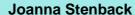
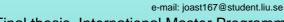


Assessing the immediate displacement effect of an interactive pinger on harbour porpoises (*Phocoena phocoena*) in the wild











Harbour porpoise populations are threatened by high levels of by-catch in fishing nets.

VS.

Traditional AQUAmark 100™

Reduce by-catch **but** emit high frequency displacement sounds continuously

Negative effects: disturbance, habituation, habitat exclusion

How do harbour porpoises react to sounds of the interactive pinger?

New AQ626 Interactive pinger

Displacement sounds emitted *only* when activated by porpoise sonar, i.e. only when porpoises are in the area

Alerting sounds *stimulate echolocation* to increase chance of activation

Reduces negative effects

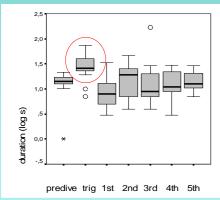
The sounds seem to increase the porpoises' awareness, rather than displace them from the area



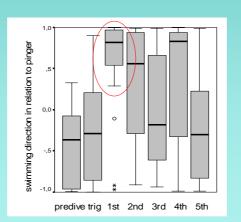
We tested both pinger types in a simulated fishery situation with an array of four pingers



Porpoises stayed long under the surface and explored the interactive pinger acoustically with its sonar



In the next dive they swam away (positive value) a shorter distance from the interactive pinger



Interestingly, they passed the array more often when the by-catch reducing AQUA*mark* pinger was deployed (*Fishers' exact test,* P=0.049)

