

#Goalconf20

Offshore

the new frontier for salmon farming



This is about utilizing the FJORDS & OCEAN

Source of sustainable and renewable proteins for a growing global population

- 70% of the world's surface is covered by SEA.
- Today, just 3% of the food we eat comes from the sea.
- Aquaculture the solution – a renewable and sustainable resource.
- It is environmentally and ethically indefensible not to develop and grow such a valuable resource.

Short on technology achievements with Ocean Farm One

Salmar has worked with the world's foremost offshore competence since 2012



2012 -15

- Feasibility study
- Framework conditions
- New operating concept
- Engineering design
- Application of oil industry technology

2015 -17

- Licences granted
- Construction/hand-over/transport
- Clarification / transfer of smolt
- A billion invested in the project
- Massive learning curve

2017-20

- Production and harvesting of the 2 first generations
- 20,000 sensors provide unique insights
- Biological performance we could only dream of .

From big to bigger – from Ocean Farm to Smart Fish Farm

Builds on all our fish farming experience and takes it a huge step further

EXPOSED | HS 5.5 (11m waves)



Ocean Farm 1

68m height | 110m diameter | <1.5 million salmon

OPEN OCEAN | HS 15.5 (31m waves)

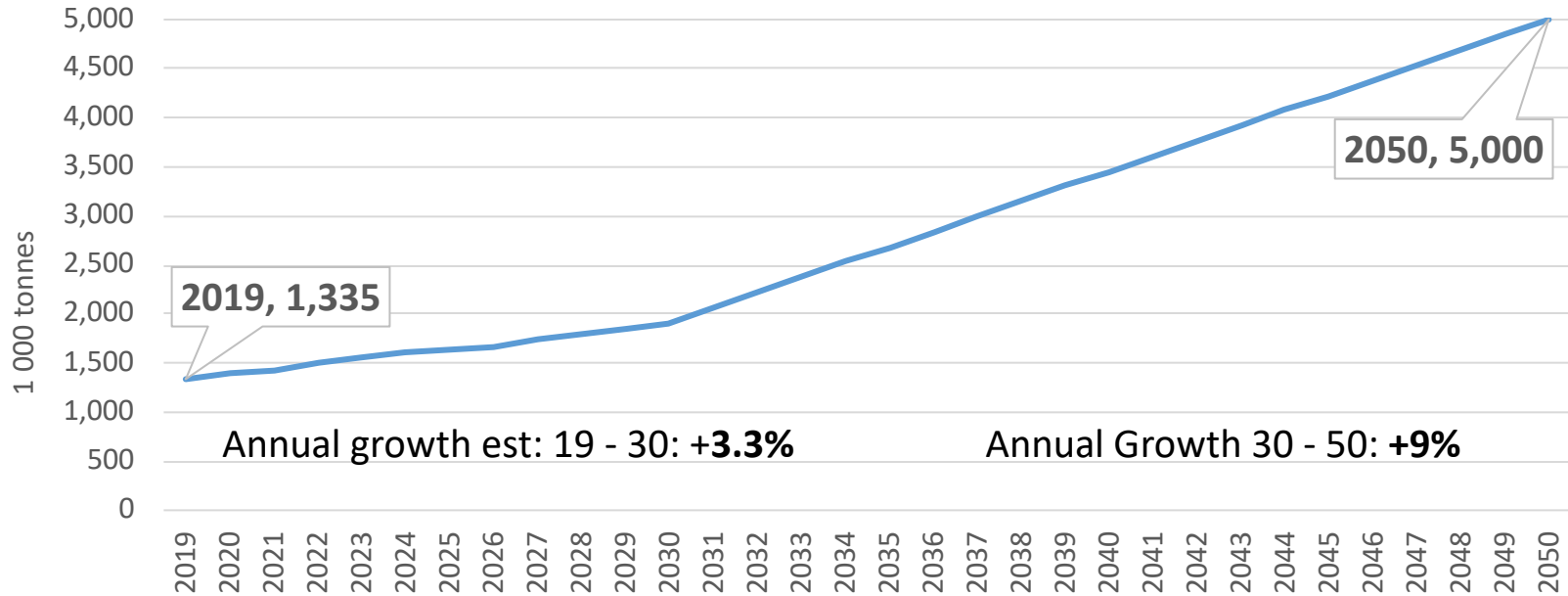


Smart Fish Farm/Ocean Farm 2

70m height | 160m diameter | >3 million salmon

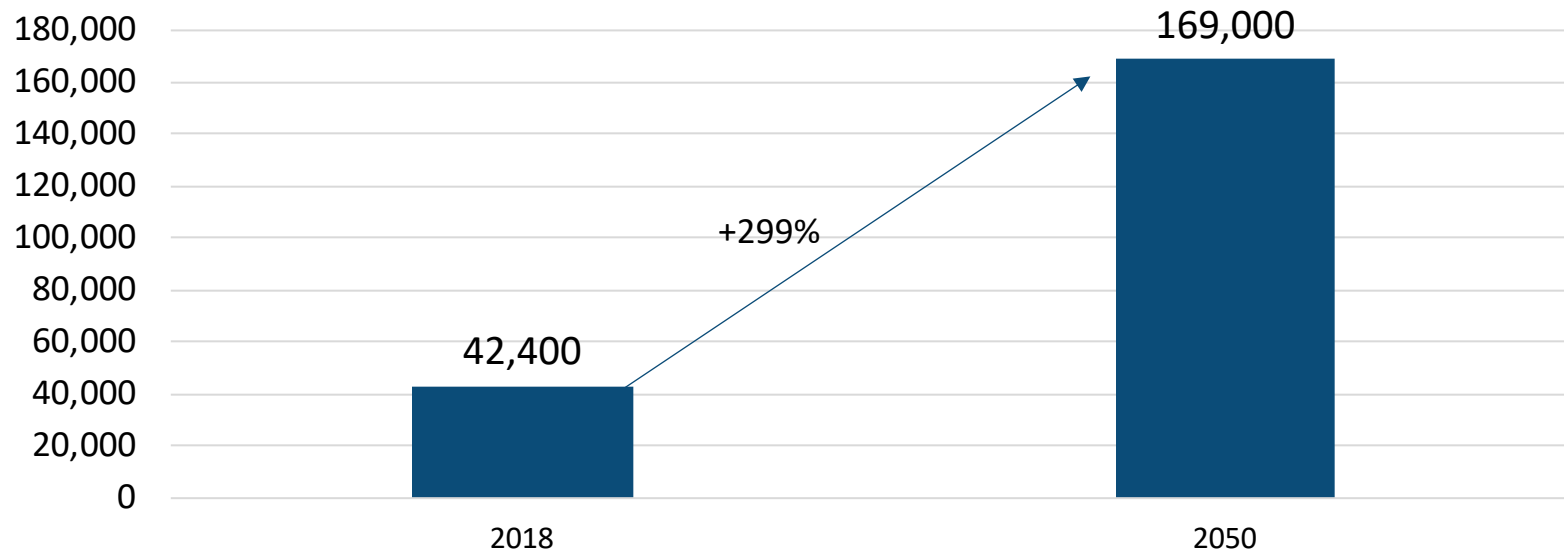
Our strategic growth fundament

The Norwegian Vision for 2050 is 5 million tonnes Atlantic salmon



The outcome; value creation for society

From 40,000 to 170,000 employees – similar potential also in “other waters”



No. of employees engaged in aquaculture in Norway – directly and indirectly

- SINTEF calculates that there were 42,400 FTIs (directly employed, in processing, sales/exports and indirectly employed) in the aquaculture supply chain in 2018.
- With growth to 5 million tonnes in 2050 and without growth in labour productivity, the sector will require, directly and indirectly, more than 125,000 new employees. If we estimate a 2% increase in labour productivity, 88,600 jobs will be needed. More than a two-fold increase, in other words.

Growth will generate enormous value to society

Colossal investment will be required if we are to realise the growth target

- Investment levels we haven't seen in Norway since the golden age of oil exploration
- Exploitation of our huge **offshore area**.
- We assume 70% of the growth from 2030 will be offshore salmon farming
- **The industry in Norway must invest over NOK 200 billion in offshore production equipment**
- Then comes corresponding smolt capacity of approx. NOK 40-60 billion in Capex.
- In addition we will need – among others
 - A new generation of well- & feed boats,
 - New harvesting plants,
 - Capacity in operations and maintenance,
 - Increased education capacity

Dream or reality?

This is happening as we speak



- We do have the financing capabilities
- We, as an industry have the competence and the proven ability to grow
- We need to work with our politicians to agree on a sustainable platform for such growth

Thank you

