FARMING SYSTEM IN HOK TAU, FANLING (FIELDWORK)

GROUP: _____

Objectives:
1. To investigate the farming systems in Hok Tau area and the factors affecting its location.
2. To apply geographical fieldwork skills.
3. To understand the limitations of the study and suggest ways for improvement.

Enquiry question:

What are the constraints of farming activities in Hong Kong?

Study area: Hok Tau area, Fanling (refer to the map provided)

Date of fieldwork: _____ (_____) Time: _____

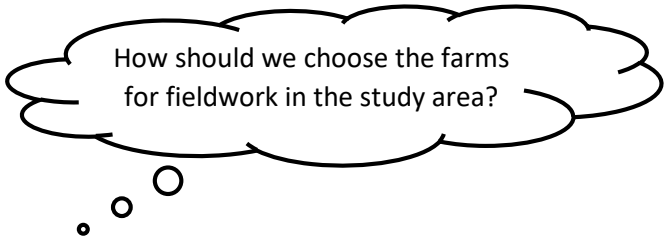
Weather condition during fieldwork: _____

---------- **Stage 2: Data Collection** ----------

Fieldwork Tasks

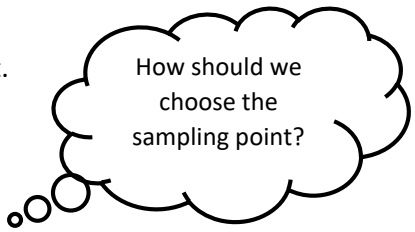
1. Walk along the study route and identify the types of agricultural land use. Record the farming land use on the map (p.10) by using the following code.

Type	Code
Commercial farming	Com
Subsistence farming	Sub
Leisure farming	Le
Abandoned land	Ab



2. According to the farming land use distribution, choose three farms and study their farming system. By applying appropriate fieldwork techniques, collect and record of the characteristics of the farming system of the three farms.

3. Collect water and soil samples.
   a. Collect a bottle of water sample from each selected sampling point.
   b. Collect a bottle of soil sample from each selected farm.



Data record sheet: Case study of the farming system: Write down your findings [including quantitative (e.g. data from measurement) and qualitative (e.g. interview result) in the table below. Take photos as field evidence. *(Please mark "unknown" if you are unable to collect data of the specific items)*

		Selected Farm (for sampling)		
		No. _____	No. _____	No. _____
Farming inputs				
Weather	Sunlight (Lux)			
	Air temperature (°C)			
	Relative humidity (%)			
	Wind direction & wind speed (m/s)			
Water supply *(e.g. water quality, stability)*				
Land	Relief			
	Field size			
	Tenure			
Soil	Texture *(e.g. sandy/ clayey)*			
	pH value			
	fertility *(refer to p.5)*			
Labour				
Machines and technology				
Market				
Transport network				
Government/policy				
Others (please specify):				

		Selected farm (for sampling)		
		No. _____	No. _____	No. _____
Farming processes (refer to Identification Kit)				
Cropping pattern *(e.g. multiple cropping, crop rotation, fallowing)*				
Irrigation *(e.g. watering, sprinkler)*				
Ploughing *(e.g. simple tools, ploughing machine)*				
Soil protection and weed control *(e.g. mulching)*				
Application of fertilizer and soil conditioner *(e.g. peanut cake, bone meal, lime)*				
Pest and disease control *(e.g. physical, chemical and biological control)*				
Others (please specify):				
Farming outputs				
Useful	Types of farm products			
	Market value			
	Main use *(e.g. sale)*			
	Other uses			
Useless	Waste water (pollution level)	*(refer to the result on p.6, compare the water quality of different sampling points)*		
	Other wasters			

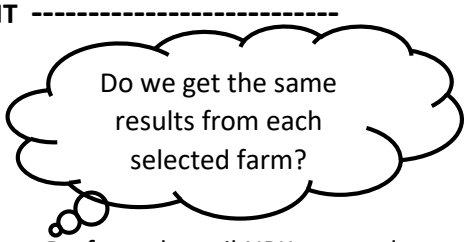
	Selected farm (for sampling)		
	No. _____	No. _____	No. _____
Other characteristics (please specify: e.g. infrastructures)			

Interview result:

Record the interview with the farmer, process the content and write the main points on the data record sheet (p.2-4).

Are the information collected sufficient to answer the enquiry question?

---------- SOIL FERTILITY (NPK) ASSESSMENT ----------

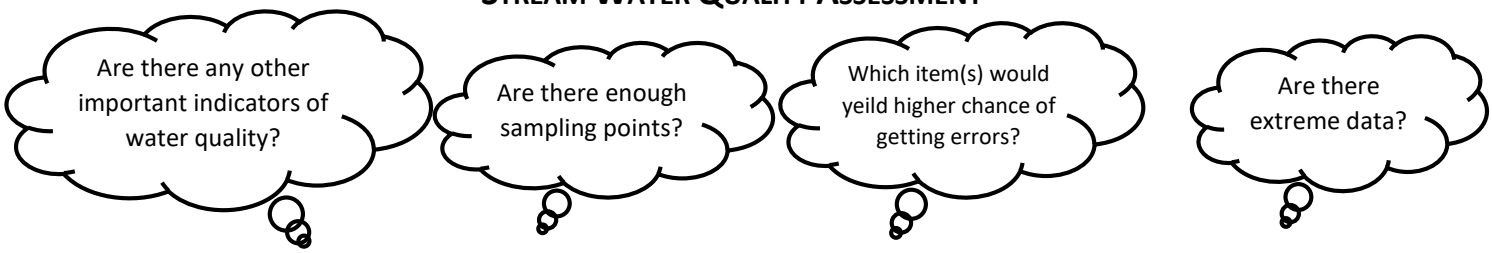


Refer to the instruction of soil fertility test. Take soil sample from the farm. Perform the soil NPK test and assess the NPK content of soil samples. Using the table below, find out the soil fertility. Write down the result on the data record sheet on p.2.

Fertility Index	0	1	2
Nitrogen (N)	Low	Medium	High
Phosphorus (P)	Low	Medium	High
Potassium (K)	Low	Medium	High

Total assessment score	0 – 1	2 – 3	4– 6
Soil Fertility	Low	Medium	High

---------- STREAM WATER QUALITY ASSESSMENT ----------



Investigate the physical and chemical properties of stream water. Write down the result in the table below.

Items	Sampling point A	Sampling point B	Sampling point C
Floating matter (None/ Some/ Plentiful/ Abundant)			
Water colour (Clear/ Turbid / Brown / Black)			
Smell (None / Slight / Moderate/ Strong)			
Dissolved oxygen level (mg/L) (Very high [>7.0] / High [5.1-7.0] / Low [3.0-5.0] / Very low [<3.0])			
pH value			
Phosphate content (mg/L)			

Stream Water Pollution Index

According to the following assessment items, calculate the total assessment score and determine the pollution level of the water samples.

Stream Water Pollution Index	0	1	2	3
Floating matter	None	Some	Plentiful	Abundant
Water colour	Clear	Turbid	Brown	Black
Smell	None	Slight	Moderate	Strong
Dissolved oxygen level (mg/L)	Very high (>7.0)	High (5.1-7.0)	Low (3.0-5.0)	Very low (<3.0)
pH value	Neutral (6.75-7.24)	Slightly acidic (4.95 – 6.74) Slightly alkaine (7.25 – 8.04)	Acidic (4.05 - 4.94) Alkaline (8.05 - 9.04)	Strongly acidic (< 4.04) Strongly alkaline (> 9.05)
Phosphate content (mg/L)	0 – 0.50	0.51 – 2.00	2.01 – 5.00	>5.00

Total assessment score	0 – 3	4 – 8	9 – 13	14 – 18
Pollution level	Clean	Slightly polluted	Moderately polluted	Severely polluted

	Sampling point A	Sampling point B	Sampling point C
Pollution Level			

---------- Stage 3: Data Processing & Presentation ----------

1. Show the distribution of different kinds of agricultural land use on the map by using the colour scheme below.

Type	Code	Colour
Commercial farming	Com	Red ☐
Subsistence farming	Sub	Blue ☐
Leisure farming	Le	Green ☐
Abandoned land	Ab	Grey ☐

2. Complete the table on p.2-4, compare the inputs, processes and outputs of the three selected farms.

   a. Assess the soil fertility according to the Soil Fertility Index on p.5.

   b. Assess the pollution level of water samples of different sampling points according to the Stream Water Pollution Index on p.6.

   c. Sort out the interview content from the perspective of elements of farming system and limitations faced by local farmers.

---------- **Stage 4: Interpretation & Conclusion** ----------

Summarize the information about the farming inputs, processes and outputs of three selected farms. Analyze the locational factors and characteristics of farming activities and answer the questions below.

1. What are the favourable factors and constraints of farming activities in the study area?
2. Refer to the three cases of farming systems, analyze the measures and strategies taken by the farmers to overcome the constraints.

Types of farming system	**Commercial farming**	**Subsistence farming**	**Leisure farming**
Case	Farm no. _____	Farm no. _____	Farm no. _____
Favourable factors			
Constraints			
Strategies			

---------- Stage 5: Evaluation ----------

1. During data collection, what factors may affect the validity and reliability of the data? What suggestions can be made to improve it? Review the fieldwork process and complete the table below.

Factors	Example (how will it affect the data quality)	Suggested improvement methods
Time of fieldwork:		
Field site/ sampling point:		
Data collection method:		
Types and quantity of data:		
Others (please specify):		

2. Apart from "What are the constraints of farming activities in Hong Kong?", can we use the data collected to investigate other enquiry questions? Suggest **another topic** for field study in this study area. Describe and explain the data collection method.

Suggested topic: _____			
Data collected in this fieldwork	Further information needed (How is the information related to the suggested topic?)	Data collection method (& equipment needed)	Other relevant information (e.g. time/location of data collection, sample size)

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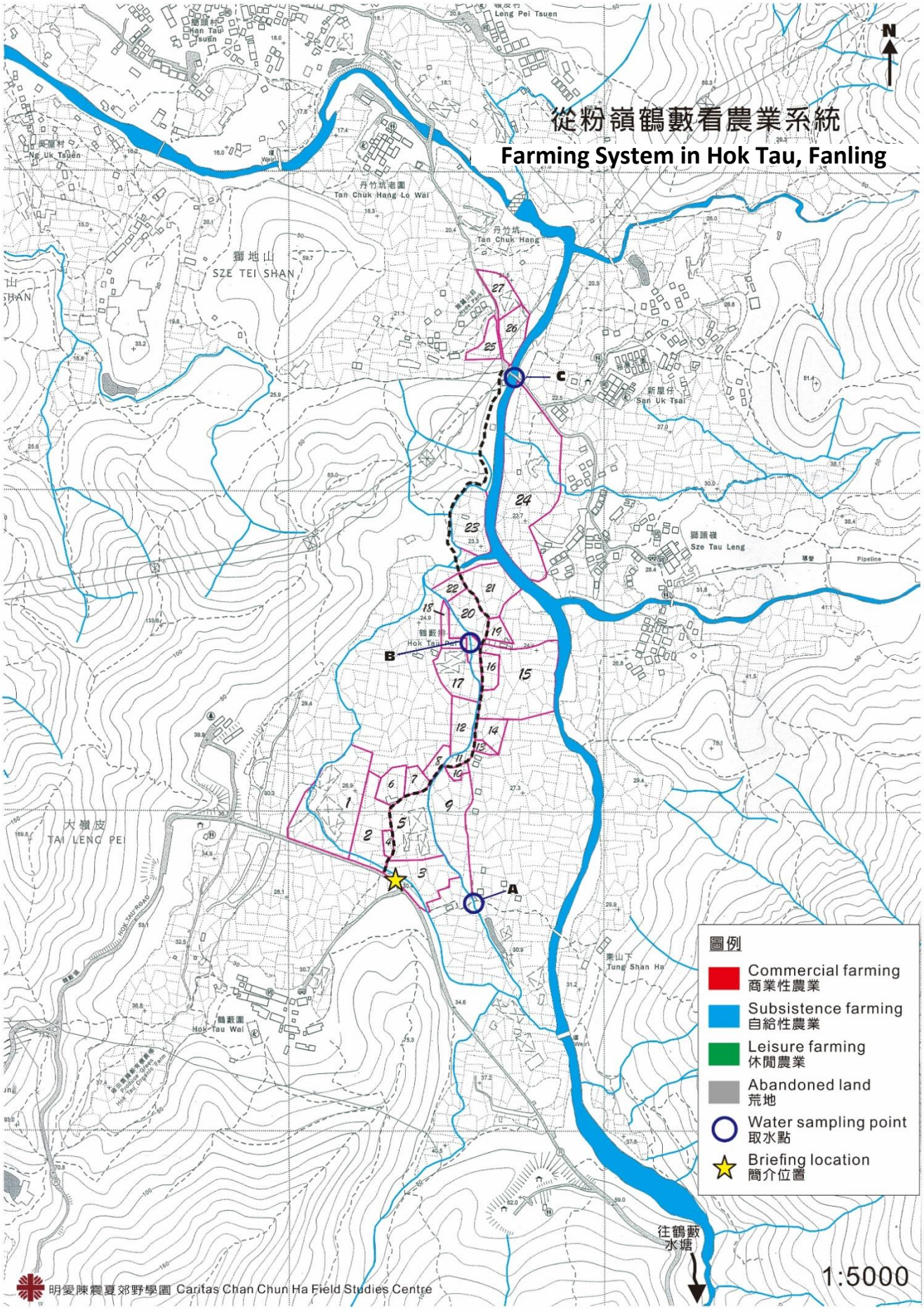
從粉嶺鶴藪看農業系統
Farming System in Hok Tau, Fanling
N
Leng Pei Tsuen
Ng Uk Tsuen
丹竹坑老圍
Tan Chuk Hang Lo Wai
丹竹坑
Tan Chuk Hang
獅地山
SZE TEI SHAN
新屋仔
San Uk Tsai
獅頭嶺
Sze Tau Leng
Pipeline
鶴藪圍
Hok Tau Wai
大嶺皮
TAI LENG PEI
東山下
Tung Shan Ha
往鶴藪水塘
A
B
C
圖例
Commercial farming
商業性農業
Subsistence farming
自給性農業
Leisure farming
休閒農業
Abandoned land
荒地
Water sampling point
取水點
Briefing location
簡介位置
1:5000