



Experience from starting international aquaculture business

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My background

- Fishery biology
- 40 years experince from fish farming in many countries
 - Salmon
 - Marine fish
- Technology
- Business





New projects – new country

- What to do if you think there is an opportunity for fish farming in a foreign country?
 - Find information about :
 - o Legal conditions
 - o Environmental information
 - o «competitors» – state of the arr
 - o Species specific information
 - o Business info:
 - + Prices
 - + Costs of input
 - + Availability of juveniles, feed and equipment
 - + Social inf
 - + Potential partners

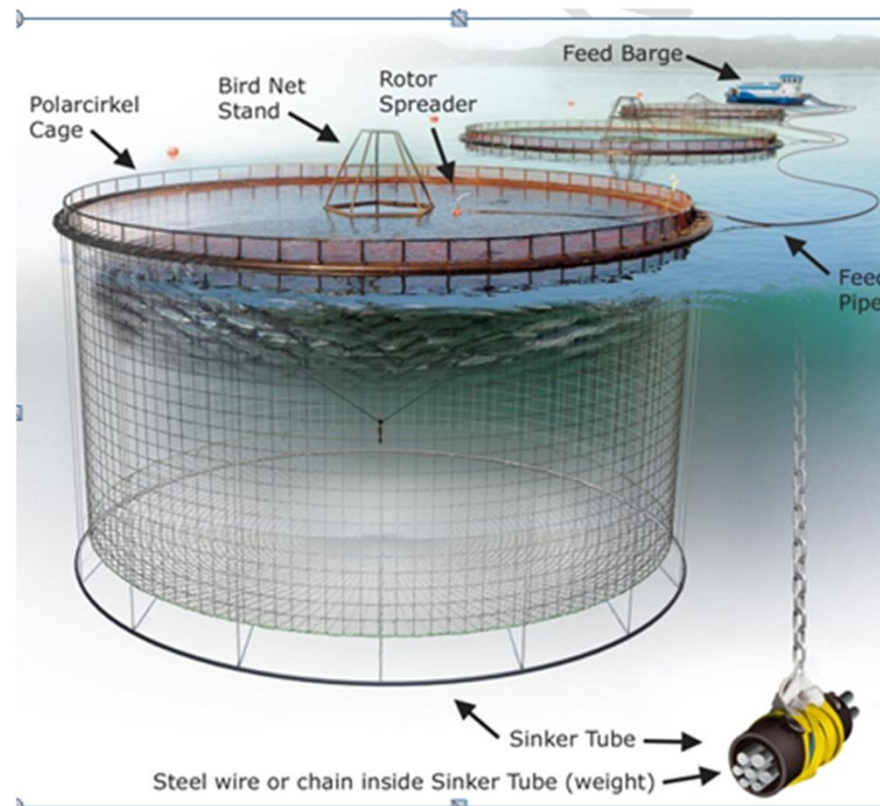
New project – new country

- Be present
- Frequent visits
- Consultant with local contacts and knowledge



Information package

Prepare information package for investors in aquaculture

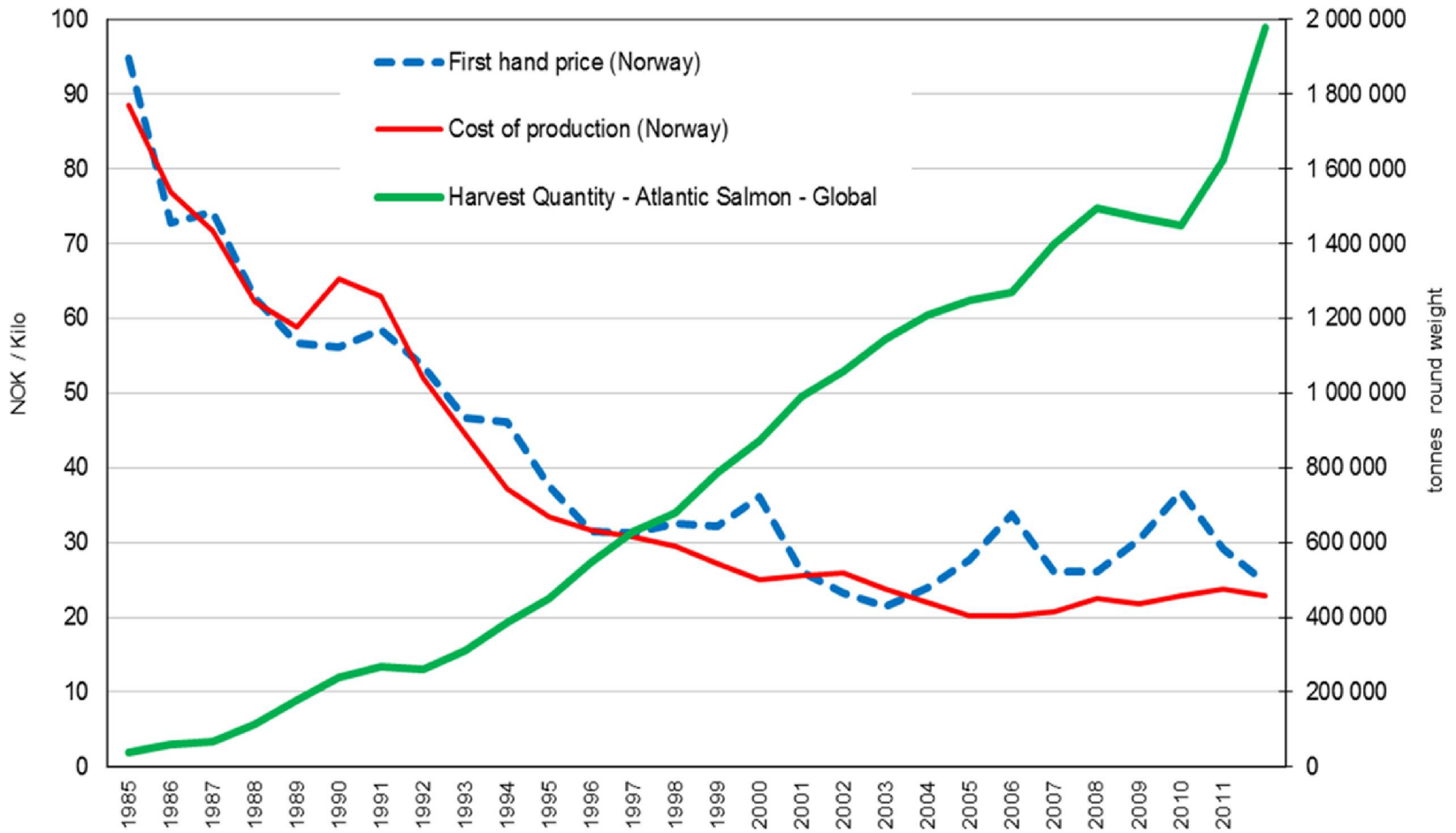




Business Plan

- **Summary**
- **Introduction**
- **Species**
- **Sites**
- **Legal conditions**
- **Technology, products and production**
- **Market analysis and sales**
- **Organisation and experience of the team**
- **Financial information and investments**
- **Risks**

Cost development





Legal issues

Long term leases and permits

Transferable rights

Clear content of EIS

Clear water extraction and discharge conditions

Distance to other farms

For cage sites

One year class per site

Fallowing after harvest

Site rotation





Success factors I People

- Managers and workers
- Experience
- Quality
- Training
- Interest and commitment



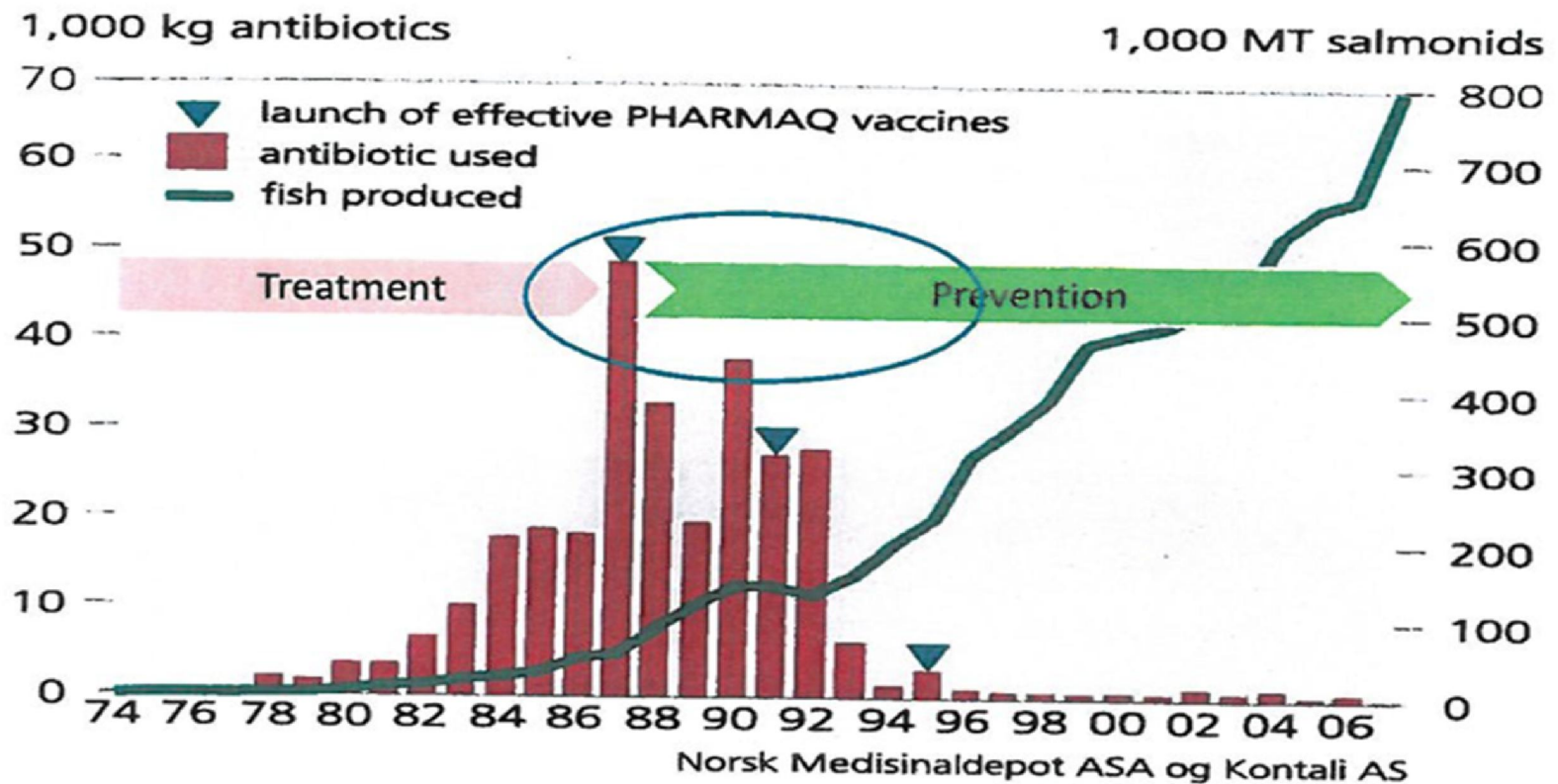


Success factors II Quality juveniles

- Hatchery water quality
- Broodfish
- Egg quality
- Feed quality (live and «dead»)
- Size at stocking (nursery)
- Robust and good growth performance (genetic background)
- Good hygiene

Use of vaccination in Norway

Vaccination and disease control in Norwegian fish farming





Challenges

- Fish diseases
- Vaccination
- Diagnostic help and advice on hygiene
- Neighbours



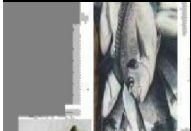
Distance to other farms

- Why this is important?
- Transfer of disease from farm to farm through the water (horizontal transfer)





Challenges II



- Control of operations
 - Number of fish
 - Fish size
 - Feeding (not too much – not too little)
 - Growth
 - Grading
 - Fish health monitoring and removal/disposal of dead fish
 - Experience managers and trained workers a key to success!



Environmental monitoring

- Water quality monitoring
- Monitoring of discharge water
- Cage farming: monitoring of sea bed



Marketing and sale

- Sell your fish local
- Sell your fish local alive
- Sell your fish local dead on ice
- Last resort: processing and export

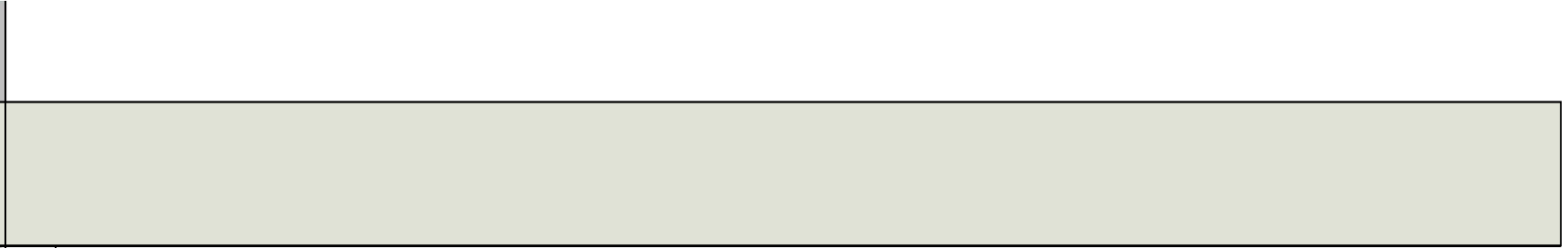


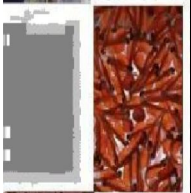
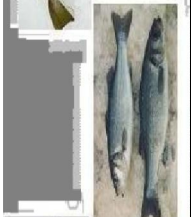
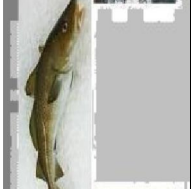
Conclusion

Success factors

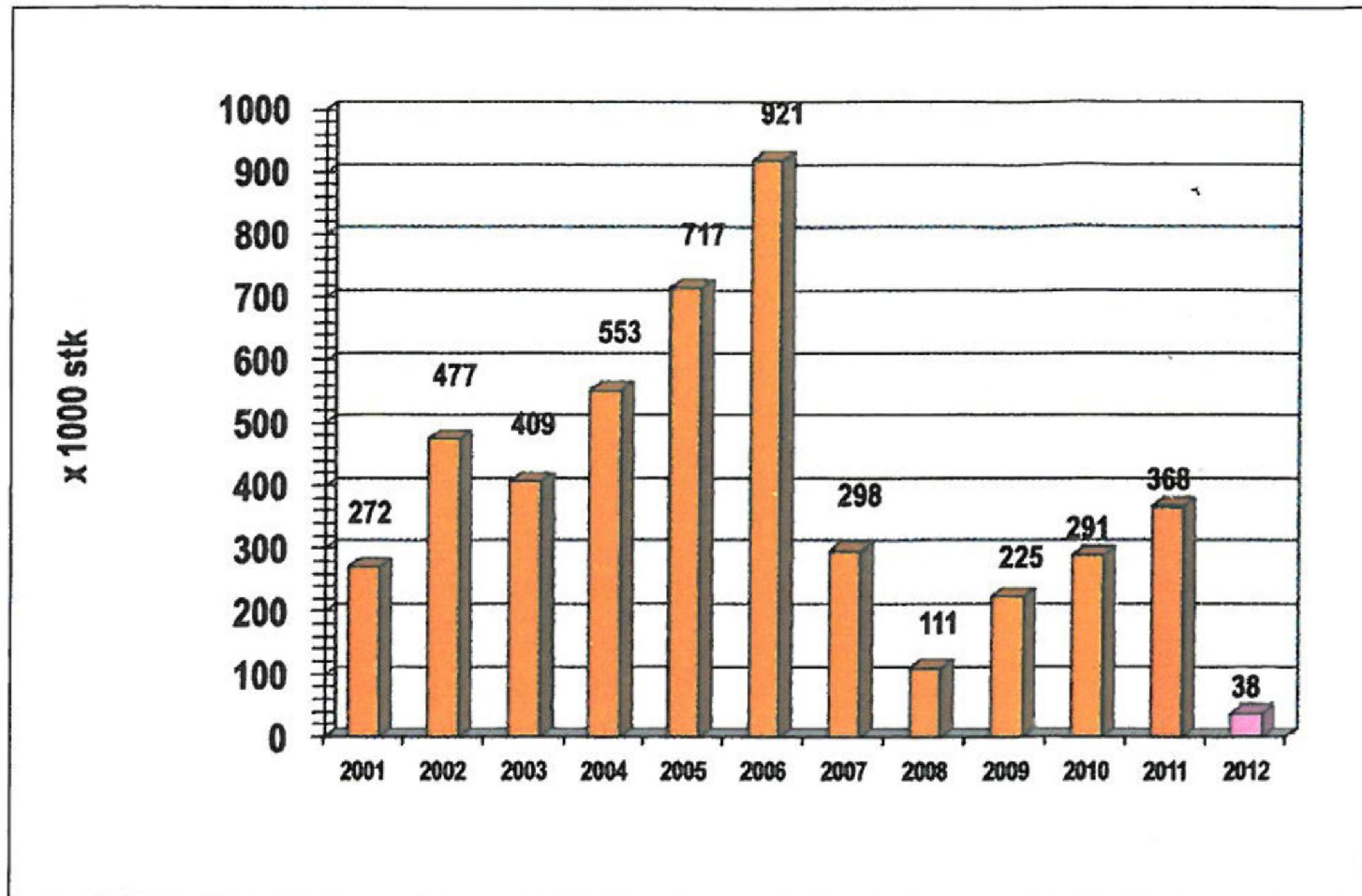
- Good legal system
- Experienced management
- Well prepared business plan
- Well trained workers
- Good quality juveniles
- Disease prevention
- Local sale

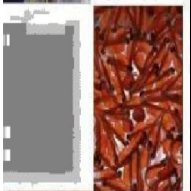
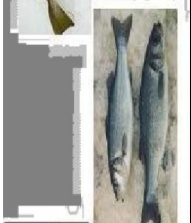
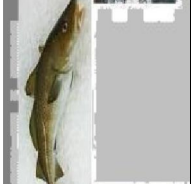
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Technical issues - escapees







Feed barge

