
Photo: Niels Sloth


Photo: Christian Schou


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Abundance of key coastal fish species

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HELCOM Workshop on Fish indicators, Gothenburg
10th of May, 2016

CONTENT

- The indicator
- Why coastal fish?
- Coastal fish and pressures
- Data and storage system
- GES-approach and assessment scale
- Aggregation and confidence
- Current status

THE INDICATOR

Relative abundance/biomass of:

- **Perch** (*Perca fluviiatlis)*. Northern and eastern Baltic, sheltered and mid parts of the coastline

- **Flounder** (*Platichtys flesus*). Southern and western Baltic, exposed parts of the central Baltic coastline

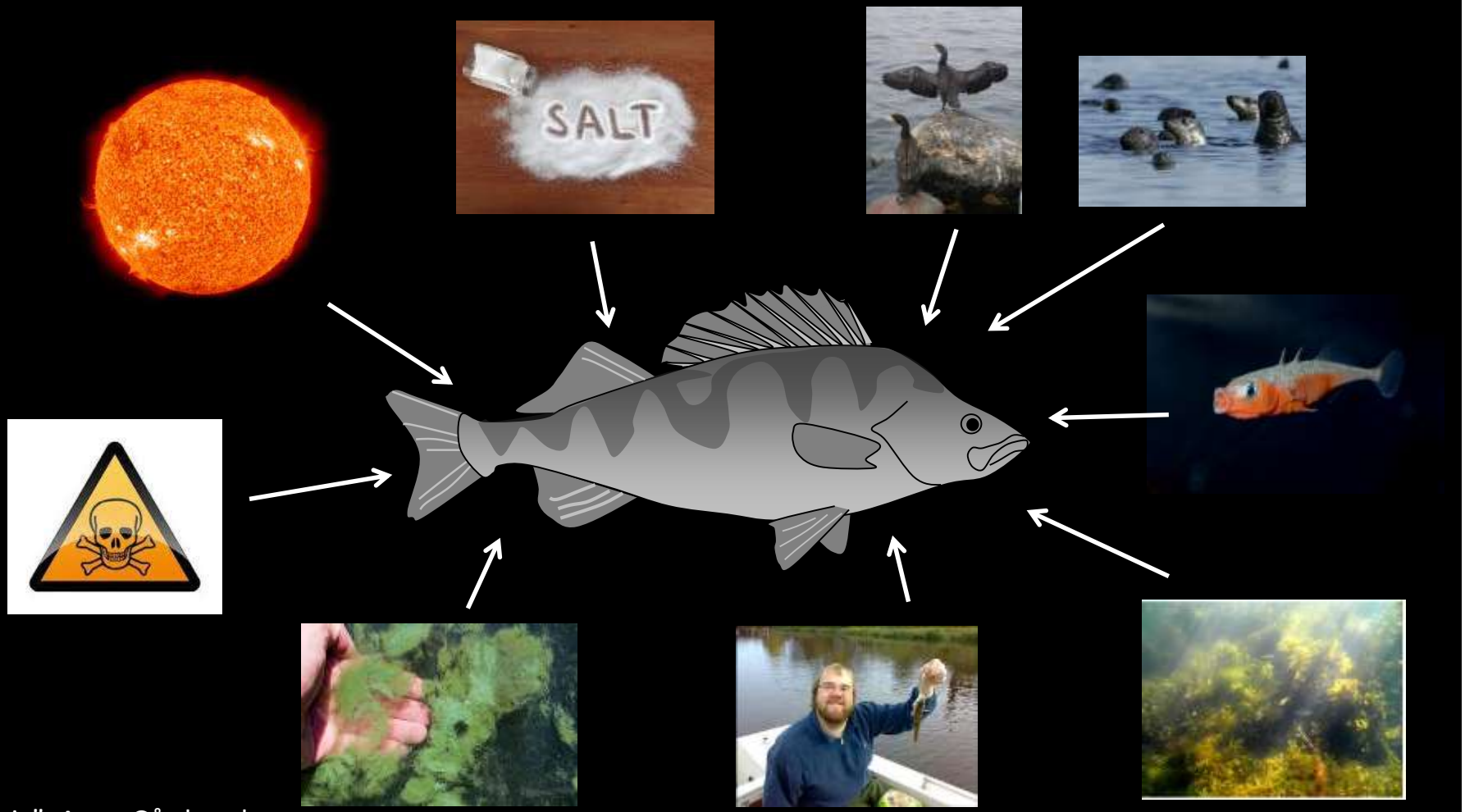
- **Cod** (*Gadus morhua*). Southern and western Baltic

WHY KEY COASTAL FISH SPECIES?

- Fish integrates processes in the coastal food-web => good indicators of ecosystem state (HELCOM 2006, 2012)
- Fish (via top-down processes) influence function and structure of coastal ecosystems (Eriksson et al 2009; Östman et al 2016)
- Fish are of great socio-economical importance to small-scaled coastal fisheries and recreational fisheries (HELCOM 2015)
- Coastal fish hence included in BSAP, MSFD (D1,3 & 4) and CFP

KEY COASTAL FISH SPECIES AND PRESSURES

Plethora of pressures impacting coastal fish communities



”Perch pic”: Anna Gårdmark

DATA TO SUPPORT THE INDICATOR

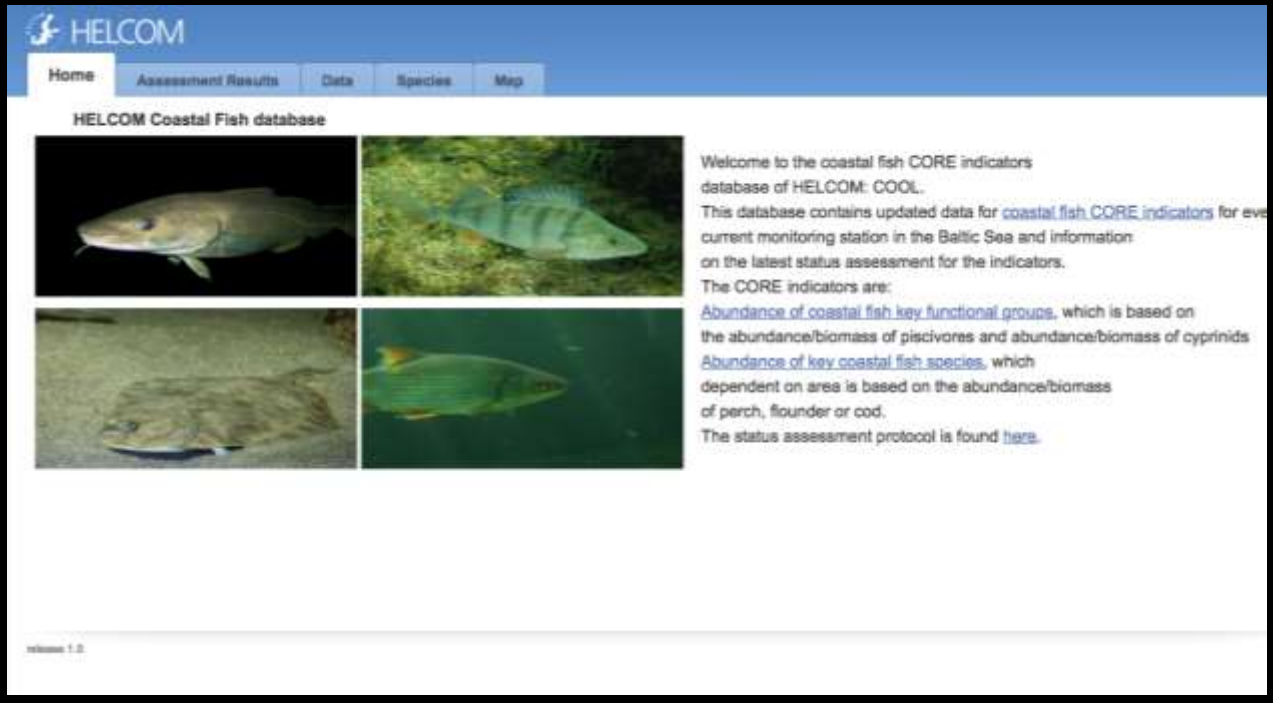
Coastal fish monitoring in various forms

Gill net monitoring, commercial catch statistics, coastal trawl surveys, fyke net monitoring and recreational fishermen surveys

Still spatial gaps

DATA STORAGE SYSTEM

- Set up of COOL-database at the HELCOM web
- Will contain CORE-indicator data and latest status assessment
- Financed within the Baltic Boost project

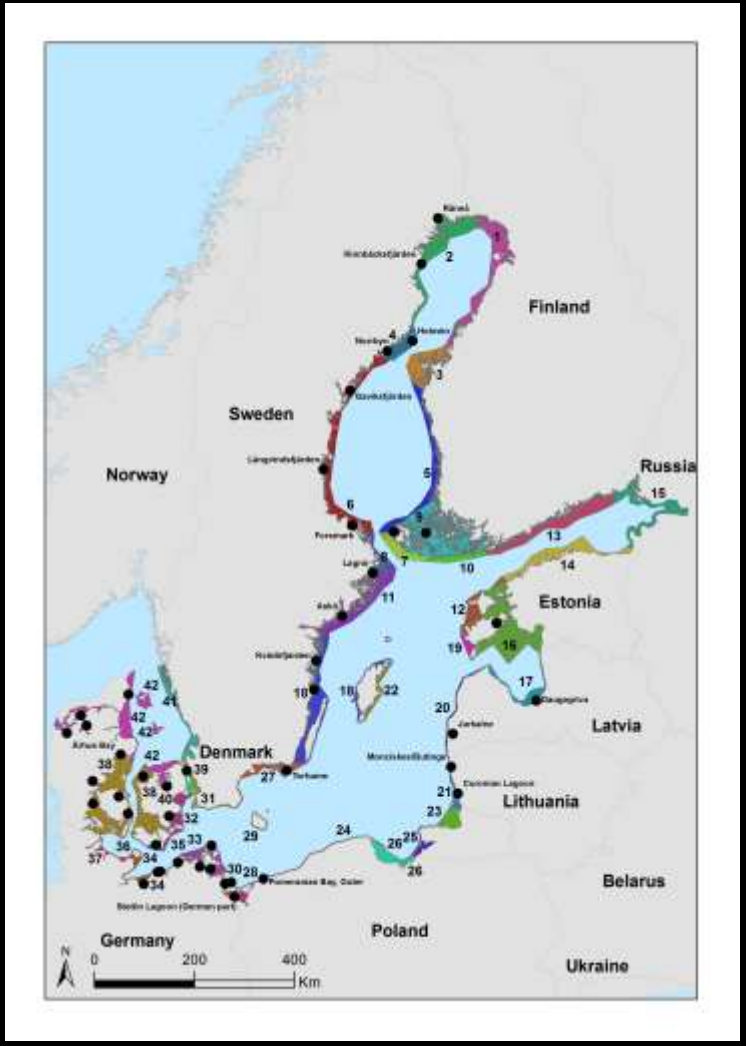


GES-CONCEPT

- Coastal fish are local -> Assessment unit level 3

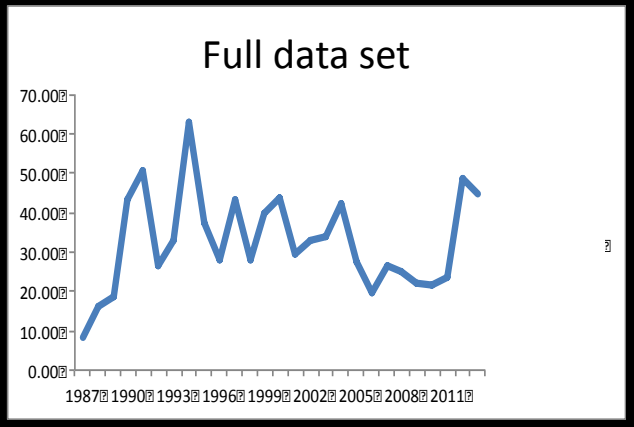
- One assessment per monitoring area (area specific GES-boundaries)
- Base-line approach (data > 15 years)
- Trend-based approach (data < 15 years)

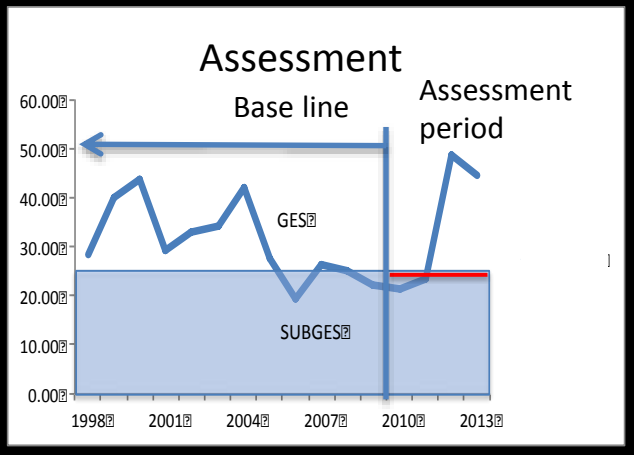
- Reference state could either reflect GES or subGES



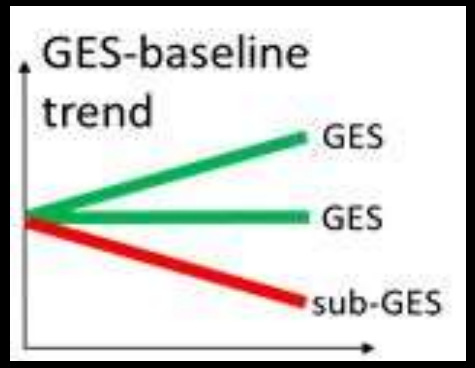
GES-CONCEPT (cont)

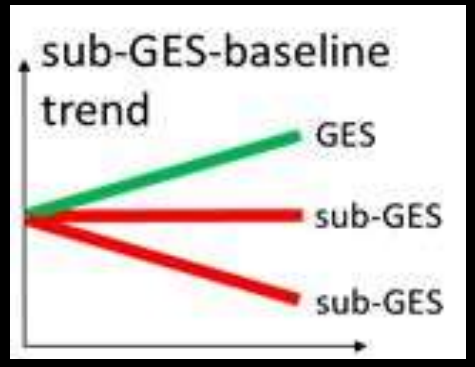
Base-line approach





Trend-based approach





AGGREGATION PRINCIPLES

”Majority rule” within assessment units and across monitoring areas

GES is observed if > 50% of the monitoring areas within an assessment unit is GES

⇒ if > 50% of the areas within an assessment unit are GES (or subGES), then the status of the assessment unit = GES (or subGES)

⇒ if 50% of the areas within an assessment unit are subGES, then the status of the assessment unit = subGES

Or the HOLAS II aggregation principle (NEAT-tool) will be applied

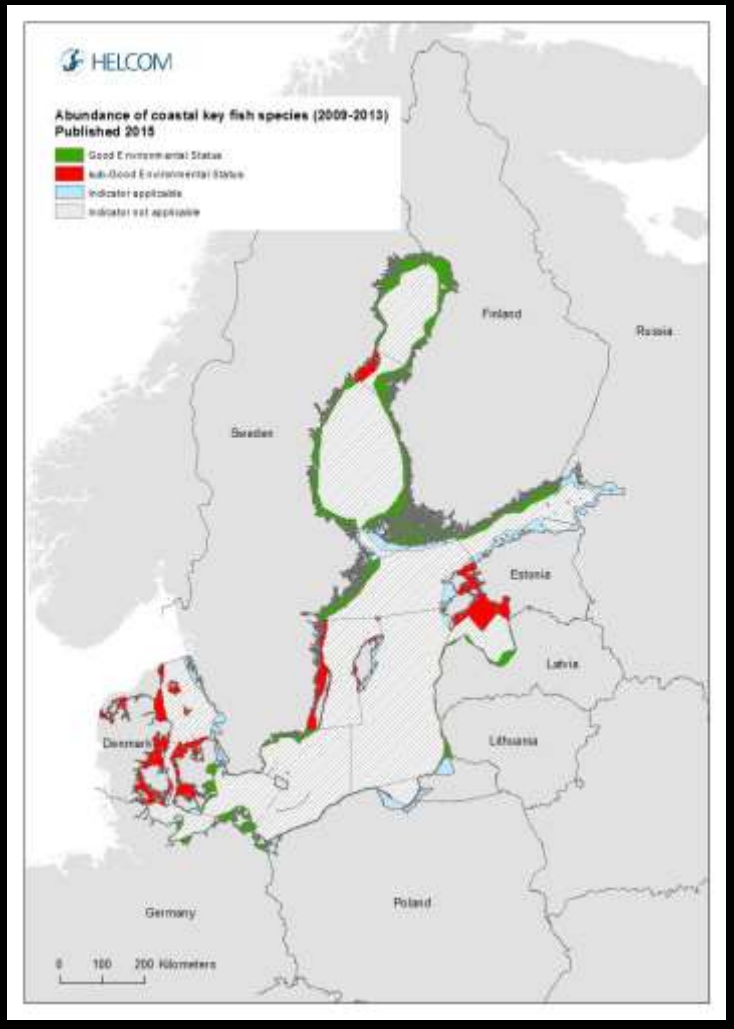
CONFIDENCE

Three levels of confidence across four criteria

Confidence level	Time series length	Congruence in status	Spatial representation	Precision of data
Low	Below 10 years	Departing status across areas (50/50)	Poor (few areas given the size of the assessment unit)	Poor (low quality data)
Medium	10-15 years	Departing status across areas (75/25)	Medium (a few areas given the size of the assessment unit)	Medium (ok quality of data)
High	15 years or more	Similar status across areas (85/15)	Good	Good

All four criteria of confidence must be fulfilled to attain a certain level of confidence

STATUS IN 2013



http://www.helcom.fi/baltic-sea-trends/indicators/abundance-of-key-coastal-fish-species

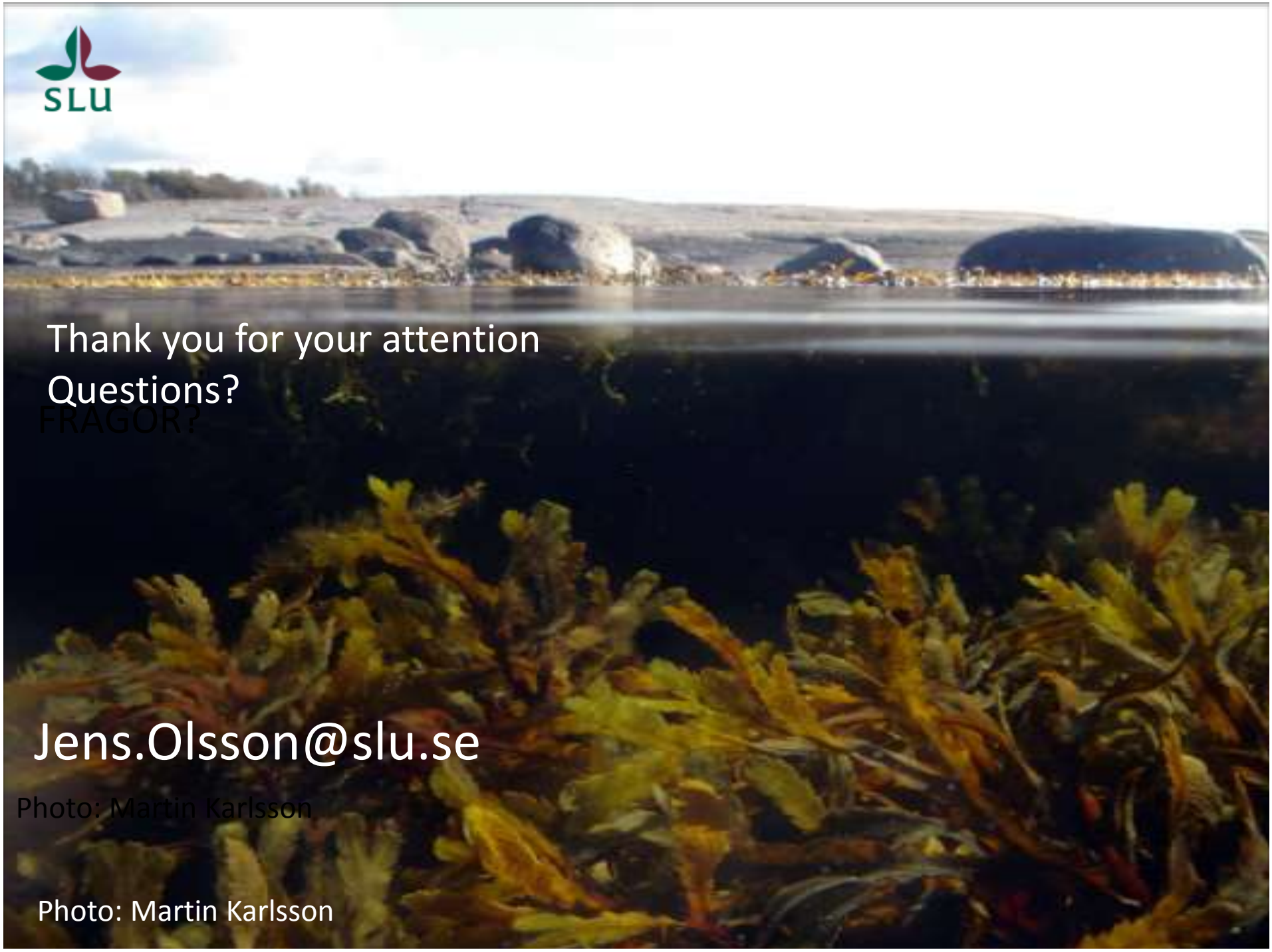


Photo: Martin Karlsson