



Status and achievements in blue bio-economy in the Baltic States: Estonia

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Blue Platform: Mapping perspectives of the blue bio-economy in the Baltic States, 26 November 2020

Estonian sea area

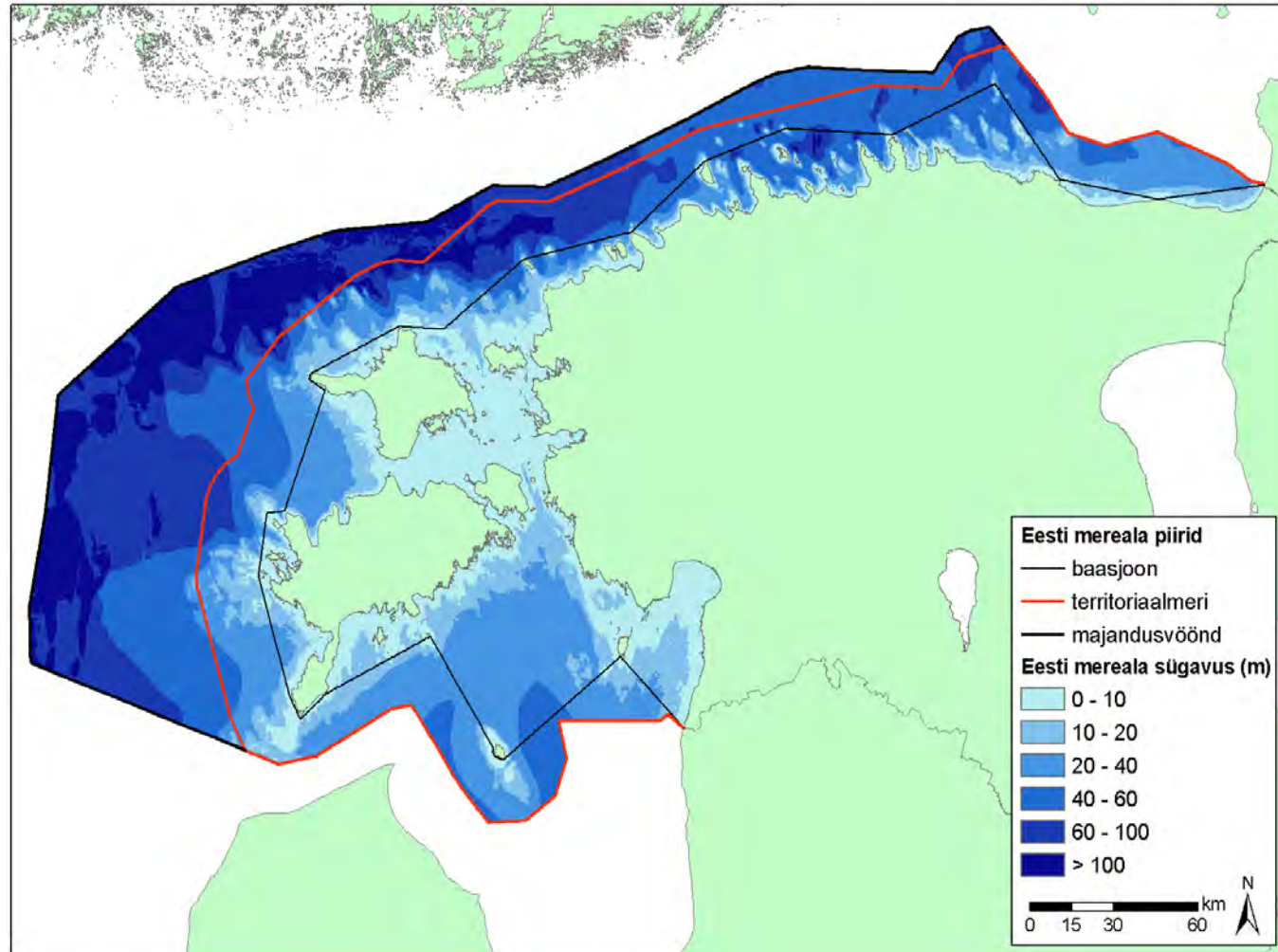
Total area: 36 500 km²

Territorial sea: 25 200 km²

Mean depth: 30 m

EEZ: 11 300 km²

Mean depth: 80 m



Estonian Blue Bioeconomy

Fisheries & Aquaculture

- Long traditions
- Important sector for economy
- Export potential
- Perspectives in aquaculture

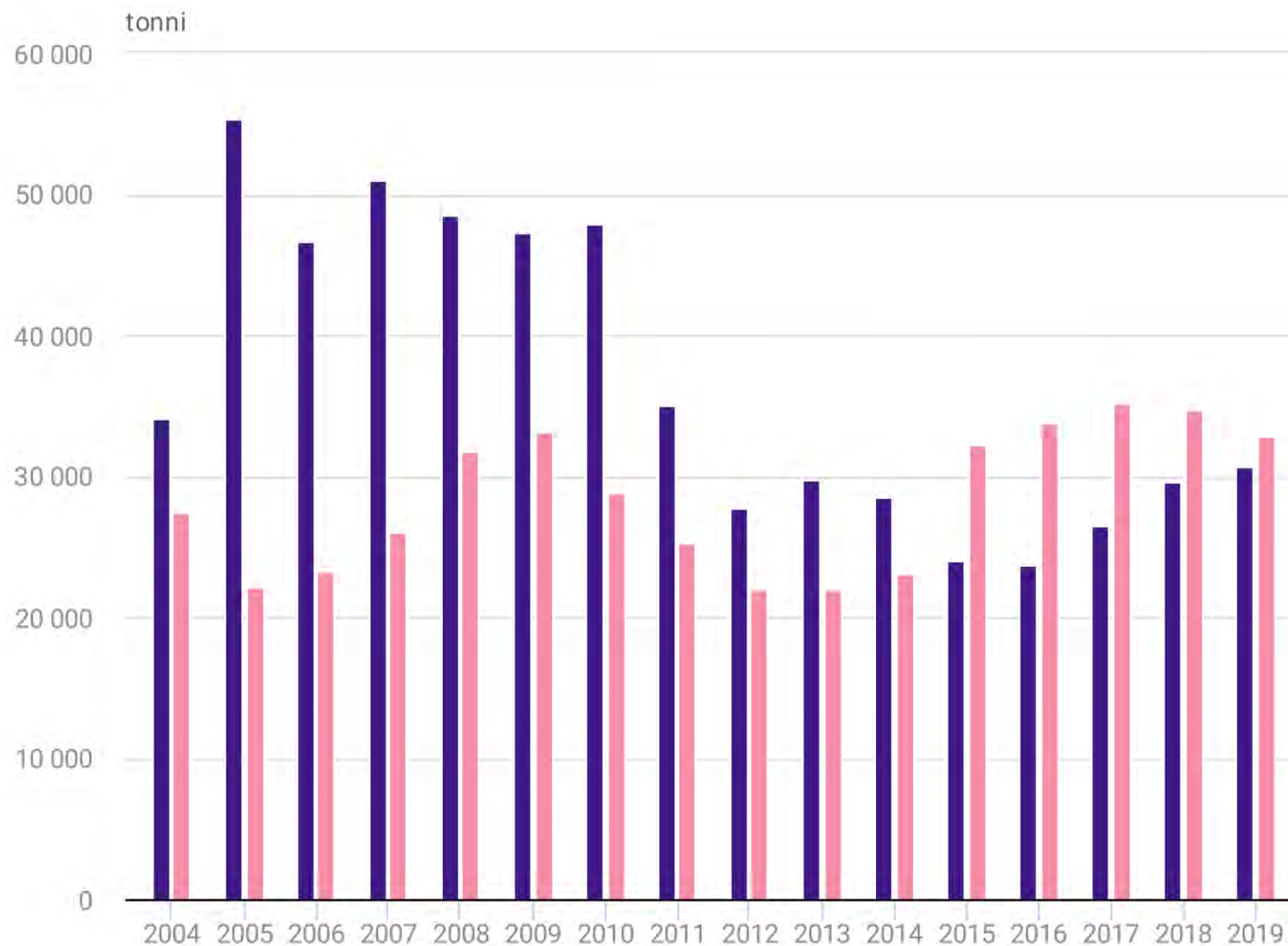
Plant harvesting

- Long traditions (reed)
- Unique species (*Furcellaria lumbricalis*)
- Minor economical importance at present moment
- Good perspectives

Estonian total fisheries in 2017

	Type of fisheries	Amount, tonnes	EUR (wholesale value)
Baltic Sea	trawling	53 634	9 651 818
	coastal	10 841	5 517 715
	total	64 475	15 169 533
Freshwater	professional	2955	5 365 303

Catches from the Baltic Sea 2004-2019



Sprat



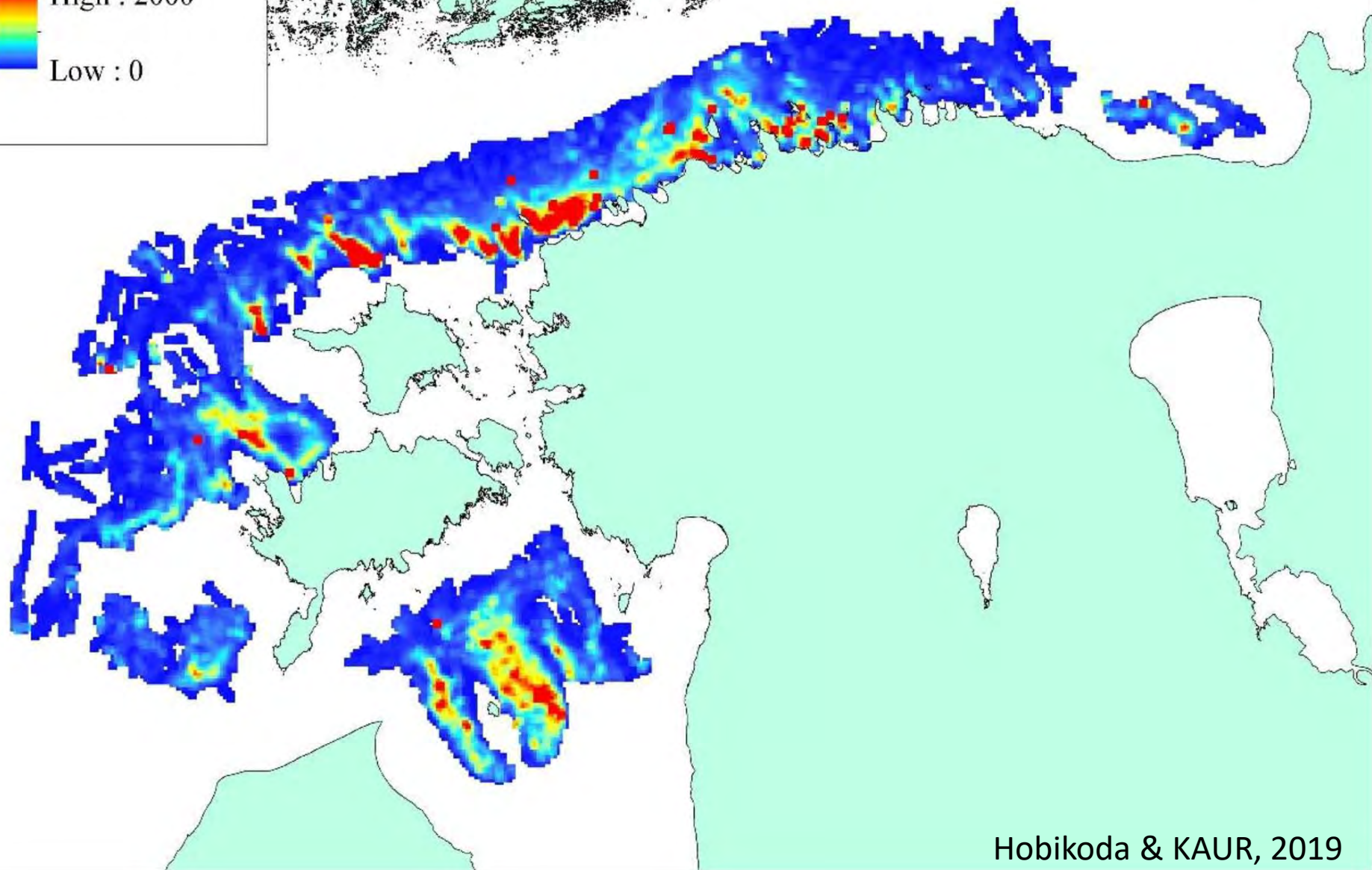
Herring

Catches of herring

Value

High : 2000

Low : 0



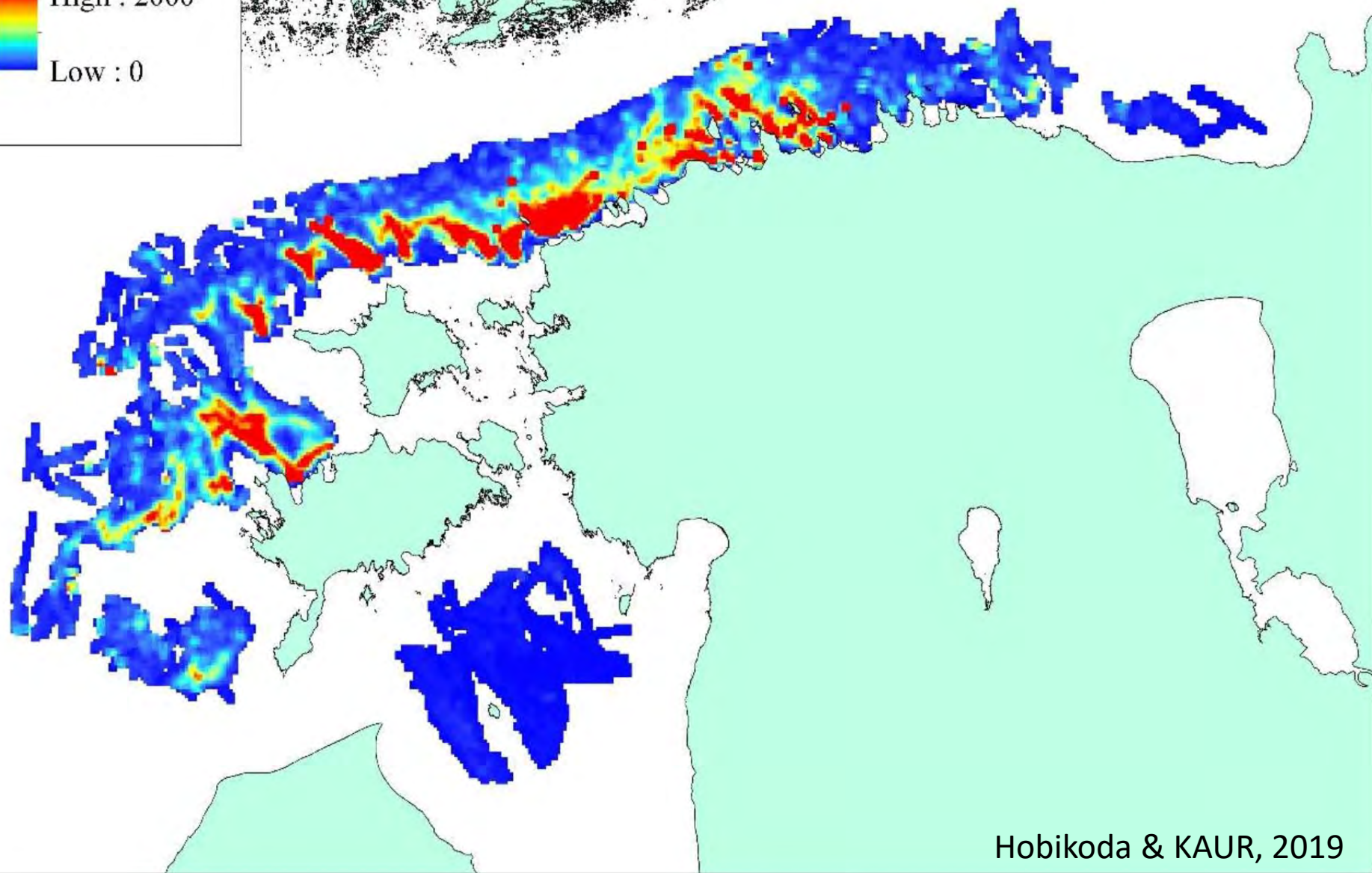
Hobikoda & KAUR, 2019

Catches of sprat

Value

High : 2000

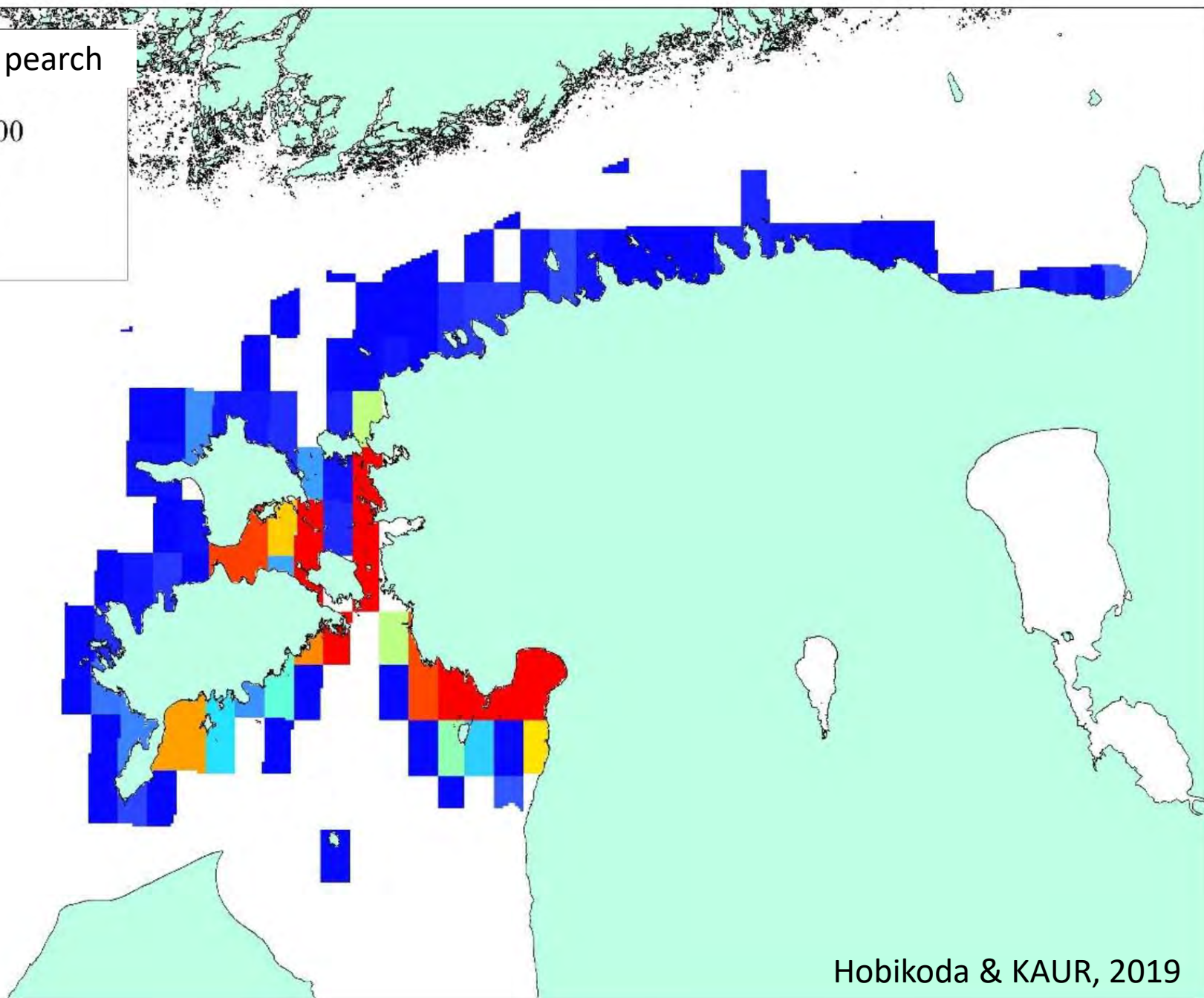
Low : 0



Hobikoda & KAUR, 2019

Catches of perch

Value
High : 100
Low : 0



Hobikoda & KAUR, 2019



Aquaculture production sold, 1992-2018

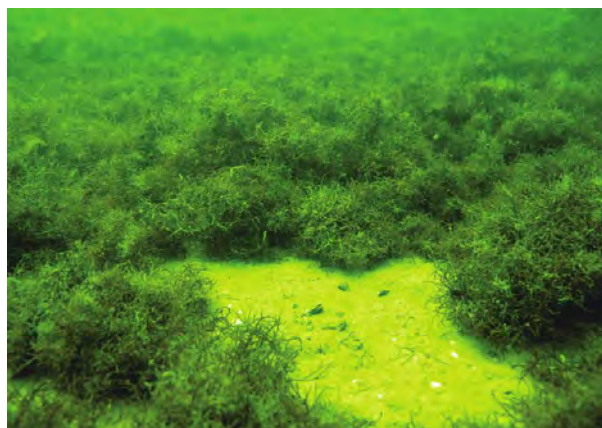


Source: Statistics Estonia



Harvesting and use of reed

<https://www.eby.ee/>



Harvesting of *Furcellaria lumbricalis* in Kassari Bay



Long tradition of harvest of macroalgae

Estagar and Vetik

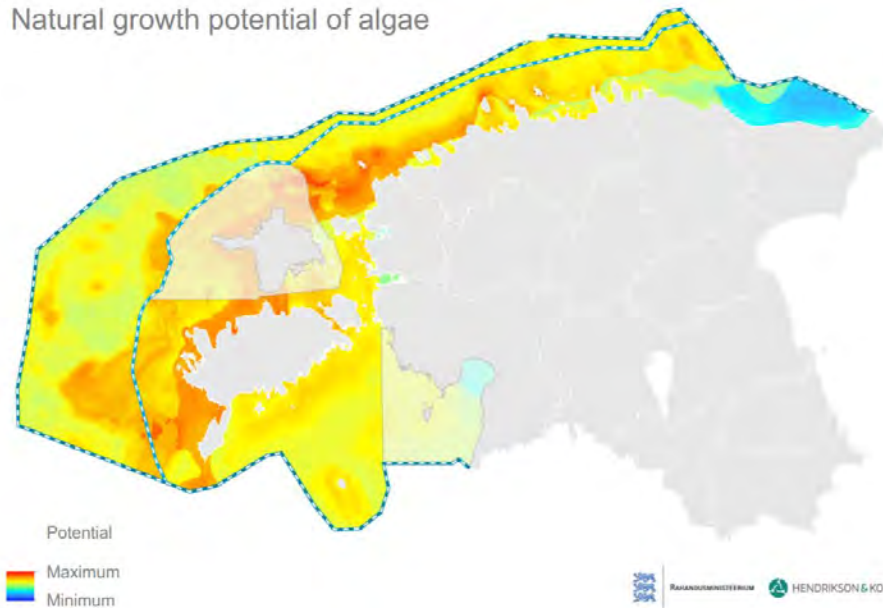
There are only two companies who are allowed to harvest the seaweed stock of 150 000 tons of *Furcellaria lumbricalis* in Estonian waters.

- Both active in product development and innovation.
- Est-Agar AS is the only producer of the unique texturant – furcellaran from the red seaweed *Furcellaria lumbricalis* in the world.
- **Est-Agar AS main business areas are:**
 - Production and sale of gelling agent furcellaran
 - Trawling, gathering, buying up, processing and sale of red seaweed *Furcellaria lumbricalis*.
- **Furcellaran** can be used as stabilizing, thickening and gelling agent in the food, agricultural, cosmetics and pharmaceutical industries.

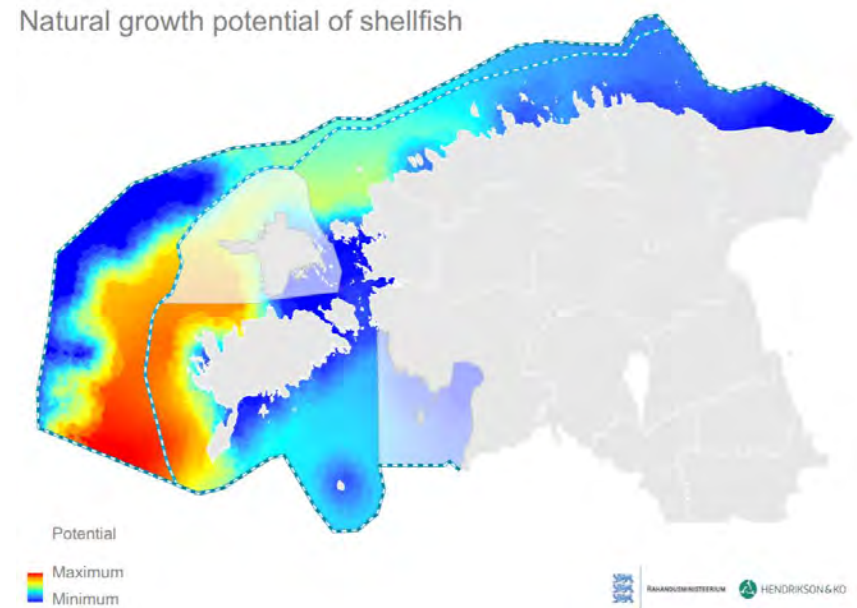


Future potentials

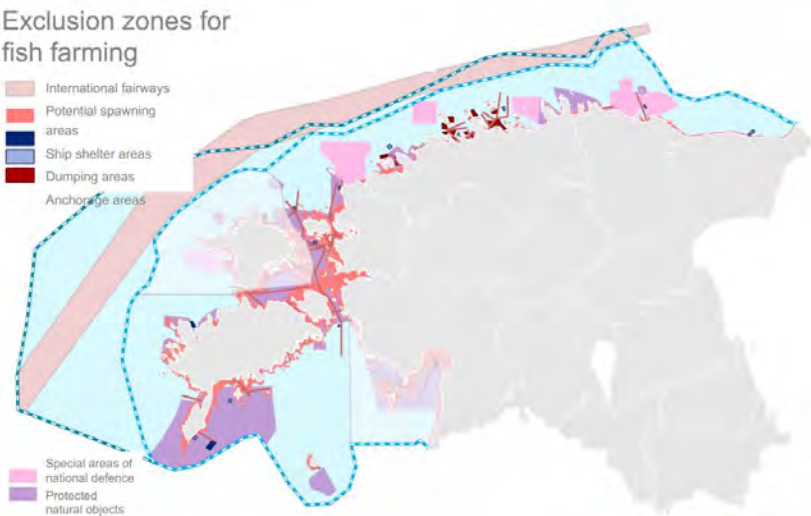
Natural growth potential of algae



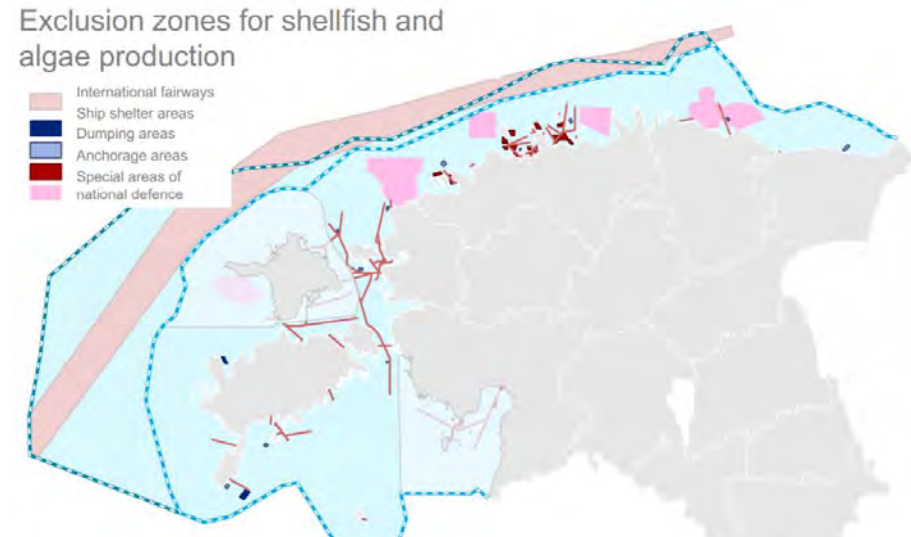
Natural growth potential of shellfish

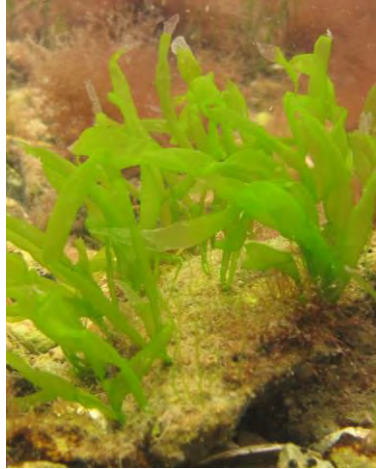


Exclusion zones for fish farming

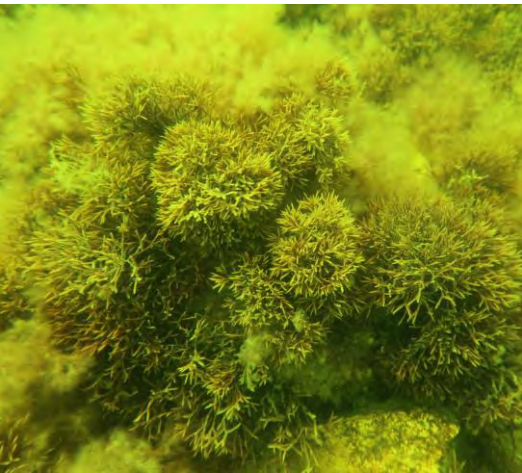


Exclusion zones for shellfish and algae production



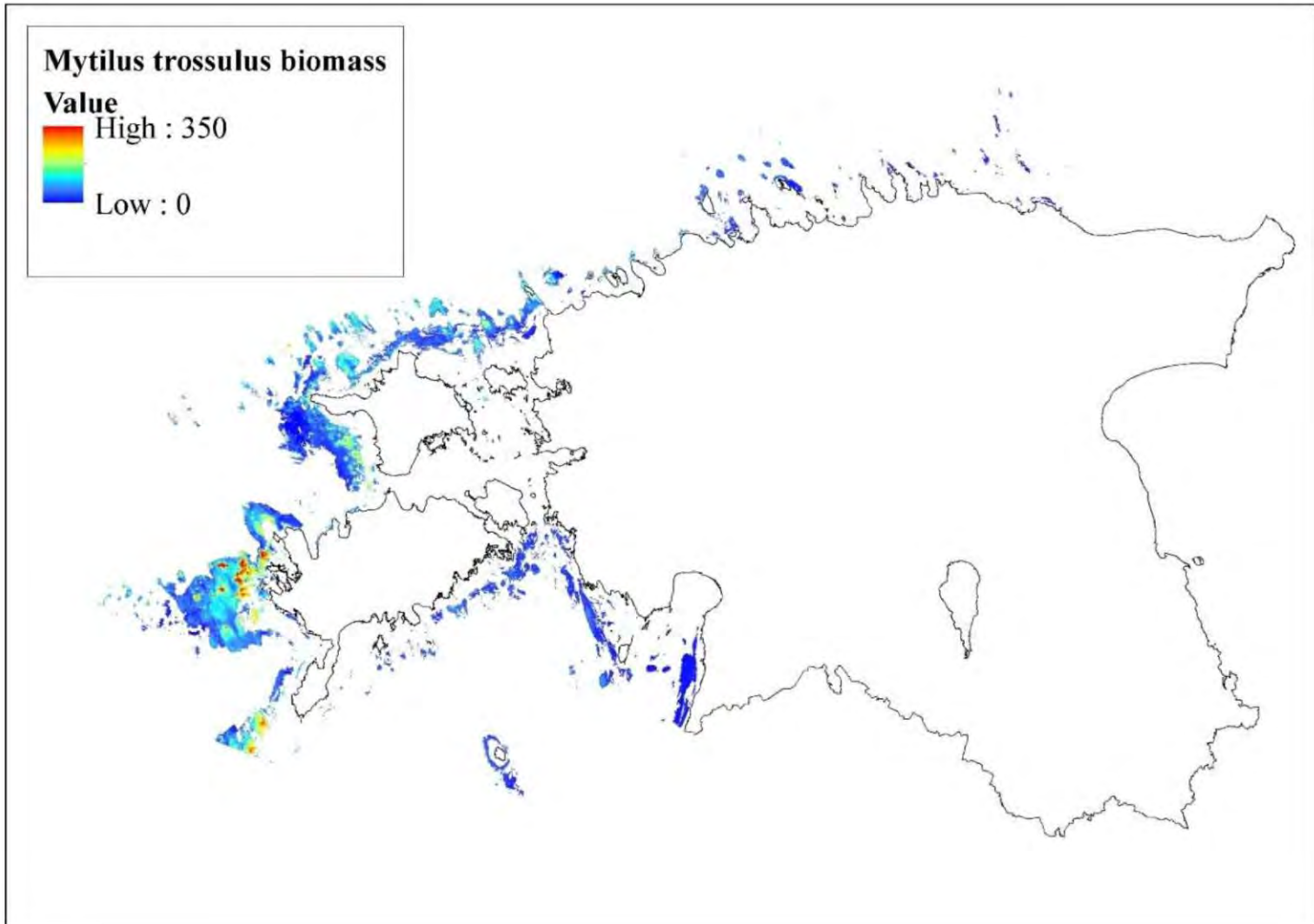


Potential new species for harvest and cultivation

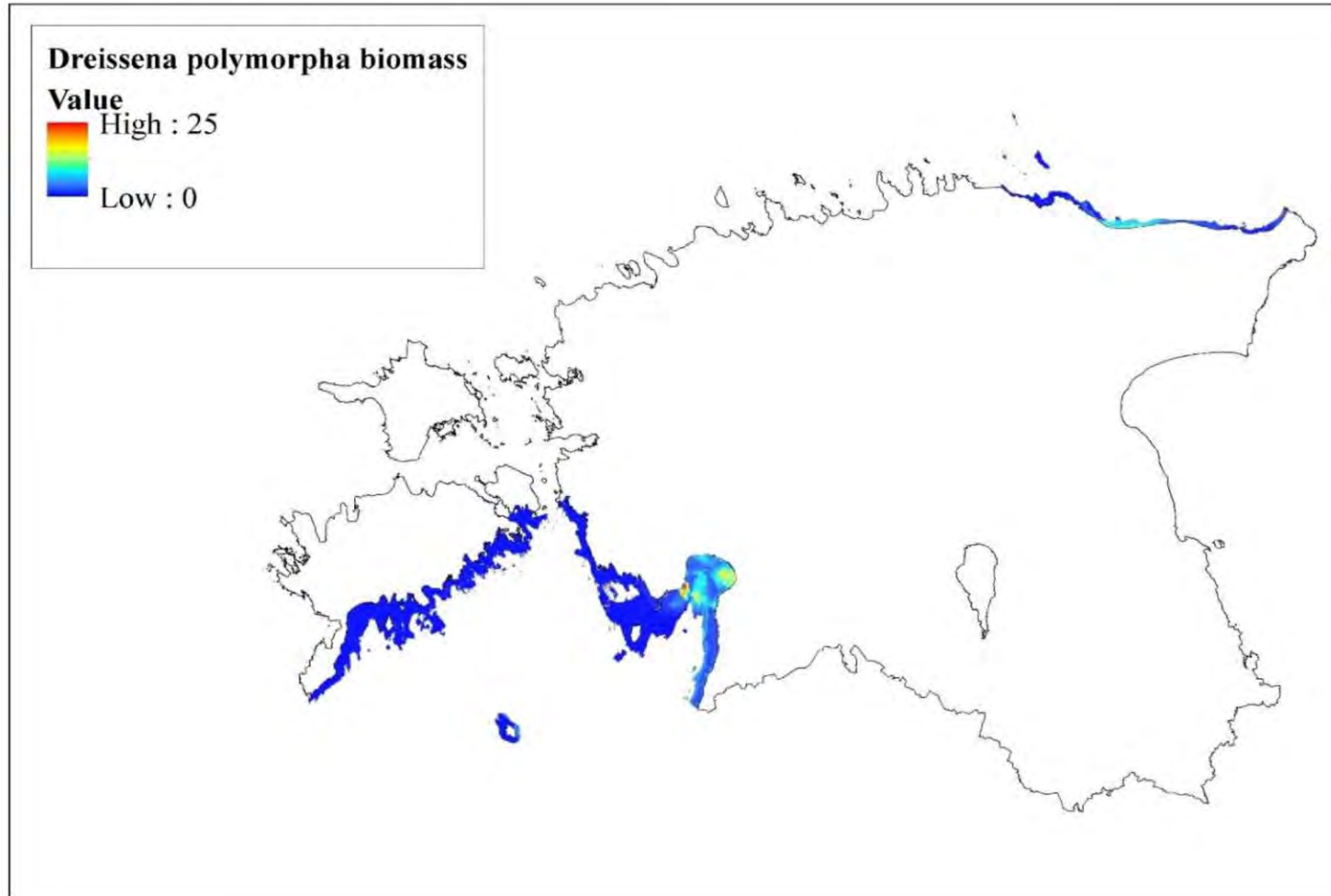


- *Mytilus trossulus*
- *Dreissena polymorpha*
- *Ulva intestinalis*
- *Fucus vesiculosus*
- *Furcellaria lumbricalis*
- *Ceramium tenuicorne*

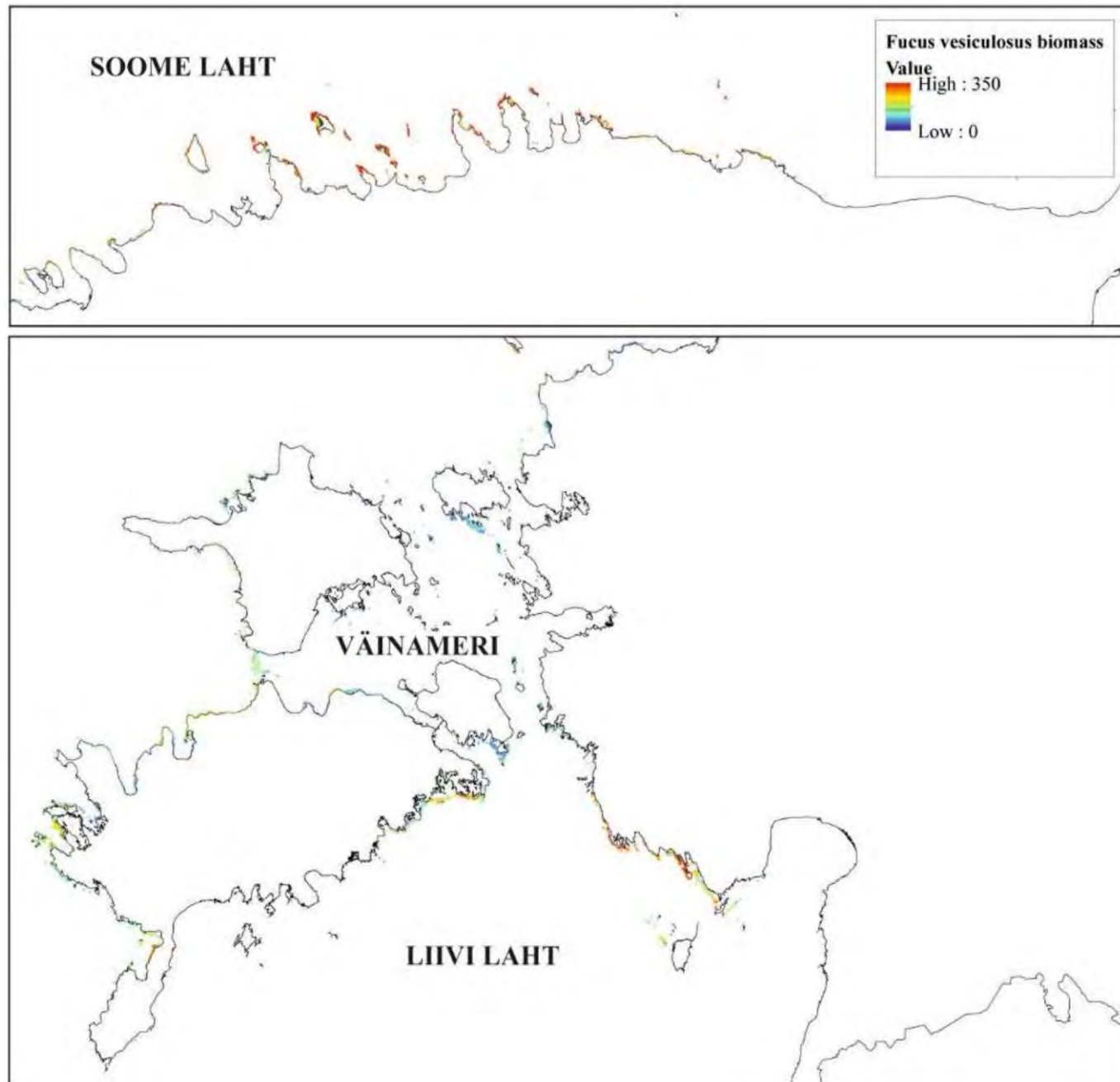
Natural distribution of *Mytilus trossulus* biomass



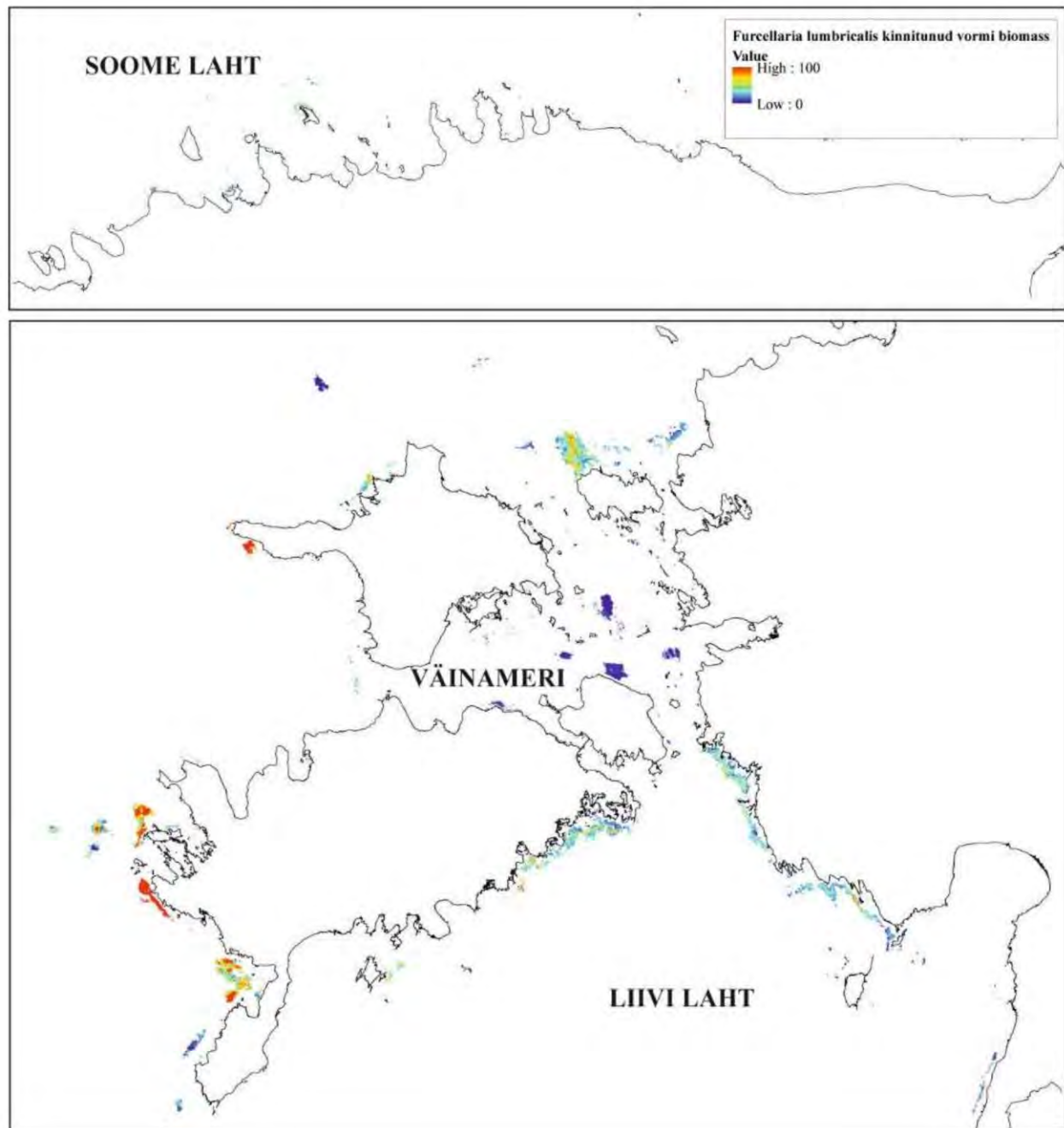
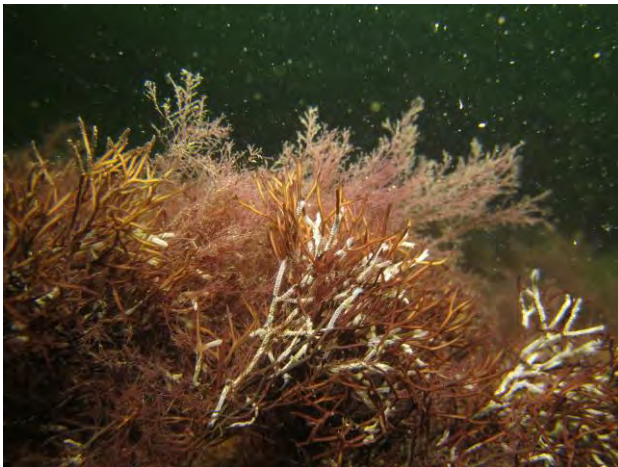
Natural distribution of *Dreissena polymorpha* biomass



Distribution of natural biomass of *Fucus vesiculosus*

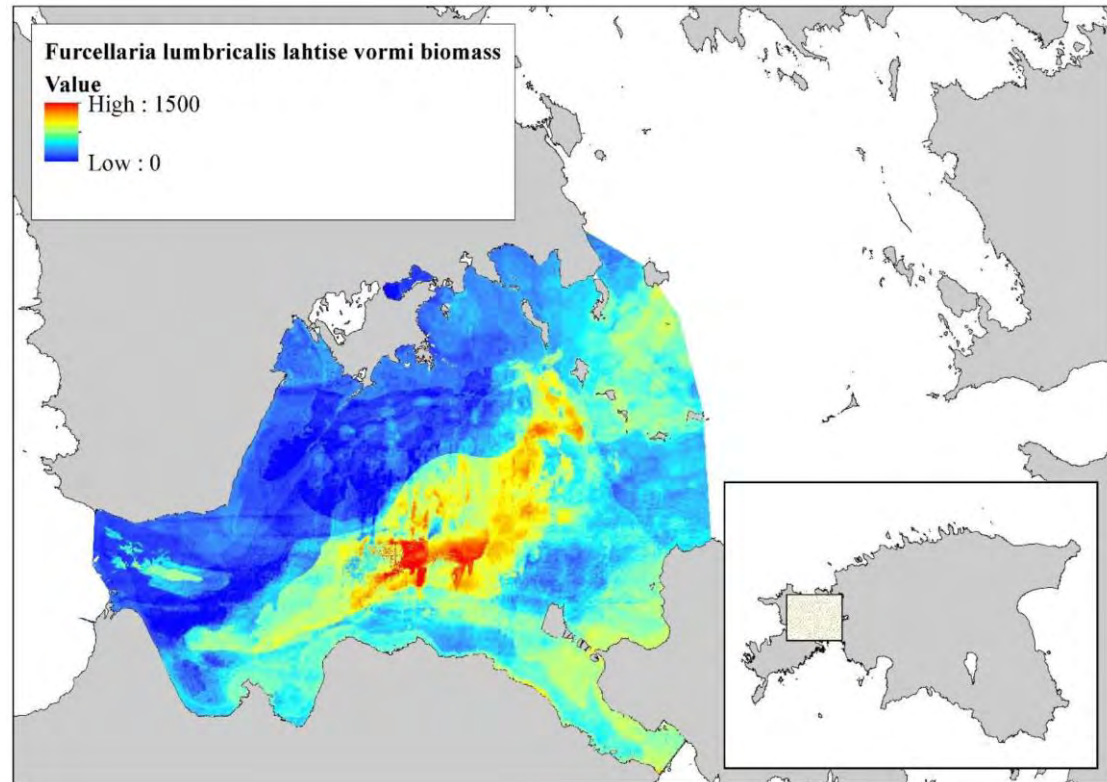


Distribution of natural biomass of *Furcellaria lumbricalis*



Distribution of natural biomass of *Furcellaria* loose form

- West Estonian Archipelago sea
- Area 200 km²
- Biomass 150-200 k t ww

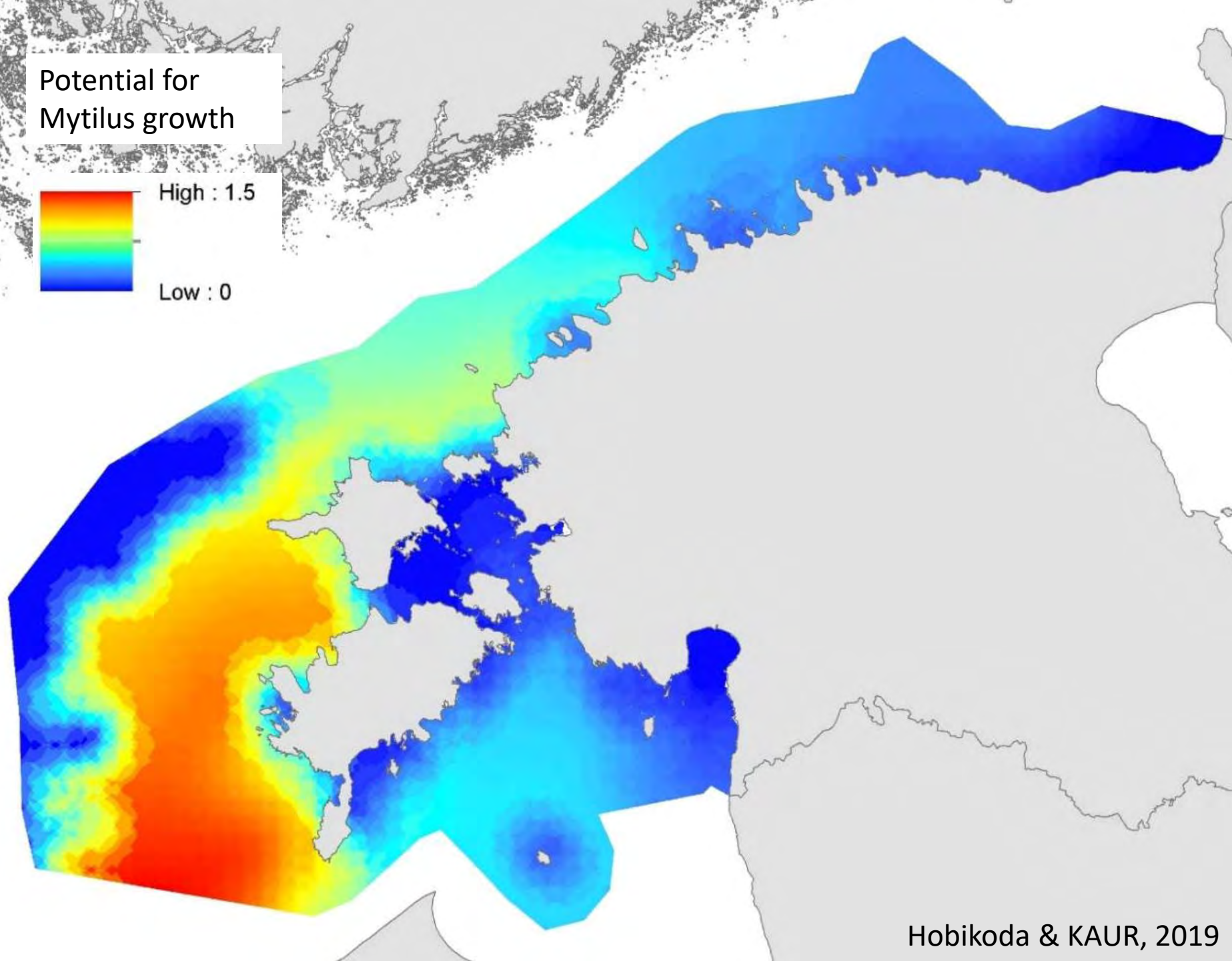


Potential for
Mytilus growth

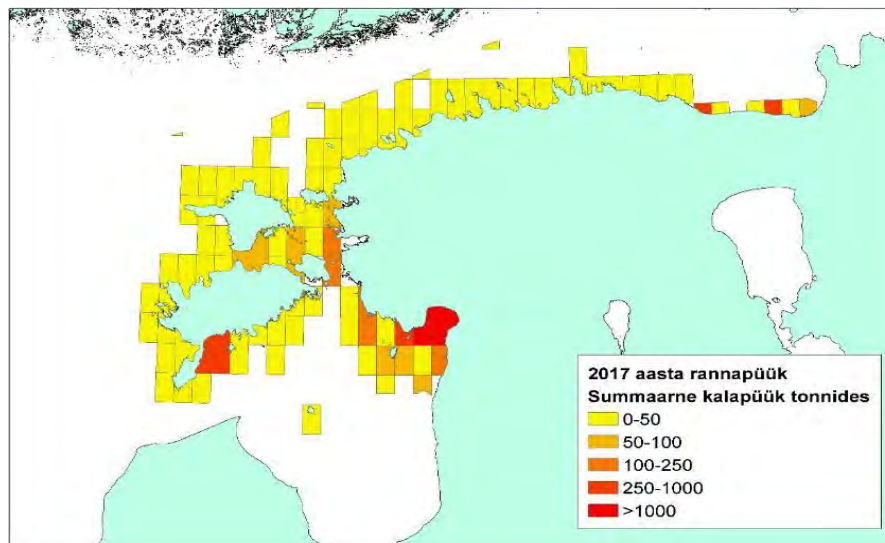


High : 1.5

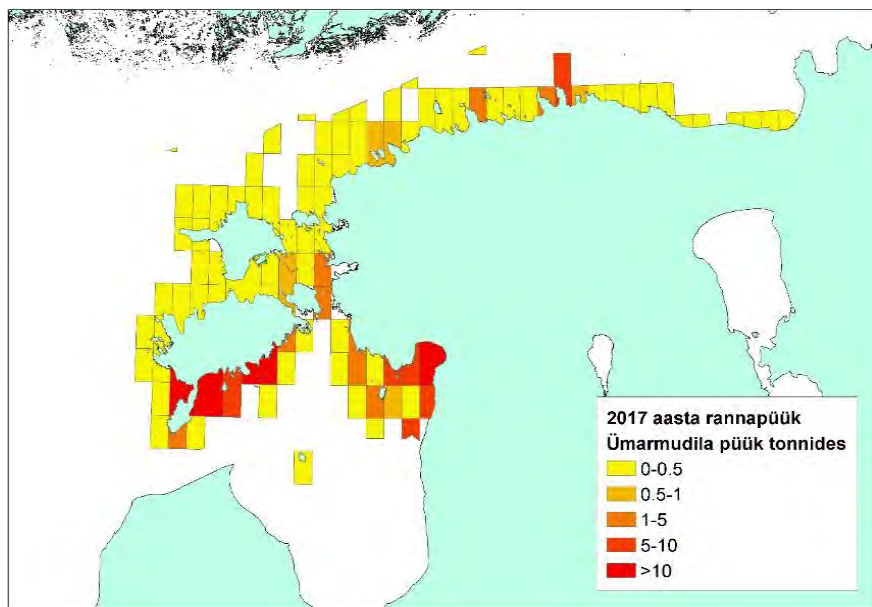
Low : 0



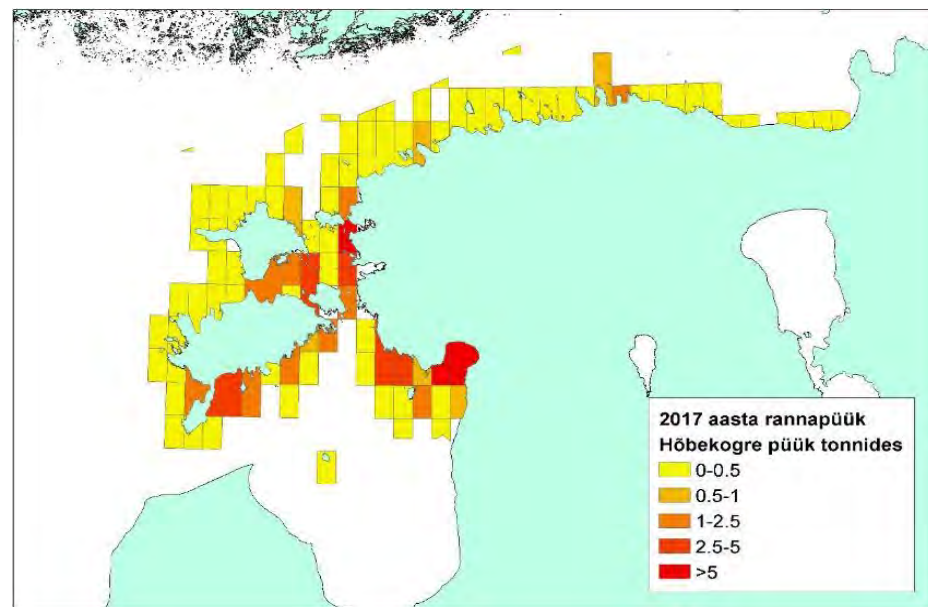
ADDVAL-BIOEC



Total catches coastal fisheries



Round goby catches coastal fisheries



Prussian carp catches coastal fisheries

Acknowledgements



ADDVAL-BIOEC

Adding value and making more efficient use of raw materials in the bioeconomy and its sectors

