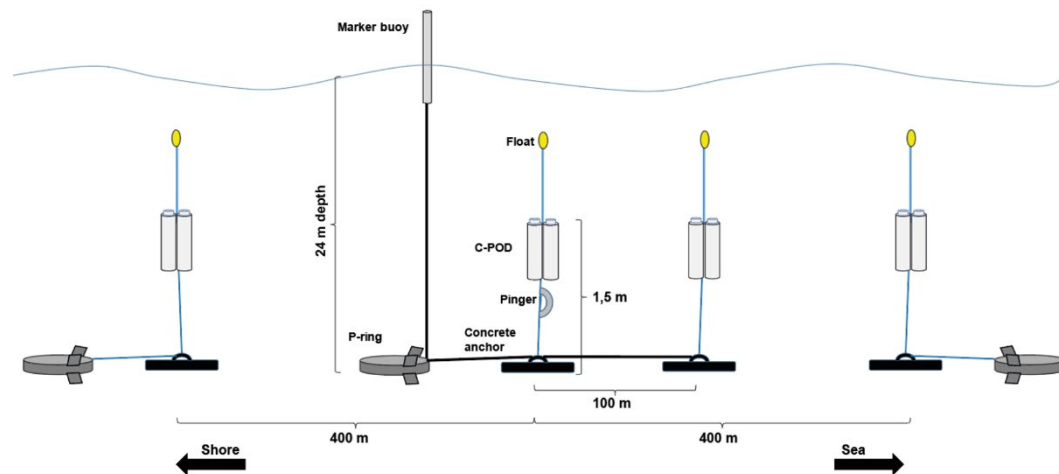


3,5 increase of bycatch in nets with no pingers

Development of a seal-safe pinger

Modified Banana pinger 55-120 kHz

Pinger On/OFF 30 hour

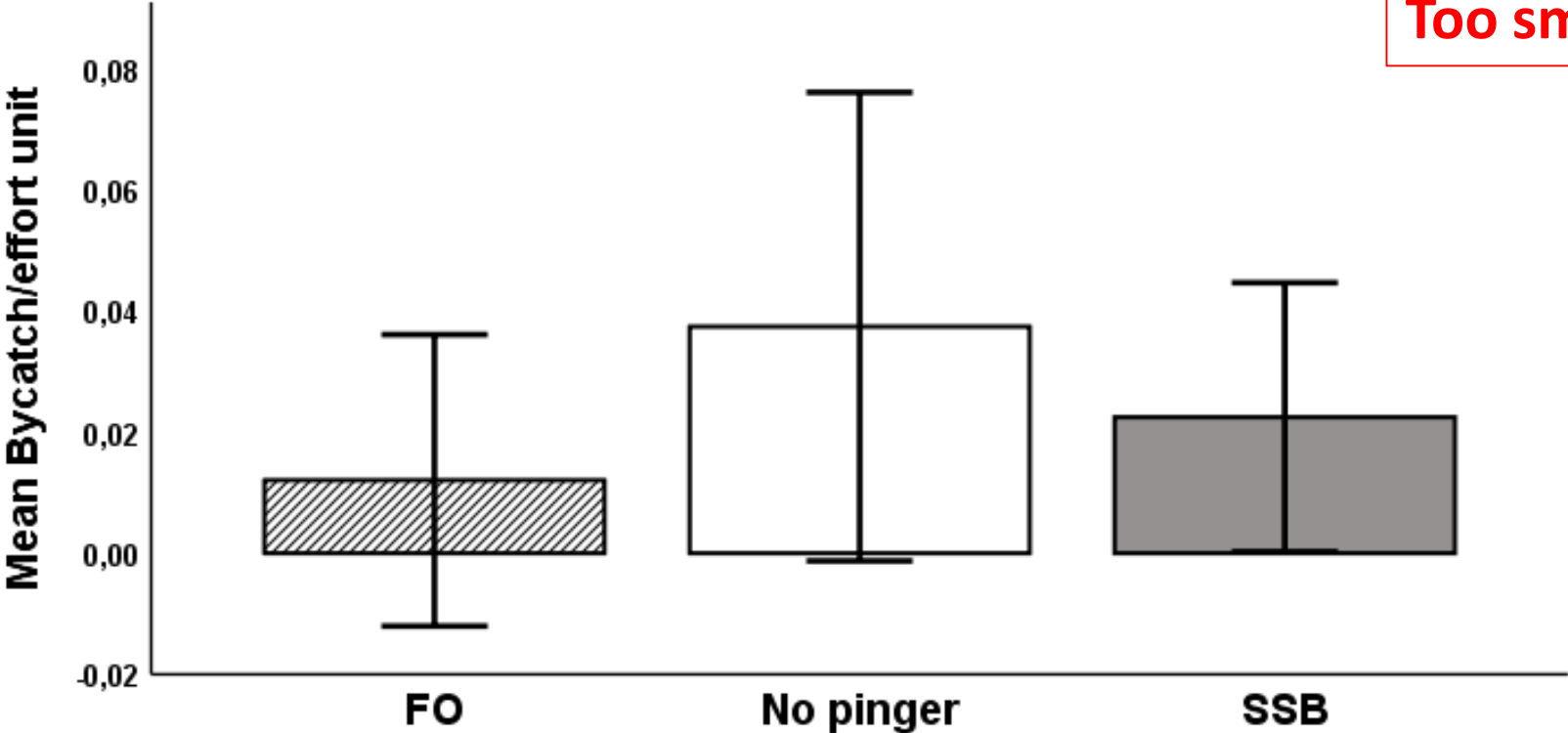


Less porpoise clicks when pinger is on at 0 and 100 meter!



- Fishing trials with pingers
- (Seal-safe Banana pingers and Future Ocean)

Ongoing trials
Too small sample!!

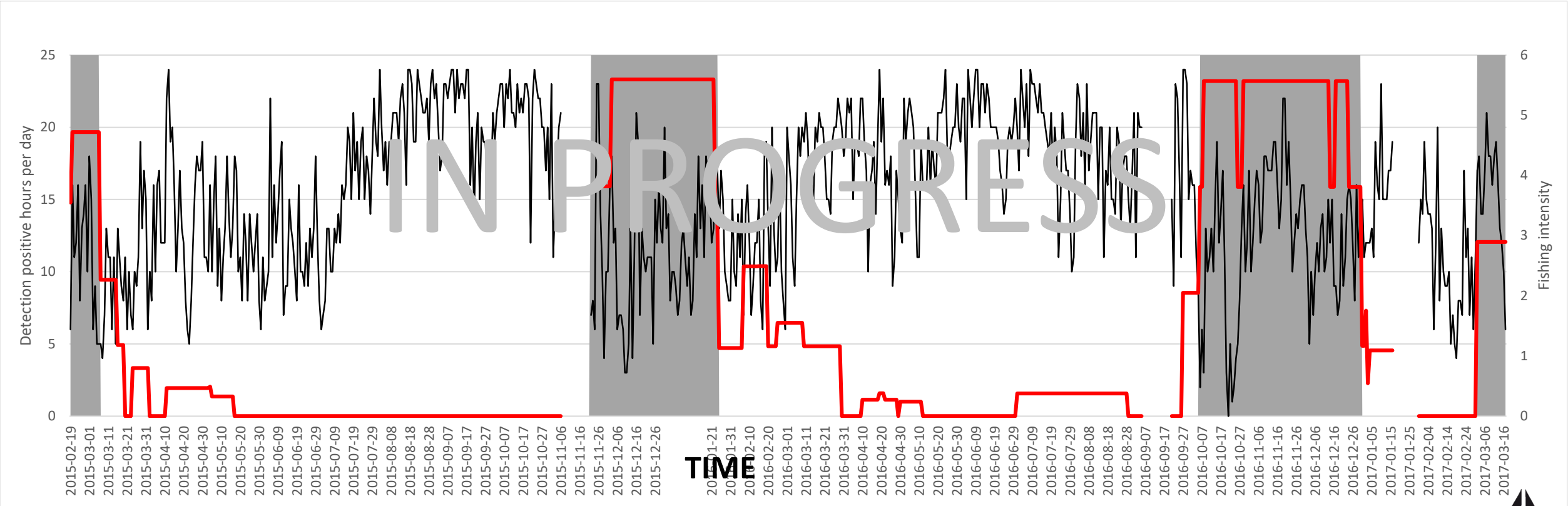




- **Porpoise behaviour around pingers and fishing gear**

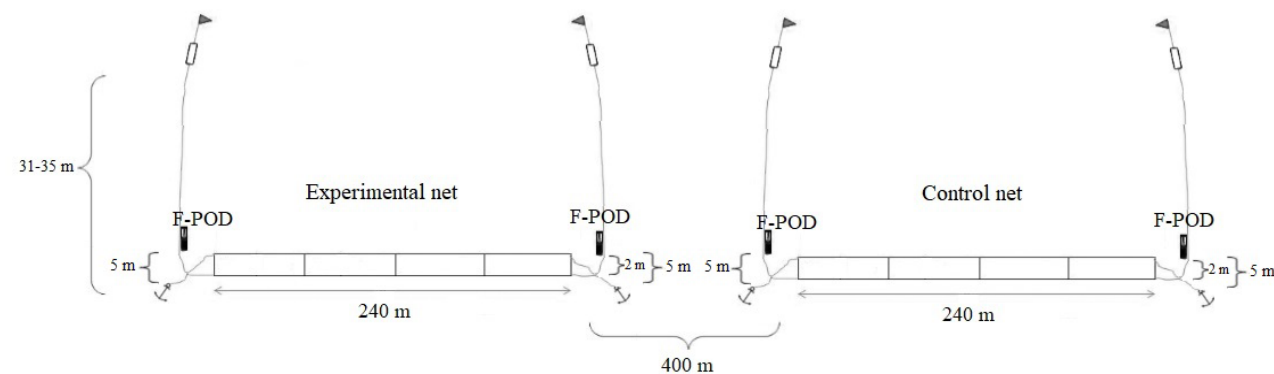
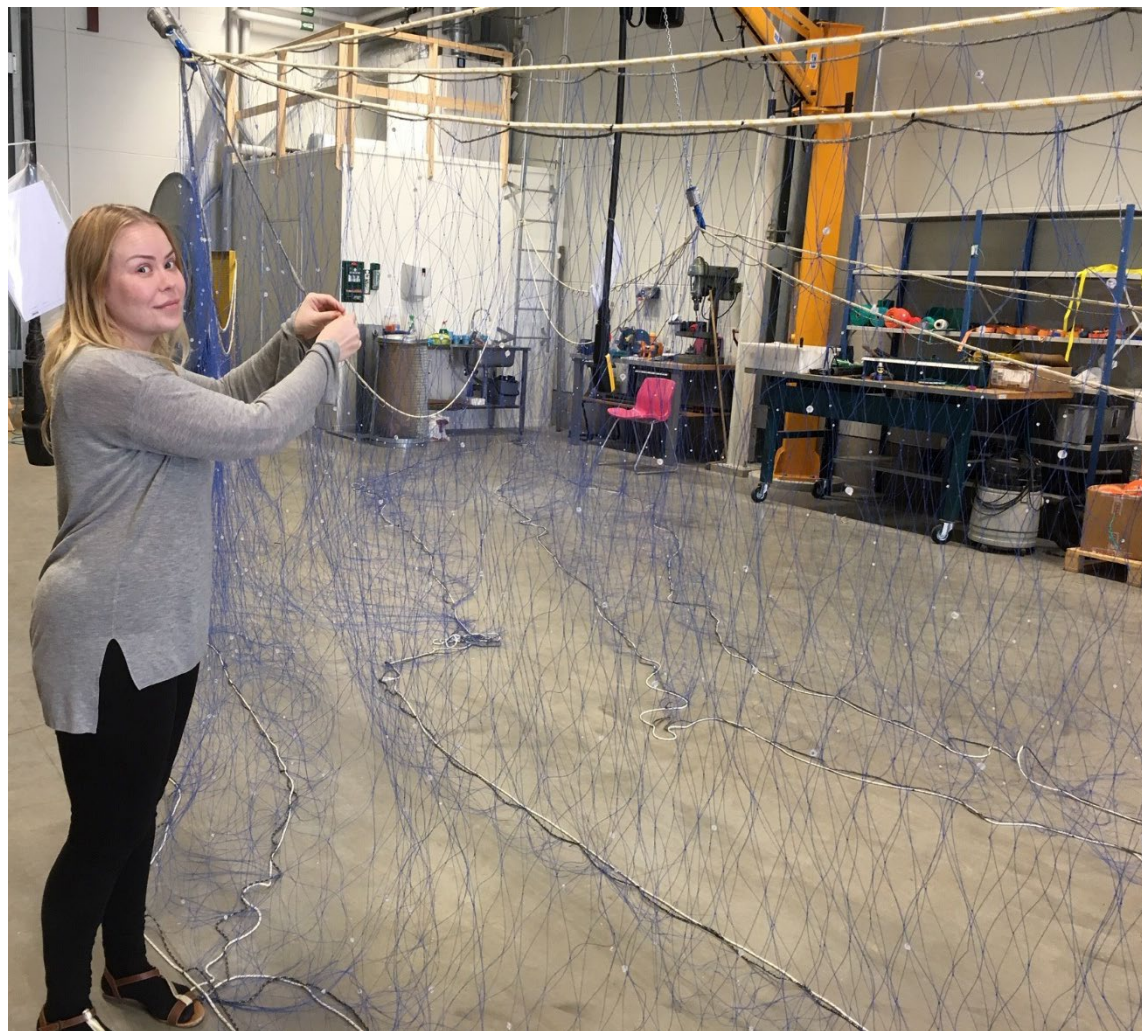


3 year study logging porpoise clicks in areas with pinger fisheries
Porpoise displacement in pinger fisheries areas??



Highly variable data, no clear sign of porpoise displacement

Porpoise behaviour towards pearl gillnets



Less porpoise clicks when pearls are used!

In collaboration with Thunen institute and DTU Aqua!!

Thank you for listening!



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