

The effect Käsnu harbour has on water characteristics

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Purpose and hypothesis

- Investigate the effect the harbour has on water characteristics.
- Based on that we formulated hypothesis:
 - Harbour area water characteristics are affected by the harbour.

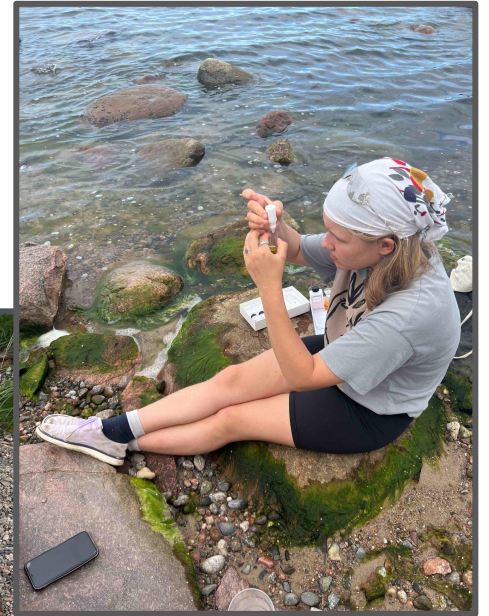
Measuring locations



Methodology

We used the following GLOBE hydrology protocols:

- dissolved oxygen
- nitrates
- alkalinity
- pH



Used measuring equipment



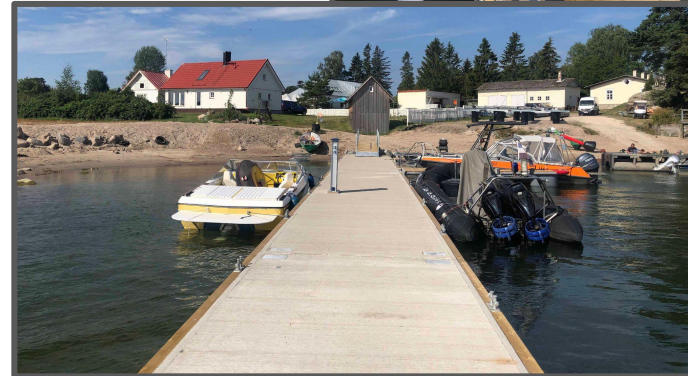
1. location: Käsnu pier

- ripples
- strong wind
- rocky shore, sand on the beach
- the vegetation on the shore: reed and other plants
- seabed: sand and mixed sediments
- bedrock: limestone



2. location: Käsmu harbour

- breezy
- small ripples
- sandy shore, the harbour was surrounded by boulder fences
- the vegetation on the shore: birch and pine
- the seabed had been dredged about a week before
- seabed: sand and mixed sediments
- bedrock: limestone



3. location: Käsmu stone beach

- a breeze
- small ripples
- the shore: mix of pebbles and sand
- boulders on the shore and in the sea
- the vegetation on the shore: mainly grasses
- seabed: sand and mixed sediments
- bedrock: limestone



Water characteristics	1. location: Käsmu pier	2. location: Käsmu harbour	3. location: Käsmu stone beach
air temperature (°C)	22	23	21
transparency (cm)	>120	>120	>120
water temperature (°C)	19	20	21
oxygen level (mg/l)	7.3	6.8	9.6
conductivity (µS/cm)	10672	10849	11032
pH	8.65	8.44	8.99
alkalinity (mg/l)	79	82	79.3
NO ₃ ⁻ (mg/l)	0.5	1	0.5

Findings

- higher alkalinity levels
- higher NO_3^- levels
- lower dissolved oxygen levels
- lower pH

Conclusion

The water characteristics in Käsmu harbour are different from the surrounding area.

The alkalinity and nitrate levels were higher and the pH and the dissolved oxygen levels were lower than at the pier and the stone beach.

Our team: The Brown Bears



Thank you!