



# 18<sup>th</sup> International Geography Olympiad

Paris, France  
12<sup>th</sup>-18<sup>th</sup> July 2022

## **Fieldwork Exercise Part I**

### **Tasks**

Dear iGEO participant,

Before starting your virtual trip of the Lower River Seine, please read these guidelines.

1. You have the printed map of the FWE-I area. Use this map to orientate yourself.
2. The sequence of moving from one task to another is in numeric order: Task 1 (Start) → Task 2 → Task 3 → Task 4 → Task 5 → (Finish).
3. You may move from one task to another and return to previous tasks if you wish.
4. For each task you will get activities you need to complete.
5. For FWE-I you can gain a maximum of **15 marks**.
6. You are to decide for how long you will be “staying” at each task.
7. Answers should be written in English on the Response Sheet. For answers use a dark blue or black pen. Do not forget to write your participant code in the upper right corner of all pages of the Response Sheet.
8. This presentation will be stopped after **60 minutes**, regardless of whether you have completed all the tasks or not. Deliver your Response Sheet to the supervisor of your exam immediately then.
9. After your answers have been uploaded you can keep the Map with you, it can be used as reference for Part II of the Fieldwork exercise (FWE-II).

**Good luck!**

# Area of the Fieldwork



*Our fieldwork exercise will take us to the Lower Seine Valley. We will board a boat at Rouen and travel down the river to the port of Berville-sur-Mer. There will be 'stops' on the way for you to do some fieldwork tasks. You can trace the route on the map.*

# Task 1: Traffic on the River Seine

As you journey along the river, there are many boats moored at the riverside or travelling along the river. On the **map on the next page**, you can see all the boats that were on the river on Wednesday 5<sup>th</sup> July at 1400h CEST. Each boat is marked by a coloured dot or an arrow. An arrow means the vessel is moving.

1A. How many boats can you see on the river?

1B. How many boats are moving?

1C. Four boats are labelled with their names. The four images on this page show the four boats. Use the key to identify each boat and complete the table in your answer book.

1D. Use the scale on the map. If the 'Van Dam' is travelling at 10 nautical miles per hour, how long will it take for it to travel the length of the River Seine shown on the map?

A



B



C



D



**Write your answers on the Response Sheet**

# Task 1: Traffic on the River Seine



## Task 2: Vernier Marsh Vegetation

*We will leave the boat at Cadebec-en-Caux and cross the river.*

The image shows a view across the Vernier Marsh. This is an area of wetland on the south bank of the River Seine, south of Caudebec-en-Caux on the map.

### 2A. How do wetlands form?

Read the causes of formation listed below and write T (true) or F (false) in the boxes on the answer sheet.

- i. Where the water table is at or near the surface
- ii. Where buried ice from glaciers has melted
- iii. Where beavers have made dams to stop streamflow
- iv. Where rivers constantly overflow their banks

2B. Look at the two images and give TWO management issues for farmers on this area of land.

**Write your answers on the Response Sheet**



## Task 2: Vernier Marsh Vegetation

The top image shows willow trees planted along a drainage channel.

**2C. Give one reason why willow trees have been planted here.**

Many farmers keep cattle on the Vernier Marsh.

**2D. Besides providing meat and dairy products, why else might the farmers keep cattle on their land?**

**Write your answers on the Response Sheet**



## Task 2: Vernier Marsh Vegetation

A student is using a quadrat to estimate the amount of vegetation cover in different parts of the Marsh.

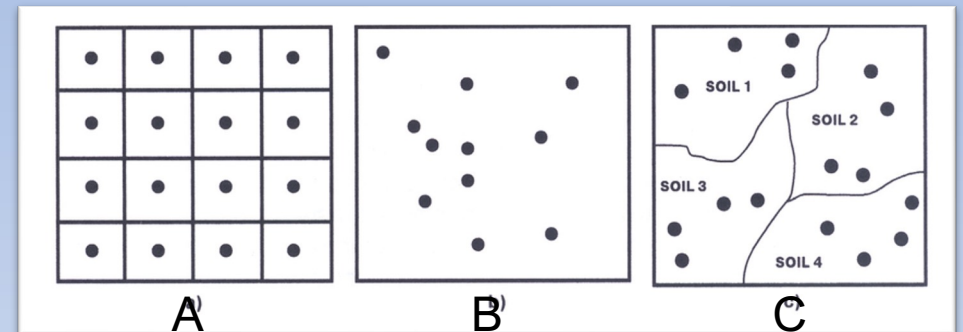
**2E. Estimate the percentage of vegetation cover and bare ground inside this quadrat.**

**2F. The quadrat measure 0.5m x 0.5m What is the actual area that the bare ground covers?**



The three boxes show different types of sampling methods.

**2G. On your answer sheet, give names for each of the different types of sampling.**



**Write your answers on the Response Sheet**



## Task 3: Vernier Marsh Soils

**3A.** This map shows the geology of the area of the Vernier Marsh.

Three soil pits were dug at locations A, B and C.

Look at the next page and **decide which soil was found at each site.**

Write the answers on the table in your response sheet.

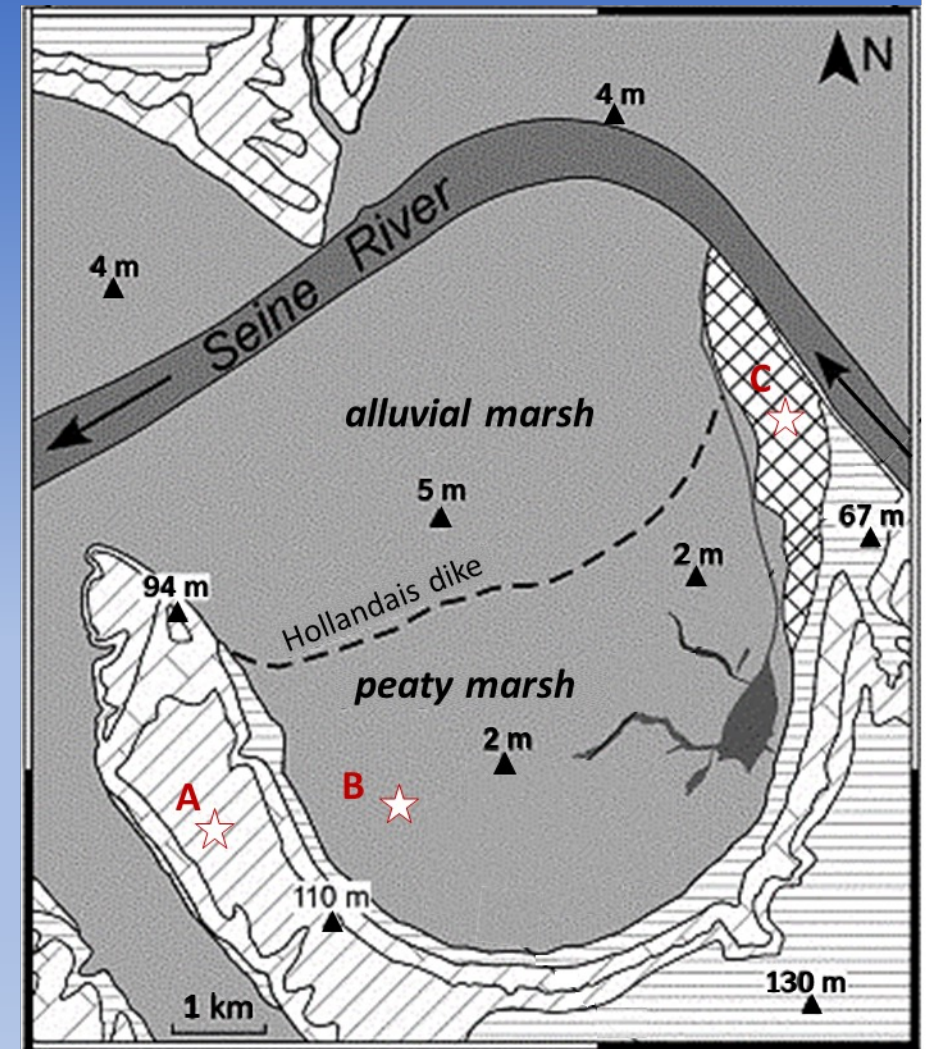
**3B.** Give **TWO** factors that influence the formation of soils besides geology/bedrock.

**3C.** Look at the key showing the different types of bedrock in the area.

**(i)** Which material was not deposited in water?

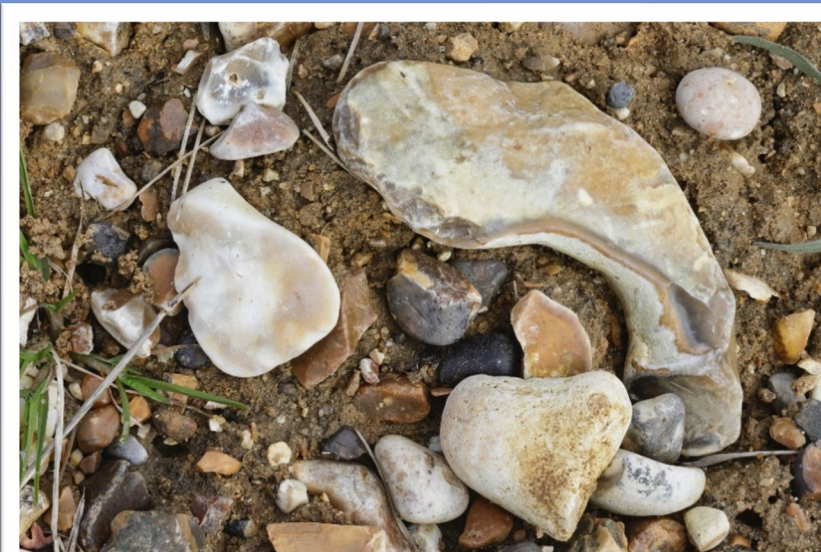
**(ii)** Which are the youngest deposits in the area?

**Write your answers on the Response Sheet**



- ★ Soil pits
- Holocene alluvial deposits (sand, silt, clay, peat)
- ▨ Quaternary fluvial deposits (gravel and coarse sand)
- ▤ Surficial deposits (loess)
- ▧ Chalk alterites (clay-with-flints)
- ▩ Geologic substratum (Mesozoic chalk)

## Task 3: Vernier Marsh soils



1



2

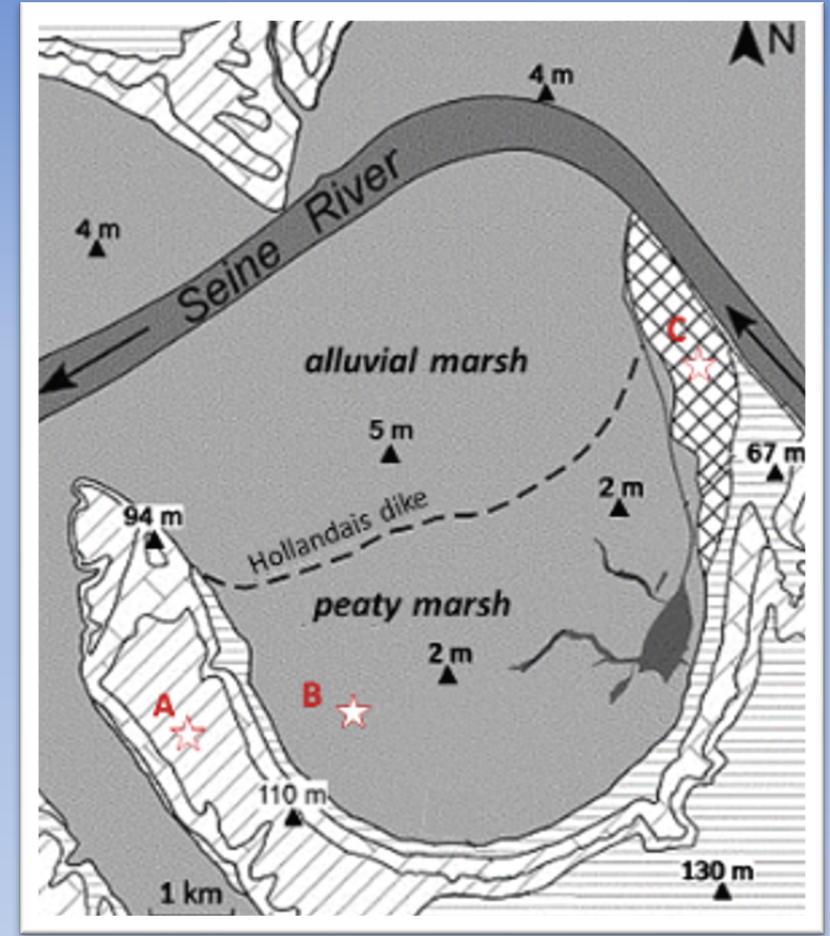


3

**Write your answers on the Response Sheet**

## Task 4: The River Channel

**4A.** The Vernier Marsh lies inside the course of an old meander. Use the map on the response sheet to sketch the probable former course of the River Seine in prehistoric times. Mark the channel clearly.



**Draw your answer on the Response Sheet**

## Task 4: The River Channel

The Seine Estuary can be divided into three zones that can be distinguished from upstream to downstream:

1. The fluvial estuary between **Poses and Vieux-Port**: a tidal zone where the water is fresh (salinity  $< 0.5$  g/l);
2. The middle estuary or brackish estuary (salinity between 0.5 and 30 g/l) between **Vieux-Port and Honfleur**: a zone where fresh and marine waters mix;
3. The marine estuary between **Honfleur and the eastern part of the Seine Bay**: area where the water is always salty (salinity  $> 30$  g/l). (g/l = grams per litre)

**4B. Mark the three zones onto the base map of the River Seine in your response sheet.**

Label each one clearly with the name and salinity of the zone.

Look at the image which was taken in the lower estuary.

**4C. Identify a place in the estuary where this photo could have been taken.**

Mark the position on the map with a large Star \*.

**Write your answers on the base map.**



## Task 5: Volume of cargo at Le Havre Port

The Port of Le Havre is the 6<sup>th</sup> busiest port in Europe.

The table shows the number of containers passing through the port between 2011 and 2018.

5A. Complete the graph on your response sheet to show the information in the table.

5B. What is the percentage increase in the number of containers between 2011 and 2018?



	2011	2012	2013	2014	2015	2016	2017	2018
('000 container units )	2,222	1,997	2,186	2,433	2,560	2,480	2,799	2,866

Write your answers on the Response Sheet

## Return to Paris

After leaving the boat at Berville-sur-mer, you board a coach to travel west. You cross the Normandie Bridge to return to Paris. It is the lowest crossing point of the River Seine.

**5C. In which compass direction will you be travelling across the bridge?**



End of the test

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