



#### The Coller FAIRR Protein Producer Index



In combined investor support



Number of institutional investors

20 Greenhouse

## Lerøy was no 1 in 2018!

4 out of top 5 was aquaculture companies.



Deforestation & biodiversity loss



Waste & pollution



Animal welfare



Water scarcity and use



Working conditions



Sustainable proteins



Coller FAIRR developed 22 key performance indicators (KPIs) for the sustainability risks to broadly assess corporate policy, disclosure and performance.



## Biomass equal 20.000 cow's from this site per year....





## 3 focus areas

- 1. Capture of N, P and  $CO_2$ .
- 2. Production of marine products for human consumption and raw material for animal feed.
- 3. New species in aquaculture
- industrial «mass production».

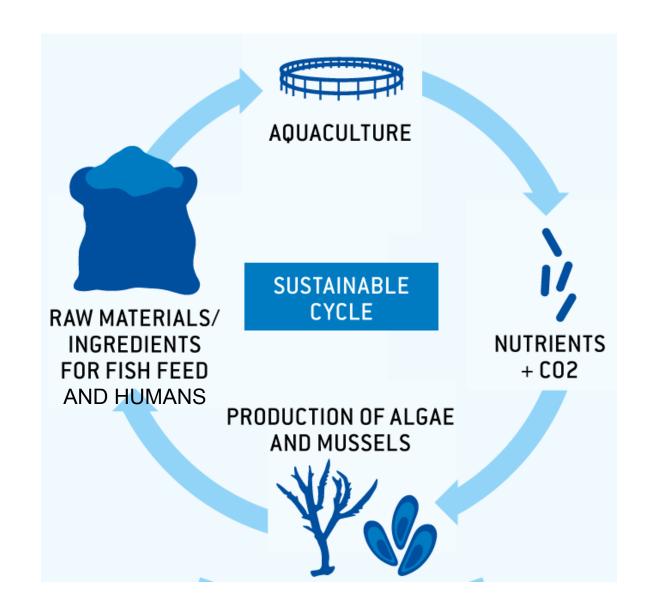


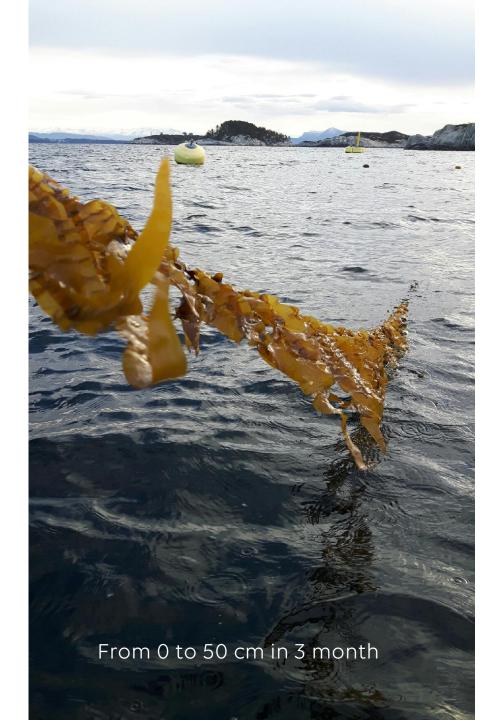


### This is what Ocean Forest do....



### Circular economy

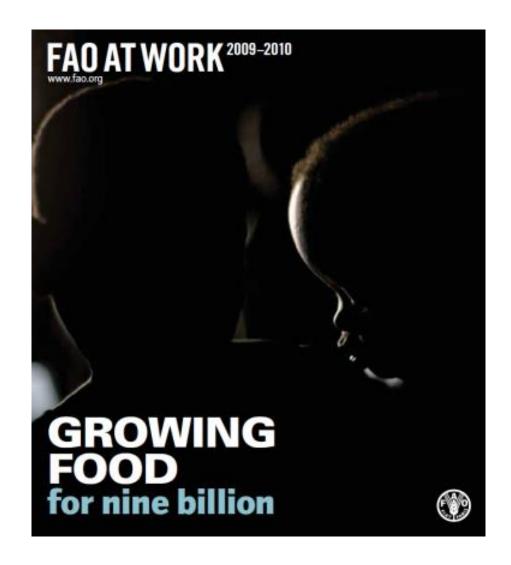




## Why is this so important?

- We want to reduce our footprint.
- We want to secure our future as fishfarmer.
- We take our part of the responsibility for feeding a growing population.

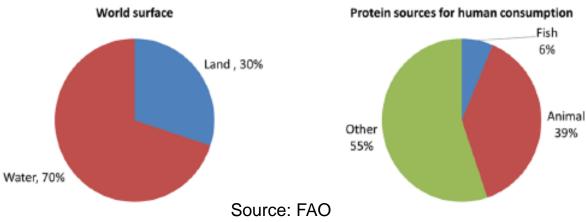




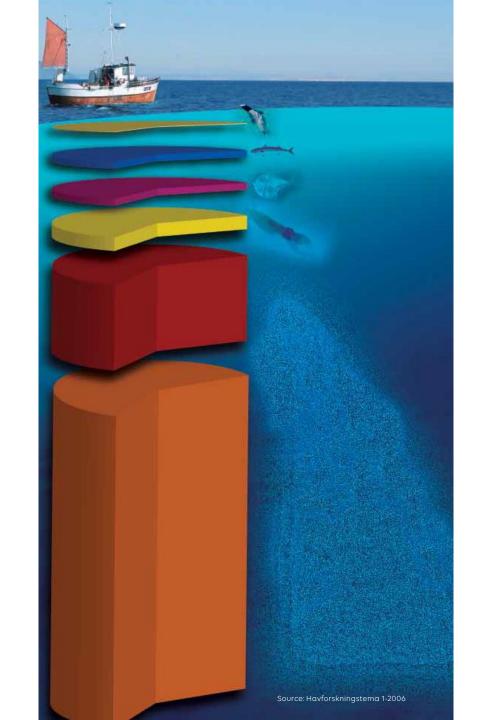
In 2030 there will be a shortage of 50,6 mill tons of fish for human consumption (FAO;2014)

## Aquaculture

- a question about sustainable food production for a growing population.



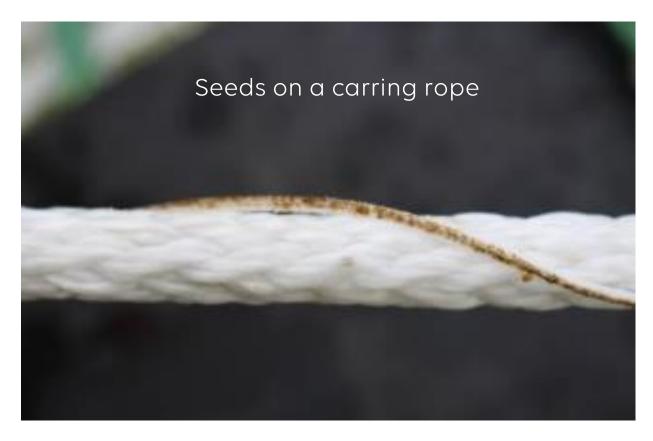
- Where in the foodweb should we harvest?
- For each step up, the quantity of resources available is reduced by 90%
- Cultivation (add resources) or harvesting?







## **Growing Seaweed**

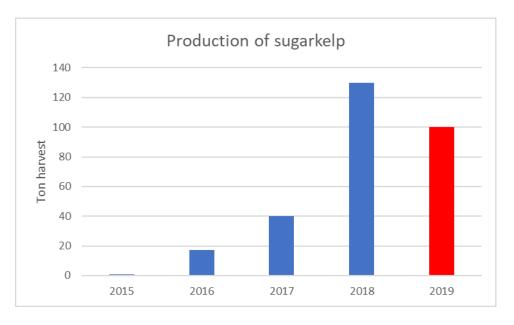






20 oct -> 5 month







#### How much Nitrogen, Phosphor and CO<sub>2</sub> do we catch?

2,4 kg Nitrogen per ton wet weight of sugar kelp.

340 gr phosphor per ton wet weight of sugar kelp.

26,3 kg C per ton wet weight equal 100 kg  $CO_2$  per ton wet weight.





## **Product development**

#### seasoning /toppings



Fresh



Dried







# Thank you for your attention!