Coastal ecology II

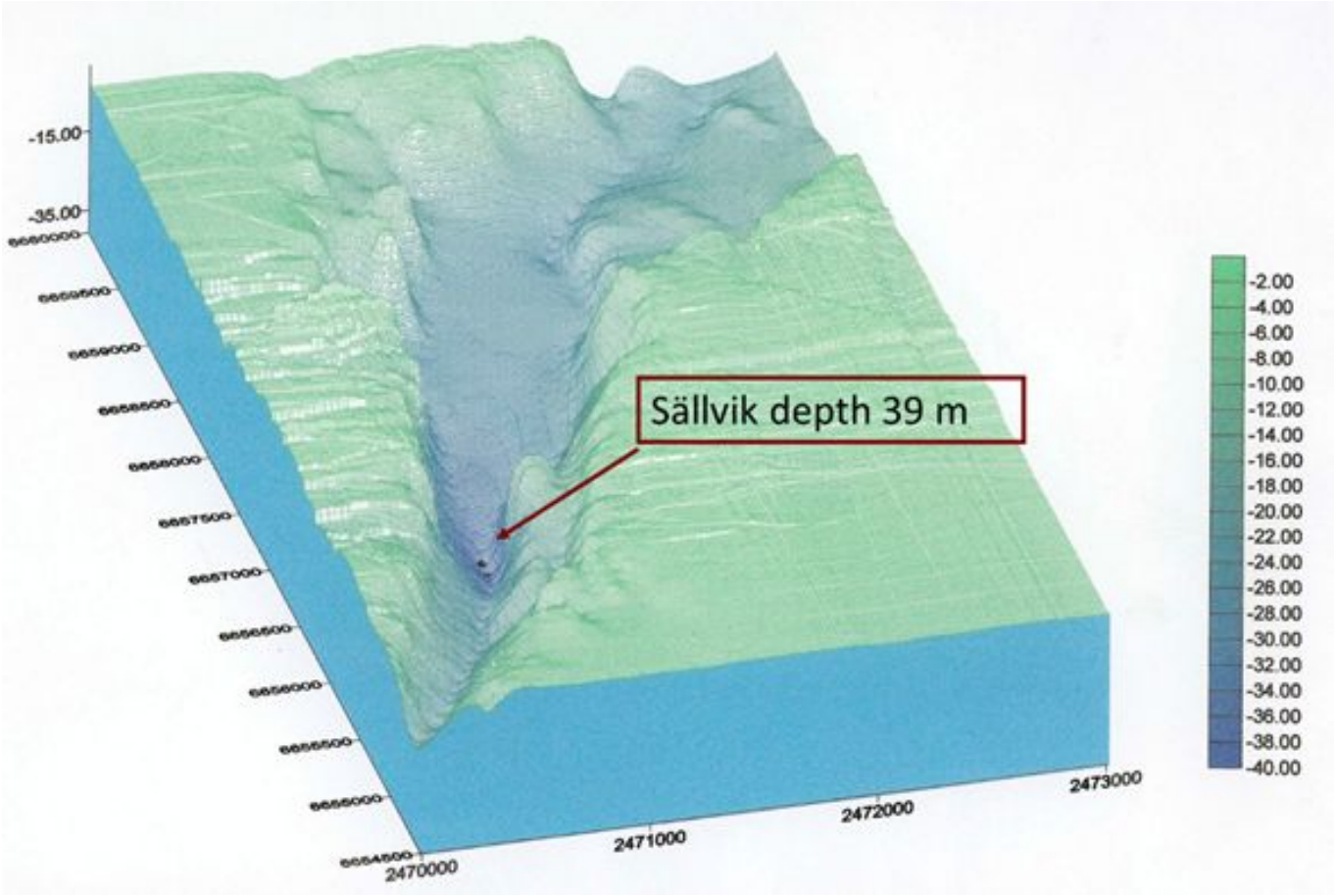
- General introduction – see moodle
- Fieldwork and report instructions – see moodle

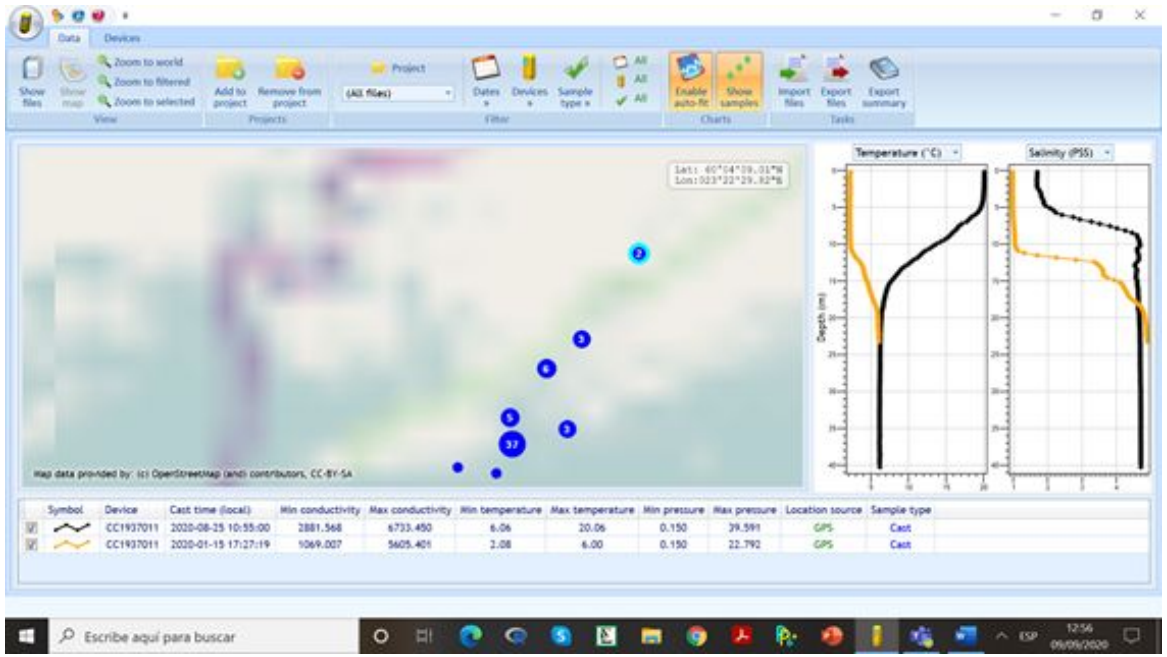
- Let's have a look

https://moodlecourses.novia.fi/course/view.php?id=1449

- Questions?

Photos: Olga Angove





http://arcg.is/1GrWDr

Let’s go through the equipment

- You should know the objectives now.

Correct?

OK, then we can have a look at the equipment

1: Apps, GPS logger & Teams (create groups)

- https://www.basicairdata.eu/projects/android/android-gps-logger/

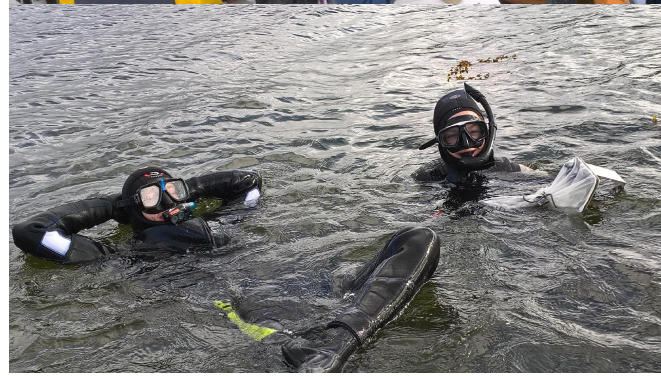
2: Field equipment – demonstration in class


Ecological field sampling

Objectives

After this lesson you should:

- Have been introduced to field sampling
- Know what is important to consider in the planning phase
- Be introduced to different field sampling strategies
- Be prepared for field work in the Pojo Bay
- Risks and safety

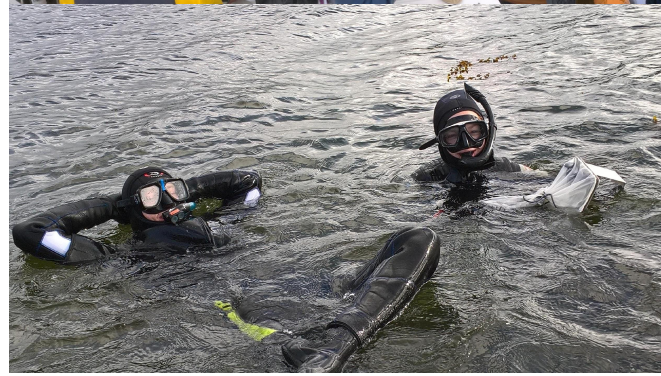


The setting

- Study question?
- Study species?
- Study extent?
- Duration?
- Analyses?
- Budget?
- Time?

The ideal case

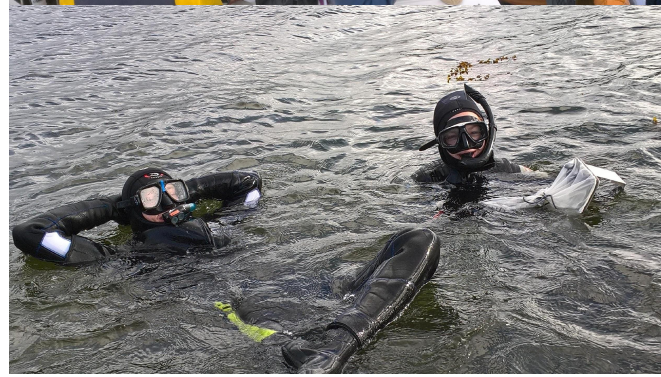
- Measure everything
- Count everything
- Know everything
- Is this possible – if, when??



“The reality”

- Low budget
- No time
- What to do?

- Take a sample!



Example monitoring of benthos

Environmental “Health” monitoring

- https://youtu.be/SZTr2eH7VjA

Baseline assessment for a shellfish farm

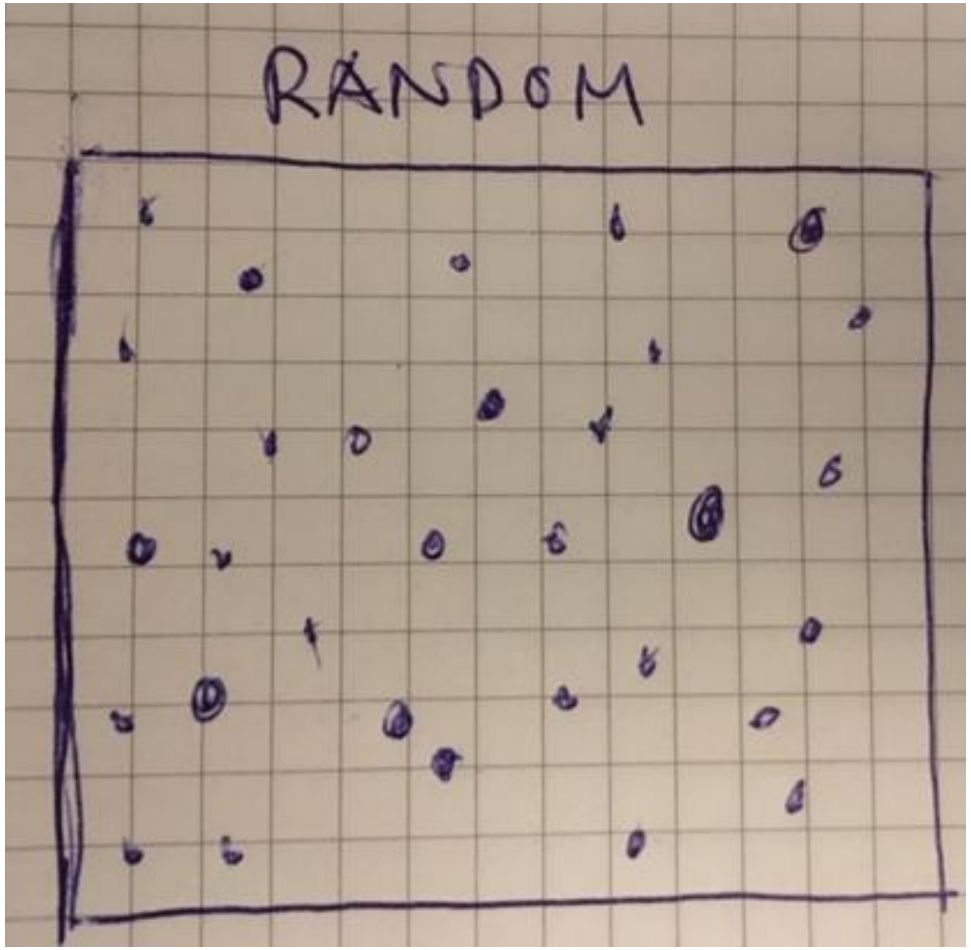
- https://youtu.be/jA1vWP17BYU

Important definitions in relation to sampling

- Sample size
- Sampling in space
- Replication in time
- Pseudo replication (subsampling) or replication
- Autocorrelation
- Sampling errors/uncertainty
- Bias
- Natural variation

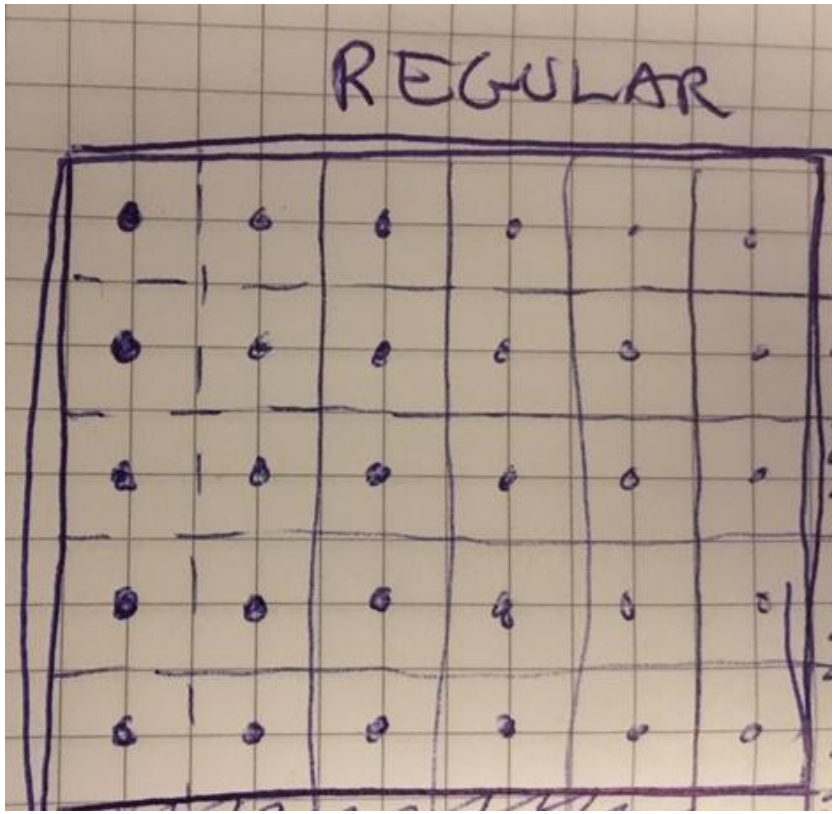
Random sampling

- Require no prior knowledge
- Statistically preferred
- Might result in biases du to gradients



Regular sampling

- Could be useful for spatial analyses (e.g. interpolations)

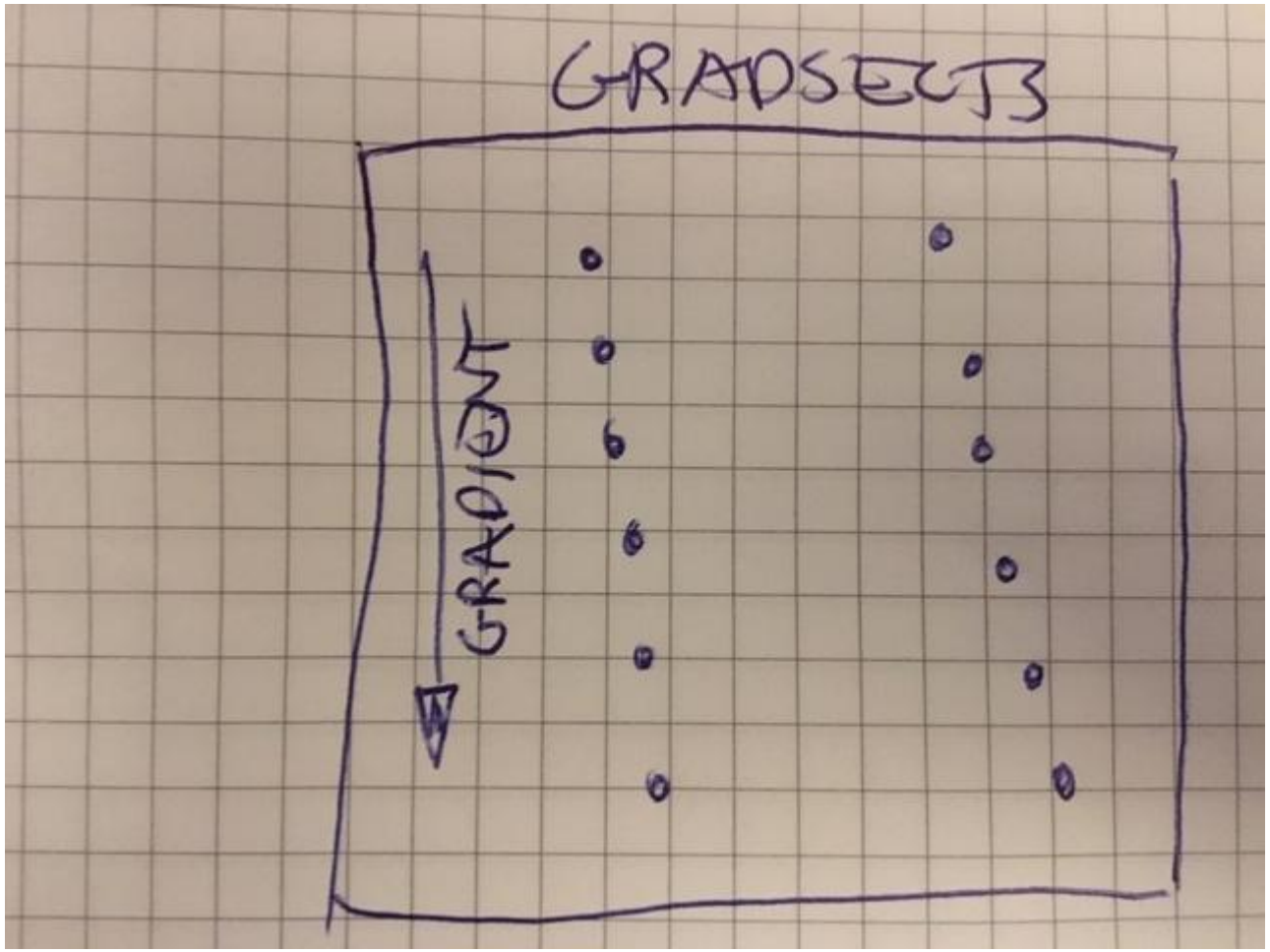


Random stratified sampling

Require prior knowledge

Transects along gradients

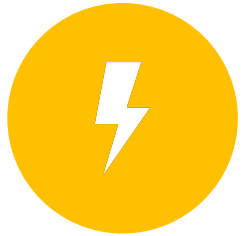
Require prior knowledge



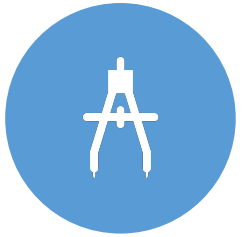
Remember documentation

AS MUCH INFORMATION AS POSSIBLE

DATE, TIME, GEOGRAPHIC POSITION



WEATHER & WIND



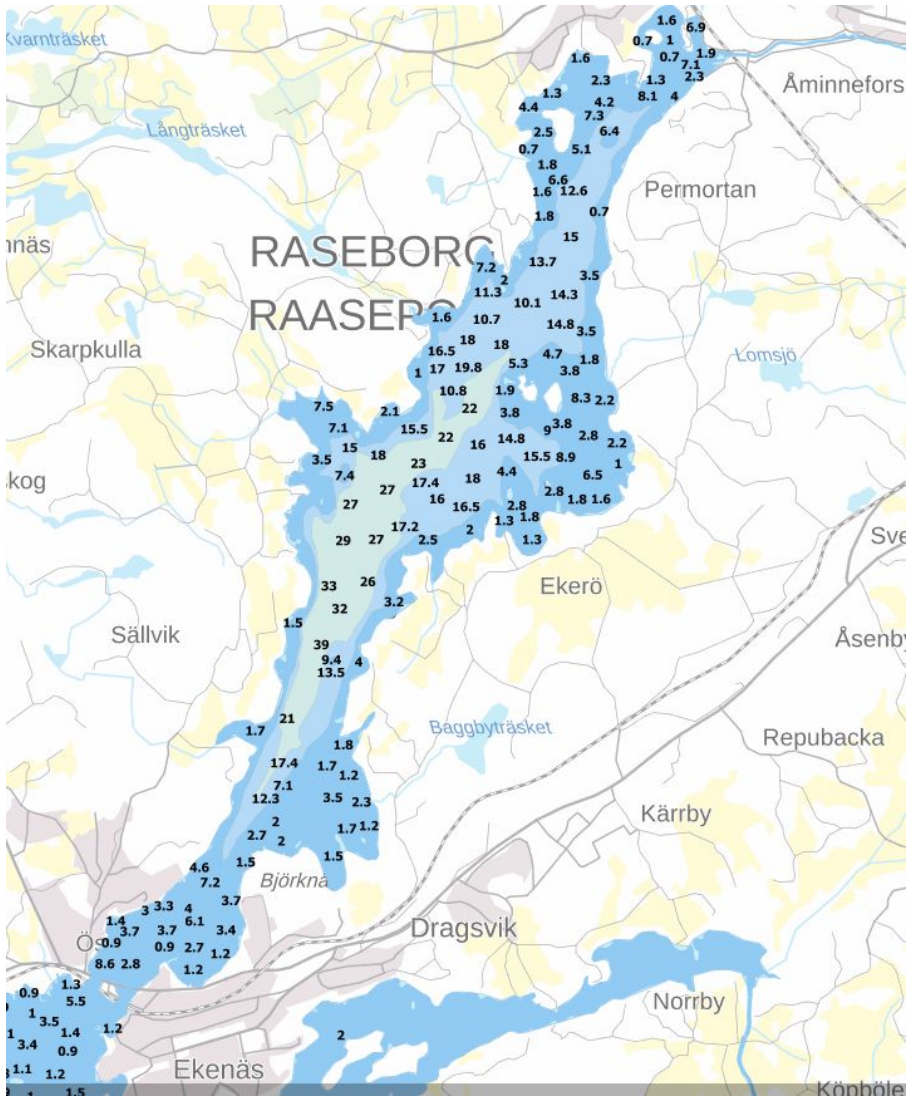
MEASUREMENTS,

SAMPLES WELL MARKED

Pojo Bay

- Let’s try to design sample schemes for the Pojo Bay

- Please find the map on moodle



DATA handling

Let’s create a excel table for recording data.

We can share the table and each group will use the same

This is important because we should be able to merge the data sets later

Fieldwork diary and tasks

- A table of tasks – responsibilities
- Plan together
- Help each other
- Evaluate the group – therefore important to keep track on who is doing what
- Communication
- Intercultural skills
- Contribute and learn
- Have fun!

Fieldwork in Pojo Bay - Safety

- Life west!
- Remember that the pier and boat can be slippery
- The boat moves
- Listen to instructions
- Ask for help if you need, for example getting into the boat
- If you do not need to stand sit in the boat
- Remember good clothes and boots