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Bangkok 2025

**21st International Geography Olympiad
28th July 2025 – Fieldwork Exercise 1**

**MORNING – Ko Kret,
Nonthaburi Province**

Student Number

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Fieldwork Exercise 1 (FWE 1)

Main instructions:

Fieldwork Exercise 1 consists of two tasks.

Task 1: Observe and Sketch the Image (10 marks).

Time to complete the task: 20 minutes

Task 2: Observe and Collect Data on Human Activities and Vegetation (20 marks).

Time to complete the task: 2 hours (approximately 1 hour per route)

The locations for FWE 1 are on Map 1-1.

Students will be assigned to 4 groups by student numbers:

- Group 1 (student number 21XX01)
- Group 2 (student number 21XX02)
- Group 3 (student number 21XX03)
- Group 4 (student number 21XX04).

The details of student and task management during FWE 1 are as follows:

Group 1, 2

| | | | | | |
|---------|-----------|----------------------|--|-----------------------|--|
| Task 1: | 8.30–8.50 | | | | |
| Task 2: | Route A: | 9.00–10.00 (Group 1) | | 10.00–11.00 (Group 2) | |
| | Route B: | 9.00–10.00 (Group 2) | | 10.00–11.00 (Group 1) | |

Group 3, 4

| | | | | | |
|---------|-------------|----------------------|--|----------------------|--|
| Task 1: | 10.40–11.00 | | | | |
| Task 2: | Route A: | 8.30–9.30 (Group 3) | | 9.30–10.30 (Group 4) | |
| | Route B: | 9.30–10.30 (Group 4) | | 9.30–10.30 (Group 3) | |

Students are expected to be ready on the buses to leave the site no later than 11.30.



0 50 100 200 300 400 Meters

Legend

★ Task 1

— Task 2 Route A

— Task 2 Route B

Map 1-1: The locations to visit during the field observations.

Task 1: Observe and Sketch the Image (10 marks)**Instruction**

Job type: Produce an annotated field sketch.

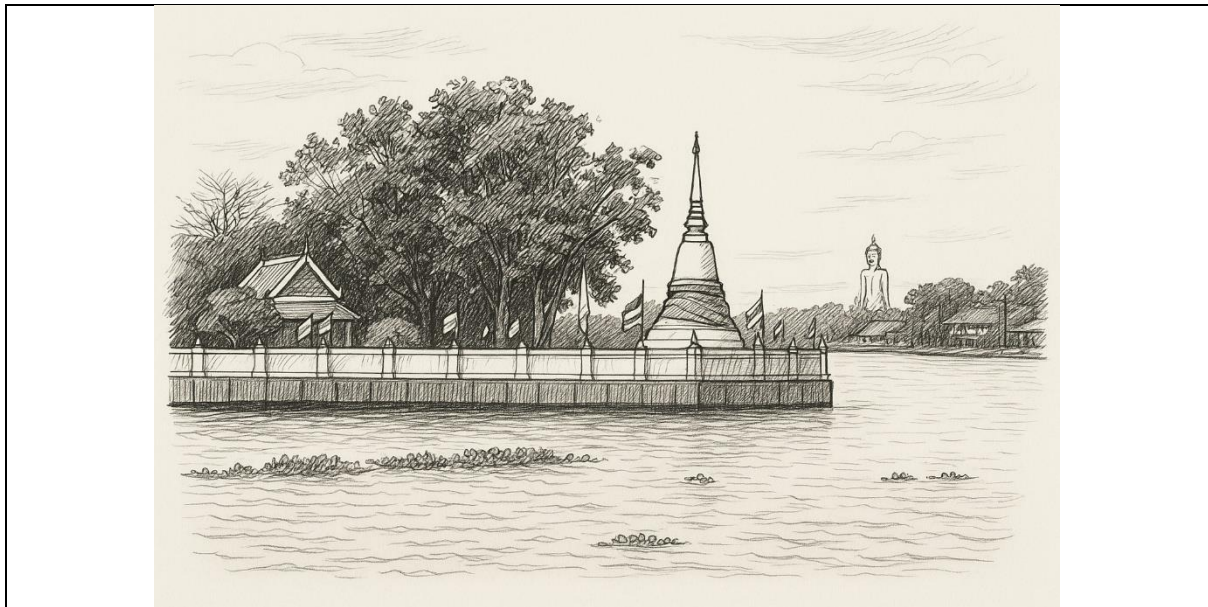
Location: Task1 on Map 1-1.

Duration: The maximum time for this task is 20 minutes.

After finishing the exercise, you must hand in this paper.

Question:

1. Produce and annotate a sketch of this location. (5 marks)



1 mark for a tilted pagoda

1 mark for concrete structure to protect erosion

1 mark for the river and water level

1 mark for a group of trees

1 mark for a building

2. Draw the river flow direction on the sketch. (1 mark)

1 mark for a correct drawn arrow indicating the river flow direction.

3. Explain the factors that determine the river flow direction. (1 mark)

1 mark for mentioning a correct factor that influences river flow direction. Possible factors are high tide, water volume, wind.

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4. Estimate the velocity of the river: _____m/s. (1 mark)

1 mark for a reasonable estimate based on calculation. The estimate answer is 0.4-0.7m/s

5. Estimate the angle at which the pagoda is tilted from vertical. (1 mark)

1 mark for a reasonable estimate of the angle. The estimate of the angle is 20 degrees.

6. What is the concrete structure found at this site called? What is its main purpose? (1 mark)

0.5 mark for naming the concrete structure. The structure names "Riverbank embankment"

0.5 mark for stating its main function. Its main function is used to prevent riverbank collapse due to water erosion

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Task 2: Observe and Collect Data on Human Activities and Vegetation

(20 marks)

Instruction

- Job type:** Observe and Record Human Activities and Vegetation Data on Two Walking/Cycling Routes.
- Location:** Ko Kret, Nonthaburi Province (Map 1-1)
- Starting and Ending Point:** Wat Poramai Yikawat.
- Task management:** The survey and data collection will be conducted along two designated routes. Students who start with Task 2 will be divided into two groups. Each group will complete Task 2 along one designated route. After finishing the first route, both groups will meet at the starting point and switch to the other route to complete the same tasks. Students are not allowed to talk to each other.
- Duration:** The maximum time allotted for the fieldwork is 2.0 hours, one hour for each designated route. Upon completion of all assigned tasks, participants must arrive at the designated endpoint (Map 1-1) no later than 15 mins before time expires and submit all examination materials. Any submissions made after that will be recorded as late, and therefore subject to a mark penalty.
- Remark:**
- 1) Upon completion at each fieldwork site, all worksheets and maps will be collected once the group has reported in. Please do not leave the final checkpoint until all worksheets and maps have been submitted.
 - 2) Students are required to proceed to the field site in their assigned groups, as indicated on the official name list. However, each student must complete all assigned tasks independently. All group members are responsible for ensuring that every area within the designated fieldwork site is thoroughly covered and that individual observations are accurately recorded on their personal worksheets.
 - 3) Worksheets for Task 2 in FWE 1 will be given back to students to assist in completing the tasks in FWE 2.

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1. Observe and record the following data for route A and route B on Map 1-2:
 - Major economic activities, locations of important landmarks, tourist attractions and facilities, e.g. temples (or “Wat”, in Thai), large pagodas, markets, restrooms, services, piers, and waste management-
 - Green spaces along the study routes. Indicate whether the green spaces are natural vegetation or agricultural fields (orchard) (Figure 1). In natural vegetation areas, locate and draw the boundaries of local plant clusters -- 1) Lotus and 2) Nor Kala (a type of ginger plant used in the local cuisine) (Figure 2).

Data from this task will be used in the following questions and in FWE 2.



Natural Vegetation



Agricultural Fields

Figure 1: Natural vegetation and agricultural fields in Ko Kret

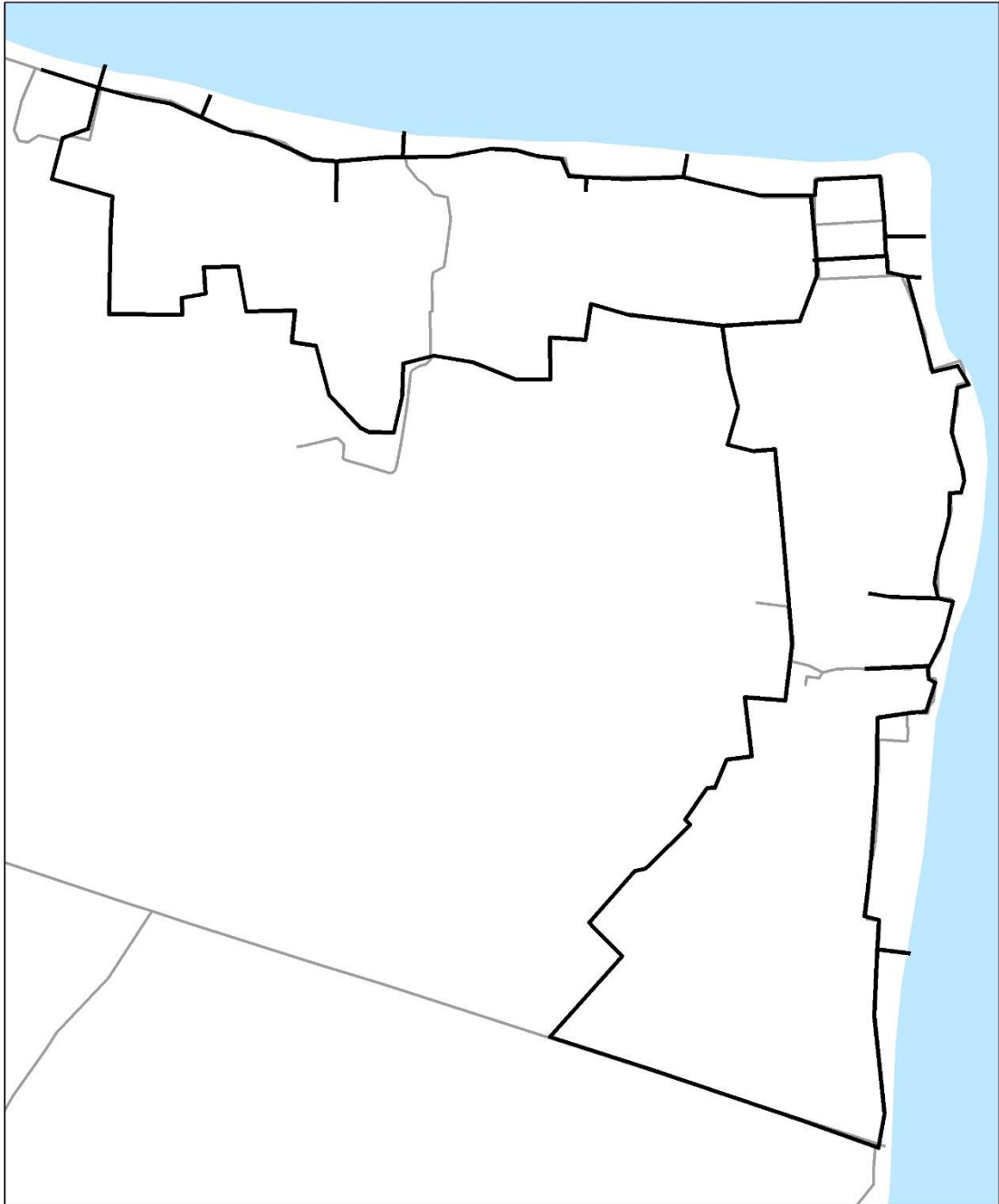


Lotus



Nor Kala

Figure 2: Local plants in Ko Kret



Map 1-2: Field observations (Size A3)

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2. Describe the spatial pattern of natural vegetation areas (including two local vegetation – Lotus and Nor Kala), and agricultural fields in Table 1-1. (4 marks)

Table 1-1: Spatial pattern of Natural vegetation and Agricultural Fields.

| Type of green spaces | Description of spatial pattern |
|------------------------------|---|
| Natural vegetation | <p><i>1. Natural vegetation is widely distributed along the outer river bends and is also concentrated in the southern and western sections. These zones often intermingle with the two local vegetation types: lotus and nor kala</i></p> <p><i>2. Lotus fields are clustered in the northwest and southern sections. They are mostly found within areas of natural vegetation.</i></p> <p><i>3. Nor kala fields are concentrated in the central and southern sections, with some distribution in the eastern parts. They are also mostly located within natural vegetation areas.</i></p> |
| Agriculture fields (orchard) | <p><i>4. Agricultural fields are distributed across the western, central, and southern parts of the map.</i></p> |

Guideline for marking:

Give 1 mark for each correct and appropriate answer

3. Identify 6 tourist facilities and indicate economic activities related to tourists along BOTH routes. (6 marks)

3.1 Tourist facilities:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____

3.2 Economic activities related to tourists:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____

| Tourist facilities | Economic activities related to tourists |
|--|--|
| <i>Toilet</i> | <i>Pottery production (factory and shops)</i> |
| <i>Trash bin</i> | <i>Open market</i> |
| <i>Tourist signs on the walking paths</i> | <i>Restaurants/bars/food strand</i> |
| <i>Piers</i> | <i>Souvenir shops</i> |
| <i>Tourist information map</i> | <i>Bicycle rent</i> |
| <i>Tourist information centre</i> | <i>Cloth shops</i> |
| <i>Tourism Police office</i> | <i>Massage centre</i> |
| <i>Public shelter for food and drink consumption</i> | |

Guideline for marking:

Give 0.5 mark for each correct and appropriate answer.

4. Identify four problems within the community that may impact tourism. Specify the route(s) where you observed them. (6 marks)

Table 1-2: Physical Problems.

| Problems | Route | Descriptions/evidence |
|--|------------------------|---|
| <i>Narrow walking path</i> | <i>Route A & B</i> | <ul style="list-style-type: none"> <i>The walking path is used for both pedestrians and cyclists. Pedestrians need to be aware of cyclists from time to time.</i> <i>Many shops extend their stalls on the walking path, reducing the walking space.</i> <i>No clear division between walking and cycling lanes on the green route.</i> <i>Parts of route A are not well paved or not in good conditions for cycling.</i> |
| <i>High density of shops</i> | <i>Route A</i> | <i>Shops are densely located next to each other. Together with the narrow path, it can be very difficult for accessibility and evacuation during emergency events (e.g. fire).</i> |
| <i>Trash</i> | <i>Route B</i> | <i>Almost no trash bins on this route because it is mainly residential areas. Some tourists simply disposed of garbage on the ground alongside the walking path.</i> |
| <i>Restroom</i> | <i>Route A and B</i> | <i>No public toilet along the route. There is only one toilet spot near the start of 2 routes. Tourists may need to use the toilets at the shops, restaurants, or temples during their walking journey.</i> |
| <i>Land subsidence near river bank</i> | <i>Route B</i> | <i>Inclined pagodas at Wat Wat Poramai Yikawat and Wat Chimplee Sutthawas as a result of river bank subsidence. Construction to maintain the pagoda to be on its vertical axis.</i> |
| <i>Flooding</i> | <i>Route B</i> | <ul style="list-style-type: none"> <i>Flood marks on the buildings</i> <i>Man-made levee along the river bank, which can be clearly observed at the temples</i> |

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| Problems | Route | Descriptions/evidence |
|--|----------------------|--|
| | | <ul style="list-style-type: none"> <i>Elevated walking path at some parts (e.g. green areas),</i> <i>Aquatic plants (e.g. lotus)</i> |
| <i>No resting area</i> | <i>Route A and B</i> | <i>No shelter or shade areas where tourists can rest on the green route. Also, no restaurant and café on that green part for tourists to rest.</i> |
| <i>Street dog</i> | <i>Route A and B</i> | <i>There are many dogs along the route</i> |
| <i>Lack of sanitary regulation by preparing food on street</i> | <i>Route B</i> | <i>Some houses prepare food without a proper kitchen, directly next to the street</i> |
| <i>Disposal water</i> | <i>Route A and B</i> | <i>There is some household garbage in the river.</i> |

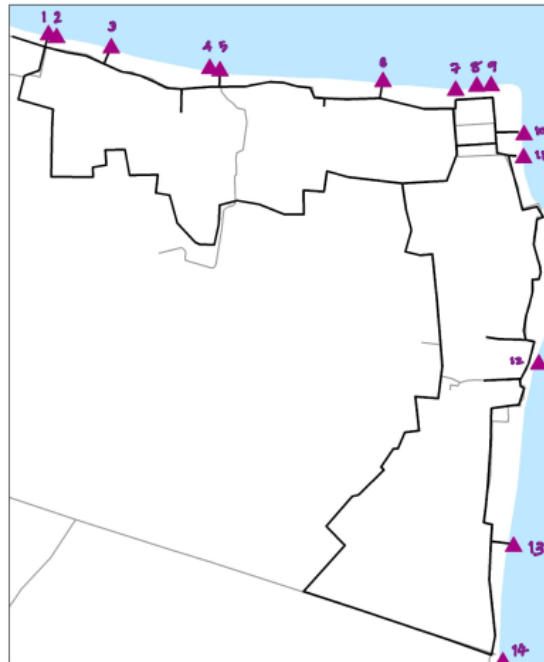
Guideline for marking schemes:

- 0.5 mark for a problem and route*
- 1 mark for correct evidence*

5. Mark the locations of the piers on Map 1-3 with numeric symbols (e.g. 1, 2, 3, and so on). Identify which piers are mainly used for public transportation. Justify your answers in Table 1-3. (4 marks)

Table 1-3: The uses of piers.

| Major use | Pier Number | Justification for your answer |
|----------------------------------|--------------------------------|---|
| Public transportation | 2 piers 11 and 14 | <ul style="list-style-type: none"> - There is a high volume of pedestrian traffic around the ferry terminal. - There is a toll booth for collecting ferry service fees. - There is an information point for assisting tourists. - There are designated parking areas for bicycles and motorcycles used by community members. - It is an area located near an important temple on the island. |
| Non-public transportation | Other numbers (1-10, 12-13) | <ul style="list-style-type: none"> - It is a pier typically located within a community area. - There are no structures to provide protection from sun and rain. - There is low pedestrian traffic. - Trash bags are placed in the area awaiting collection. |



Map 1-3: Locations of the piers.

Guideline for marking:

- Pier Numbers:
 - Public transportation:

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- Give 0.5 marks for those who fill in the correct pier number.
 - The maximum is 1 mark in each box.
- Non-public transportation:
 - Give 1 mark for those who fill in more than 5 correct pier numbers.
 - Give 0.5 points for those who fill in the correct pier number, less than or equal to 5 piers.
- Justification:
 - 1 mark for those who provide reasonable supporting reasons.