Novel sensors to measure distributed flow in aquaculture sea cages

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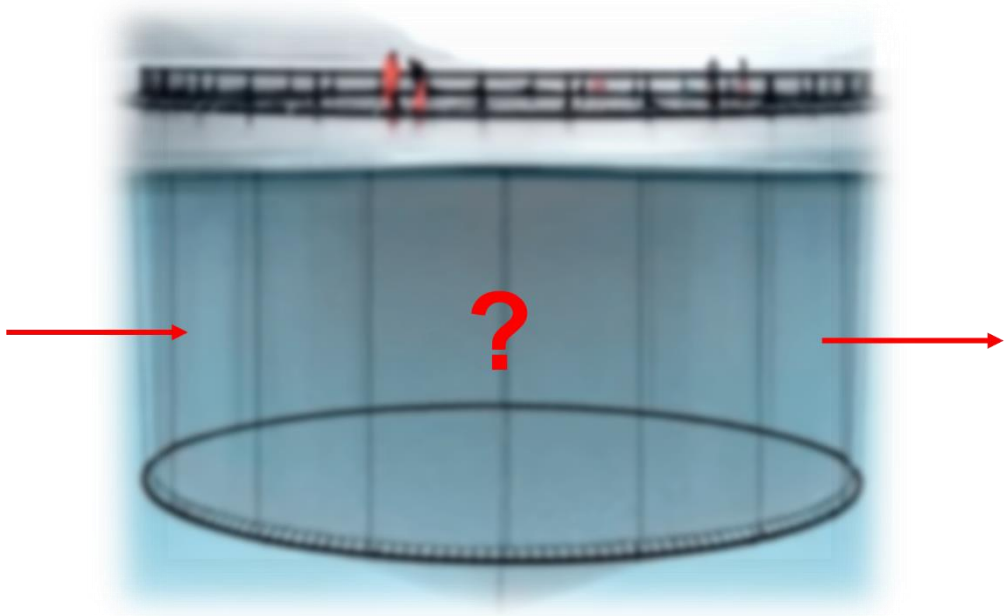
Located in Tallinn, Estonia

Formed in 2009

INDUSTRY NEED

Improve situational awareness in fish farming regarding flows inside fish cages

Movement of fresh water affecting the movement of waste, food and oxygen

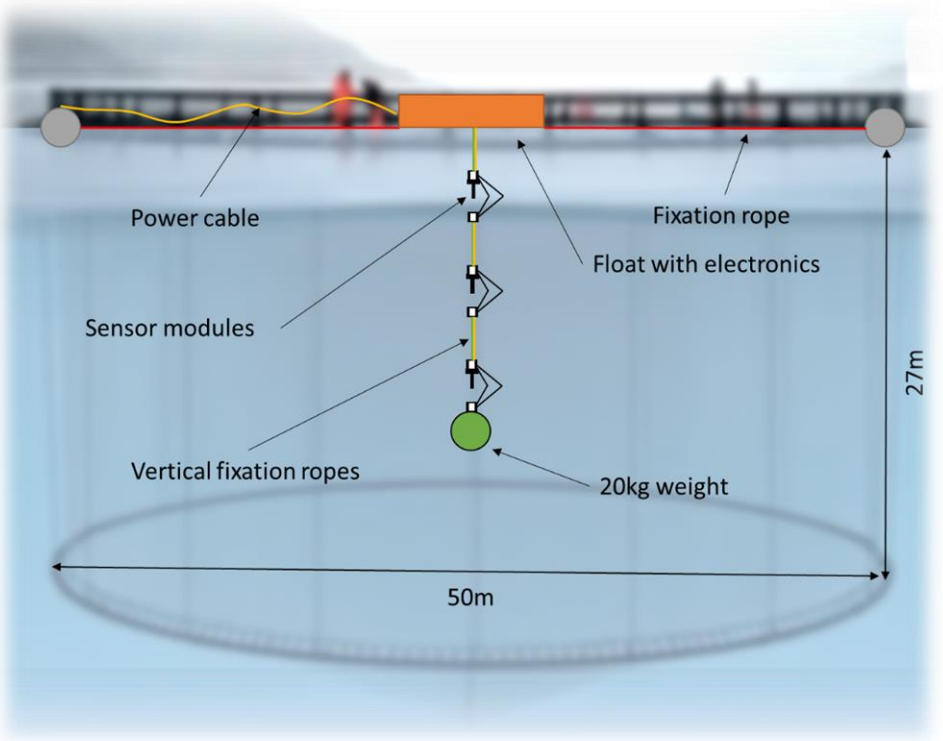


SOLUTION

Profiling current flow in fish cage with a suspended array of novel point measurement flow meters – hydromasts.

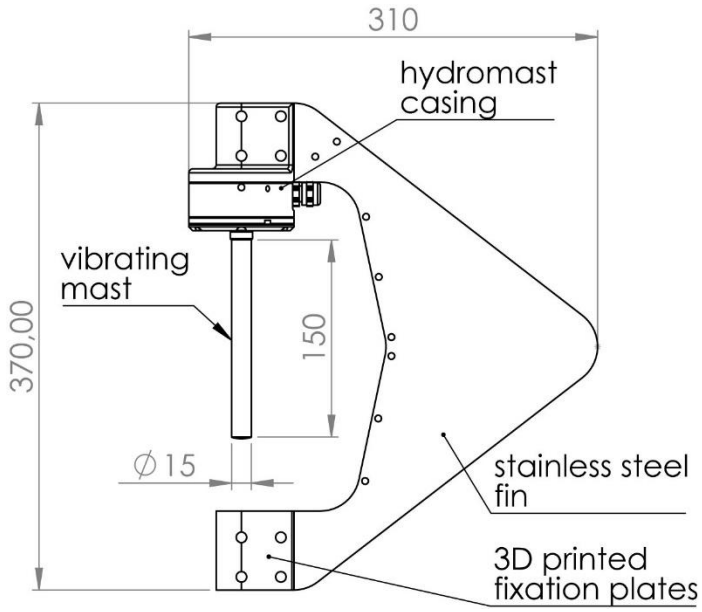
Benefits:

- Indication for more accurate maintenance times of the cages
- No shadowing effects from fishes or cage



UNDERLYING MAGIC

- We use physical point measurement devices, hydromasts, that use flow induced vibrations to detect mean bulk flow
- Background motion is removed with internal measurements units



TARGET MARKET

Fish farms

Algae farms

Harbours

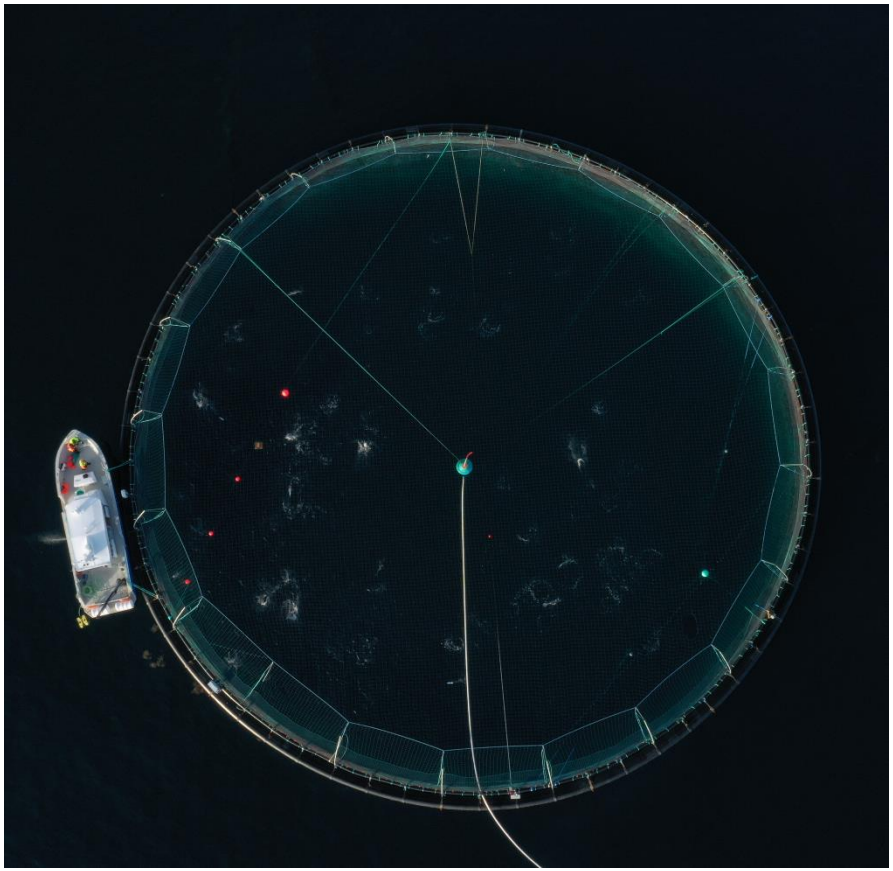
River monitoring

Applications:

- possible site investigations;
- situational awareness;
- effects of climate extremes;
- flow regimes

ECONOMIC IMPACT

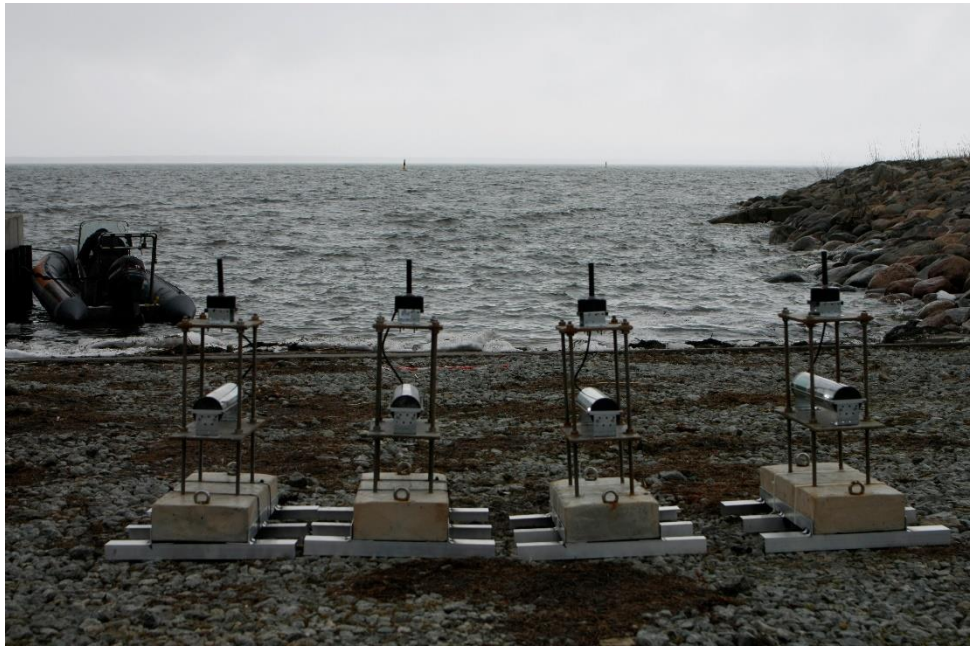
- Better cage environment
- Improved monitoring inside farms
- Optimized cage inspection schedules
- Competitors - ADV, ADCPs expensive and restrictions for usage inside nets



TNA Project No AE090026
Experiments performed in SINTEF ACE facilities, Frøya, Norway
Photo credit (Magnus Oshaug Pedersen, SINTEF Ocean)

CURRENT STATUS

- Currently TRL 4-5
- The IP belongs to the university: patented
- Further testing needed – more and longer pilot studies needed
- Looking for interested partners fish farming



THANK YOU!

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