INCREASED UTILIZATION AND VALUE CREATION FROM WHITEFISH REST RAW MATERIALS

Guro Møen Tveit, SINTEF Ocean 11.09.2020

FOOD GAP

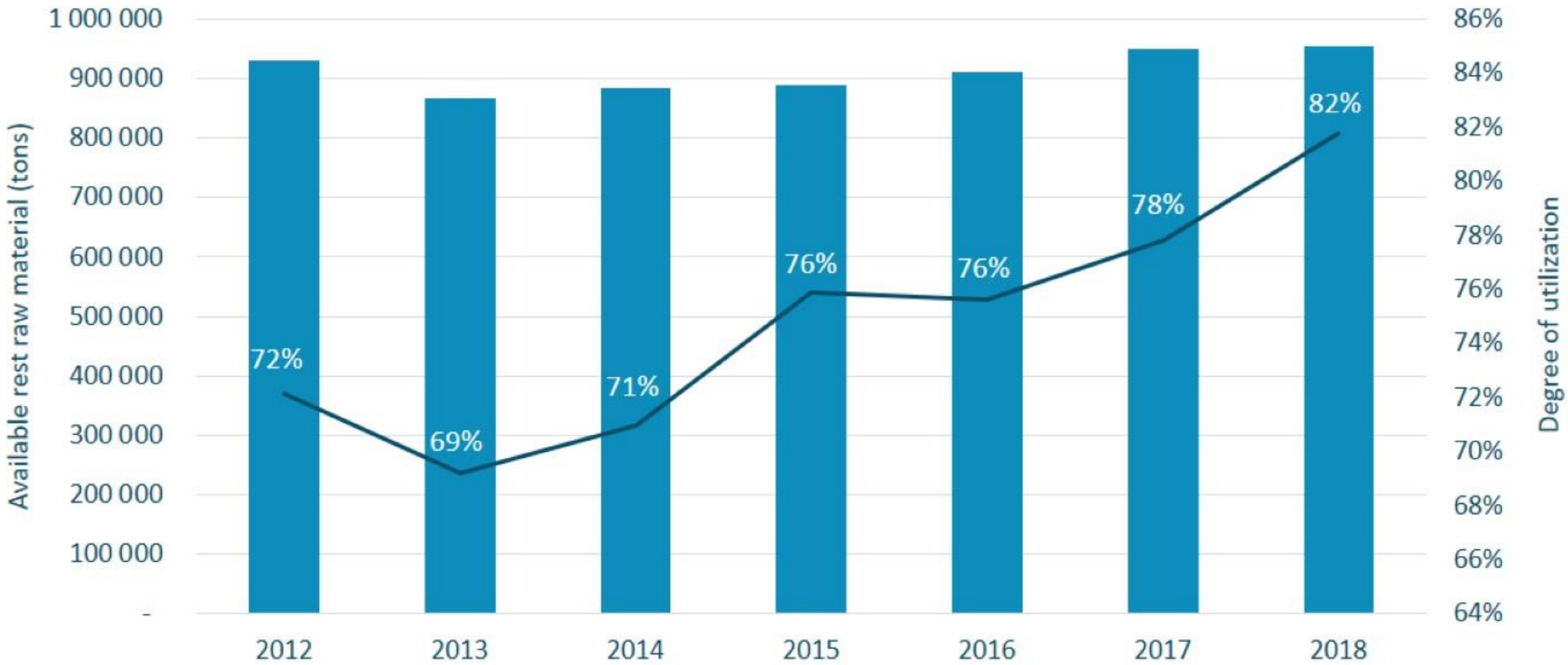
71 % of the earth is water…….

….. but only 2 % of the world food production comes from the ocean

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

...When discards prior to landing are included, 35 percent of global catches are lost or wasted and therefore not utilized...

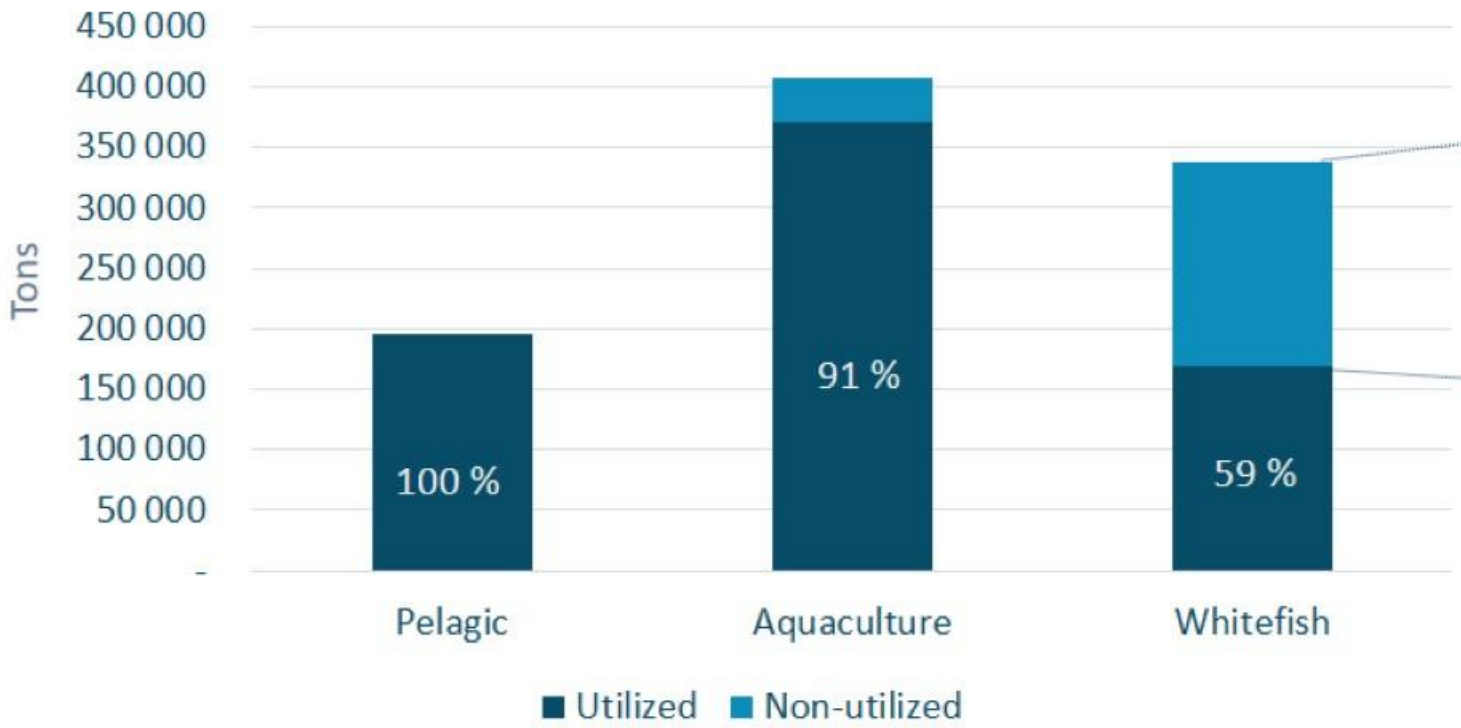
MARINE REST RAW MATERIAL IN NORWAY



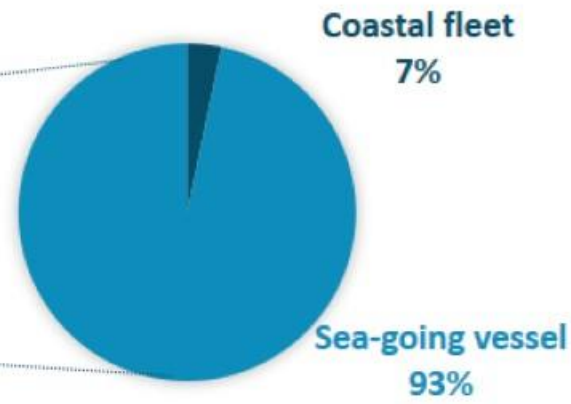
Source: Richardsen, R., Myhre, M., Nystøyl, R., Strandheim, G., & Marthinussen, A. (2019). Analyse marint restråstoff 2018 - Tilgang og anvendelse av marint restråstoff i Norge.

MARINE REST RAW MATERIAL IN NORWAY

DEGREE OF UTILIZATION OF REST RAW MATERIALS



DISTRIBUTION OF THE NON-UTILIZED RAW MATERIAL



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The sea-going vessels discards most of the rest raw material

- Preservation during storage and transportation
- Logistics solutions

- Quality loss during storage
- Storage capacity
- Technological solutions for handling

- Flexible processing technology for on-board processing of value-added products

- Economic and regulatory constraints
- Market demand and possibilites

THE POTENTIAL IN THE NON-UTILIZED RAW MATERIAL

Non-utilized whitefish rest raw materials
131 700 ton
(2018)

6 600 ton lipids

18 500 ton protein

~ 14 million people could get their daily recommende intake (250 mg EPA + DHA) for a whole year

~ 0.8 million people could get their daily requirement of proteins for a whole year

SINTEF

SUPREME

Sustainable production of ingredients from whitefish rest raw materials

Forskningsrådet

Contact person: Guro.Tveit@sintef.no

SUPREME

Sustainable production of ingredients from whitefish rest raw materials (2019 – 2022)

Project coordinator: PhD Ana Carvajal, Research manager, SINTEF Ocean, 9.9 MNOK

Forskningsrådet

SINTEF

NTNU

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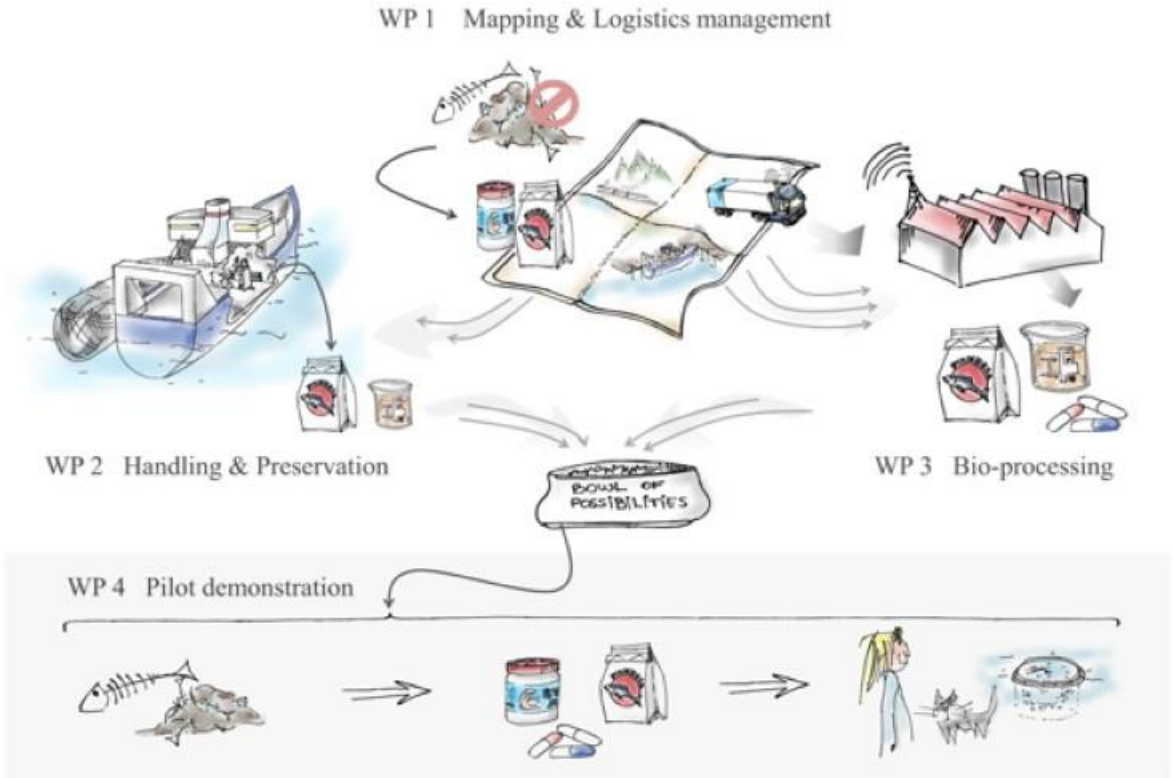
Nordic wildfish

ScanBio

FJORDLAKS AS

FLOW SOLUTIONS



WEB: https://www.sintef.no/projectweb/supreme/

Facebook: https://www.facebook.com/SUPREMEProsjekt

Instagram: https://www.instagram.com/supreme_prosjekt/

Activities

- Working close with the industry to help with solutions to their problems
- Yearly research cruises on board the commercial trawler MS "Molnes", Nordic Wildfish
- And many other activities conducted by researchers, industry, phd-students, master and bachelor students
- Research example: Testing enzymatic hydrolysis as a technology for producing hydrolysates from frozen/thawed whole or minced cod heads

SINTEF

HEADS UP

High quality proteins from cod heads

FHF
FISKERI- OG HAVBRUKSNÆRINGENS FORSKNINGSFOND

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Cod heads

- Traditionally dried
- Unstable markets
- Can we make high quality proteins?

Activities

- Screening of processing conditions in lab scale
- Pilot trials with fresh cod heads at Tufjordbruket (Rolsøy – 71° North) by using SINTEFs mobile production unit.
- Evaluated the product in food model systems
- Identify and solve technical challenges

THANK YOU

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Technology for a better society