# Possibilities and pitfalls in the development of a sea urchin industry in Norway

"Why Norway does not have an established sea urchin fishery and what are the economic and associated kelp ecosystem restoration benefits of establishing such a fishery"

> ECOURCHIN / URCHIN stakeholder seminar Oslo, Norway, Oct 3<sup>rd</sup> 2017



Nofima





Northern Periphery and Arctic Programme 2014–2020

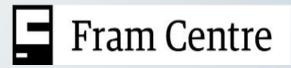


#### **EUROPEAN UNION**

Investing in your future European Regional Development Fund



Harvest urchins-restore kelp forest





# Agenda

Session One: Current projects & Research and examples of successful urchin industries

09:00-09:10 Welcome (Phil James and Wenting Chen)

09:10-09:20 Introduction

09:20- 09:50 ECOURCHIN (MIKON): sustainable development of urchin industry and ecosystem benefits from kelp recovery – a win-win situation for northern community

Wenting Chen, Researcher, NIVA

09:50-10:20 URCHIN project (NPA): Utilisation of the urchin resource in the Northern Periphery

Phil James, Researcher, NOFIMA

10:20-10:30 Keynote speaker

Inger Oline Røsvik, Norwegian Research Council

- 10:30-11:00 Coffee break
- 11:00-11:40 Successful urchin industries in similar latitudes: Iceland and Canada

Gudrun Thorarinsdottir, Marine and Freshwater Research Institute, Iceland

Janet Lochead, Fisheries and Oceans Canada, Canada

11:40 - 11:55 Kelp and ecosystem recovery

Hartvig Christie, Senior researcher, NIVA

11:55 - 12:05 Projection of future kelp forest in the North

Hege Gundersen, Researcher, NIVA

12:05 - 12:20 Kelp recovery and cod fishery

Claire Armstrong /Godwin kofi Vondolia, Professor (Post doc),

Artic University of Norway

12:20 -12:30 Discussion of morning presentations

12:30-13:30 Lunch

# Agenda

#### Session Two: Developing a sea urchin industry in Norway

13:30-13:45 Management and governance issue, regulation and policy

Aslak Forus, Mattilsyn representative (Norway)

13:45-14:05 Sea urchin roe enhancement

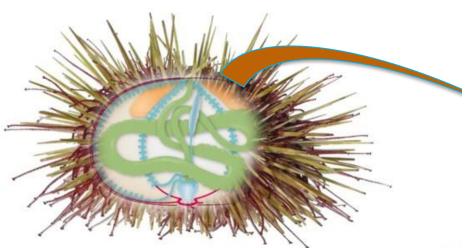
Brian Takeda, URCHINOMICS

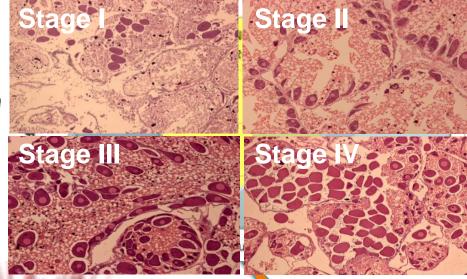
14:05-14:15 Introduction to panel discussion:

Logistical bottlenecks to a sea urchin industry

- 14:15-16:00 PANEL DISCUSSION How to move a sea urchin industry forward in Norway Creating an action plan!
- 16:00-17:00 Drinks and nibbles







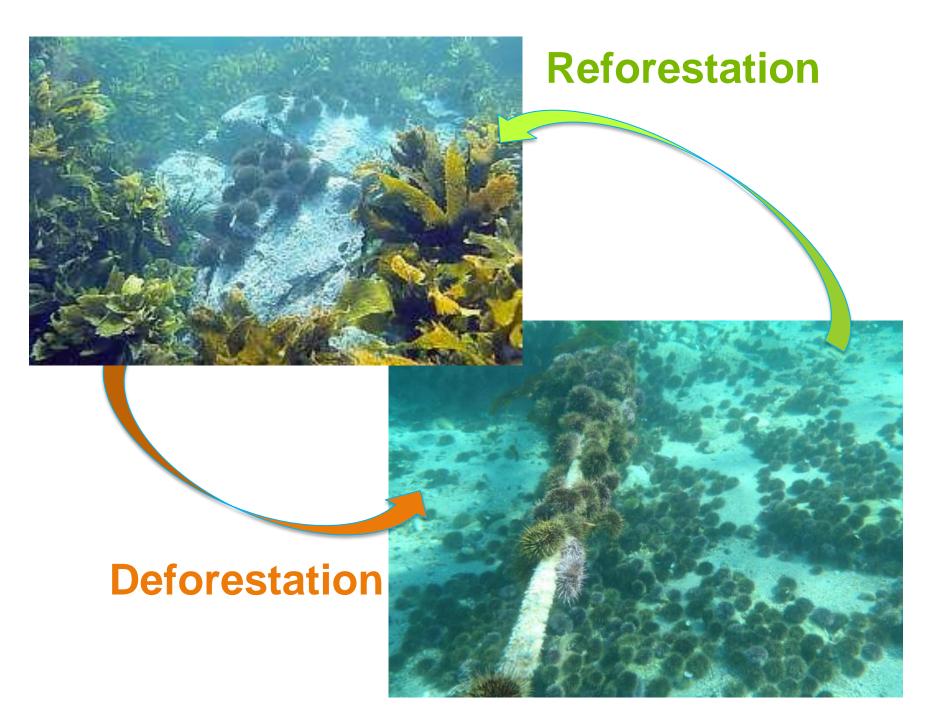
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## Taste (umami)





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Krabbe





- 1. What do you see as the major bottlenecks to the development of an urchin industry in Norway?
- 2. In your opinion how can these bottlenecks be overcome?
- 3. How can the benefits of ecosystem restoration be incorporated into an urchin industry in Norway?