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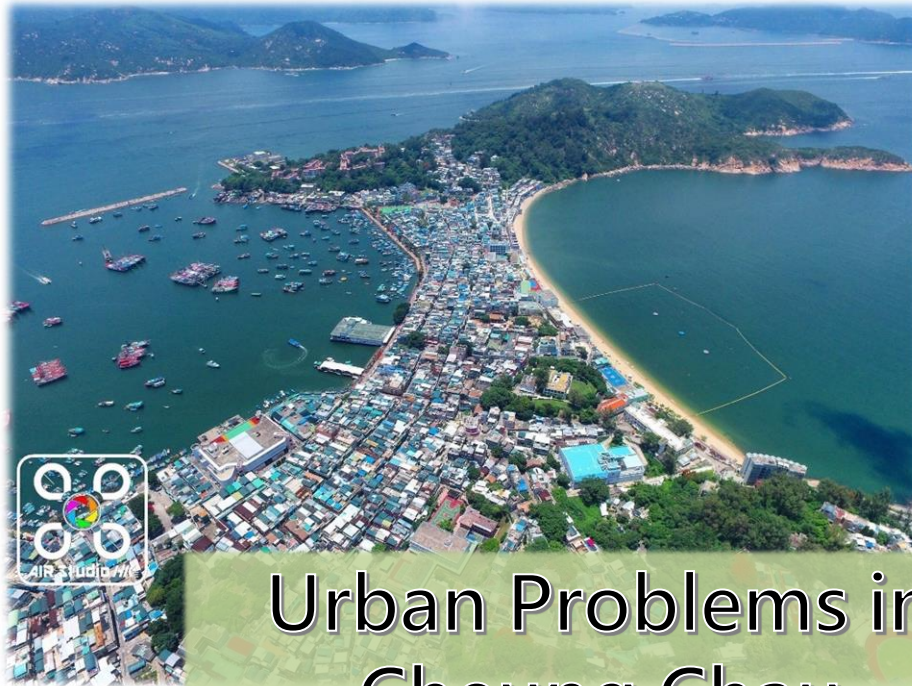
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Urban Problems in Cheung Chau

Student Name : _____

Group No. : _____

Course Date : _____

OBJECTIVES

- Knowledge :
 - To investigate the relationship between urban problems and distance of town centre of study area
- Skills :
 - To assess the level of urban decay
 - To draw choropleth maps
- Value :
 - To develop students' awareness of urban problems and sustainable development



Relevance to the DSE geography curriculum

- ✪ Building a sustainable city

PRIOR KNOWLEDGE

1. The development of Cheung Chau is long-established. The peak population had reached 40,000. Its present population is about _____. The type of settlement belongs to village / town / city / metropolis.
2. Continuous development of an area is causing urban problems gradually. Common urban problems in Hong Kong include :

STAGE 1 : PLANNING & PREPARATION

Focus of studies : Urban problems

- ✪ Hypotheses setting :

What are the differences of below urban decay problems when distance from the town centre increases (away from _____)?

Hypotheses	Indicators of Urban decay	Away from town centre, problems become _____	Reasons of this hypothesis
1	Overcrowding of street	seriously / slightly / similarly	
2	Poor building quality	seriously / slightly / similarly	
3	Poor environmental hygiene	seriously / slightly / similarly	
4	Lack of town planning	seriously / slightly / similarly	



STAGE 1 : PLANNING & PREPARATION

➤ Referring to map on page 11

Fieldwork planning	Advantages	Limitations	Suggestions for improvement
<p>Date of fieldwork : _____</p> <p>Time of fieldwork : _____ to _____</p> <p><u>Monday to Friday / Saturday /</u> <u>Sunday & Public holiday</u></p>			
<p>Location of fieldwork : <u>Whole island / Central part / Southern part /</u> <u>Northern part</u> of Cheung Chau</p> <p>Scope of sampling of location : <u>Point / Line / Area</u></p> <p>Sampling methods : <u>Random / Systematic / Stratified / Quota /</u> <u>Convenience / Purposive</u></p>			
<p>Scope of sampling of transects: <u>Point / Line / Area</u></p> <p>Sampling methods : <u>Random / Systematic / Stratified / Quota /</u> <u>Convenience / Purposive</u></p>			
<p>Scope of sampling of buildings: <u>Point / Line / Area</u></p> <p>Sampling methods : <u>Random / Systematic / Stratified / Quota /</u> <u>Convenience / Purposive</u></p>			



STAGE 2 : DATA COLLECTION

Methods of data collection:

A) Taking photographs & Observation B) Measurement C) Counting D) Scoring (Index)
E) Mapping F) Questionnaire & Interview G) Secondary data

Data aspects / items	Data collection methods	Instruments	Points to note & Difficulties / Limitations	(Fill in the box after fieldwork) How to improve the validity / reliability of data? Other methods?
Streets <ul style="list-style-type: none"> ● Flow rate of pedestrians & vehicles ● Types of street obstruction ● Width of streets 				
Building quality <ul style="list-style-type: none"> ● Surface of buildings ● Windows & pipes of buildings ● Structure of buildings 				
Environmental hygiene <ul style="list-style-type: none"> ● Air quality ● Noise level ● Rubbish & sewage ● Offensive smell 				
Town planning <ul style="list-style-type: none"> ● Distance between buildings ● Greening & recreational facilities ● Land use ● Obnoxious facilities 				

Fieldwork instruments & tools



1) Sound level meter



2) Tally Counter



3) Air quality monitor

- 4) Base map
- 5) Clipboard
- 6) Camera (BYOD)

Use after fieldwork

- 7) Meter ruler
- 8) Coloured pencil set

階段 STAGE 2：數據蒐集 DATA COLLECTION

組別 Group : _____

樣條 Transect : A/B/C/D

表格 Table 1：人車流量（2 分鐘）

Flow rate of pedestrians & vehicles (2 mins)

何時需要加權指數？
When weighted index is needed?

[illegible]

樣條 Transect : A/B/C/D

階段 STAGE 2：數據蒐集 DATA COLLECTION

表格 Table 2：街道闊度 Width of streets

[illegible]

★ 鞋子長度 Length of shoe _____ 厘米 cm = _____ 米 m → [f]



階段 STAGE 2 : 數據蒐集 DATA COLLECTION

為何分數不同？
Why are the marks different?

城市衰落評估 Assessment of Urban decay

評估項目 Assessment items	沒有 None 	輕微 Little 	中等 Some 	嚴重 Many
樓宇質素欠佳 Poor building quality				
A. 外表衰退（污積、塗鴉、油漆剝落） Surface deterioration (stains, graffiti, paint peeling)	0	1	2	3
B. 玻璃破爛、窗戶生鏽、水管滲漏／生鏽 Broken glass, corroded windows, leaked / corroded water pipes	0	2	4	6
C. 石屎剝落、鋼筋外露、出現裂縫、物料結構不穩 Concrete spalling, exposed bar tendons, occurrence of cracks, unstable structure of materials	0	3	6	9
環境衛生惡劣 Poor environmental hygiene				
D. 空氣污染 Air pollution（細懸浮微粒 PM2.5） （ $\mu\text{g}/\text{m}^3$ ：0-50 / 51-100 / 101-150 / 151 or above 或以上）	0	1	2	3
E. 噪音滋擾 Noise pollution （分貝 dB：41-50 / 51-60 / 61-70 / 71 or above 或以上）	0	1	2	3
F. 垃圾及污水、害蟲滋生 Rubbish dump & sewage, harmful insects	0	2	4	6
G. 難聞氣味 Offensive smell	0	3	6	9
缺乏城市規劃 Lack of town planning				
H. 過度擠迫（建築物間距不足） Overcrowding (inadequate distance between buildings)	0	1	2	3
I. 缺乏綠化／休憩空間及設施 Lack of greening / recreational space & facilities	0	1	2	3
J. 商住混合土地利用 Mixed land use of commercial & residential	0	2	4	6
K. 厭惡性設施 Obnoxious facilities	0	3	6	9

樣條 Transect : A/B/C/D

表格 Table 3：城市衰落評估 **Assessment of Urban decay**

[illegible]



STAGE 3 : DATA PROCESSING & PRESENTATION

- ❖ A _____ map is a type of thematic map in which areas are shaded in proportion to value.

What are the strengths and weaknesses of this map?

Data processing of table 2

Legend	Level of Urban Decay	<u>Street congestion</u>	
		Flow rate per metre per minute [R]	Quality of pedestrian flow
Blue	None	≤ 2	Broad
		$> 2 - 7$	Unrestricted
Green	Low	$> 7 - 20$	Restricted
Yellow	Medium	$> 20 - 33$	Bound
Red	High	$> 33 - 47$	Crowded
		$> 47 - 60$	Unable to move

References : 2011 年臺灣公路容量手冊，第 19 章行人設施

Data processing of table 3

Legend	Level of Urban Decay	<u>Poor building quality</u>	<u>Poor environmental hygiene</u>	<u>Lack of town planning</u>
		Min. value : _____ Max. value : _____	Min. value : _____ Max. value : _____	Min. value : _____ Max. value : _____
Blue	None			
Green	Low			
Yellow	Medium			
Red	High			



What other graph can be used to represent the above data?



STAGE 4 : DATA ANALYSIS & CONCLUSION

According to the field evidences and diagrams, answer the following questions:

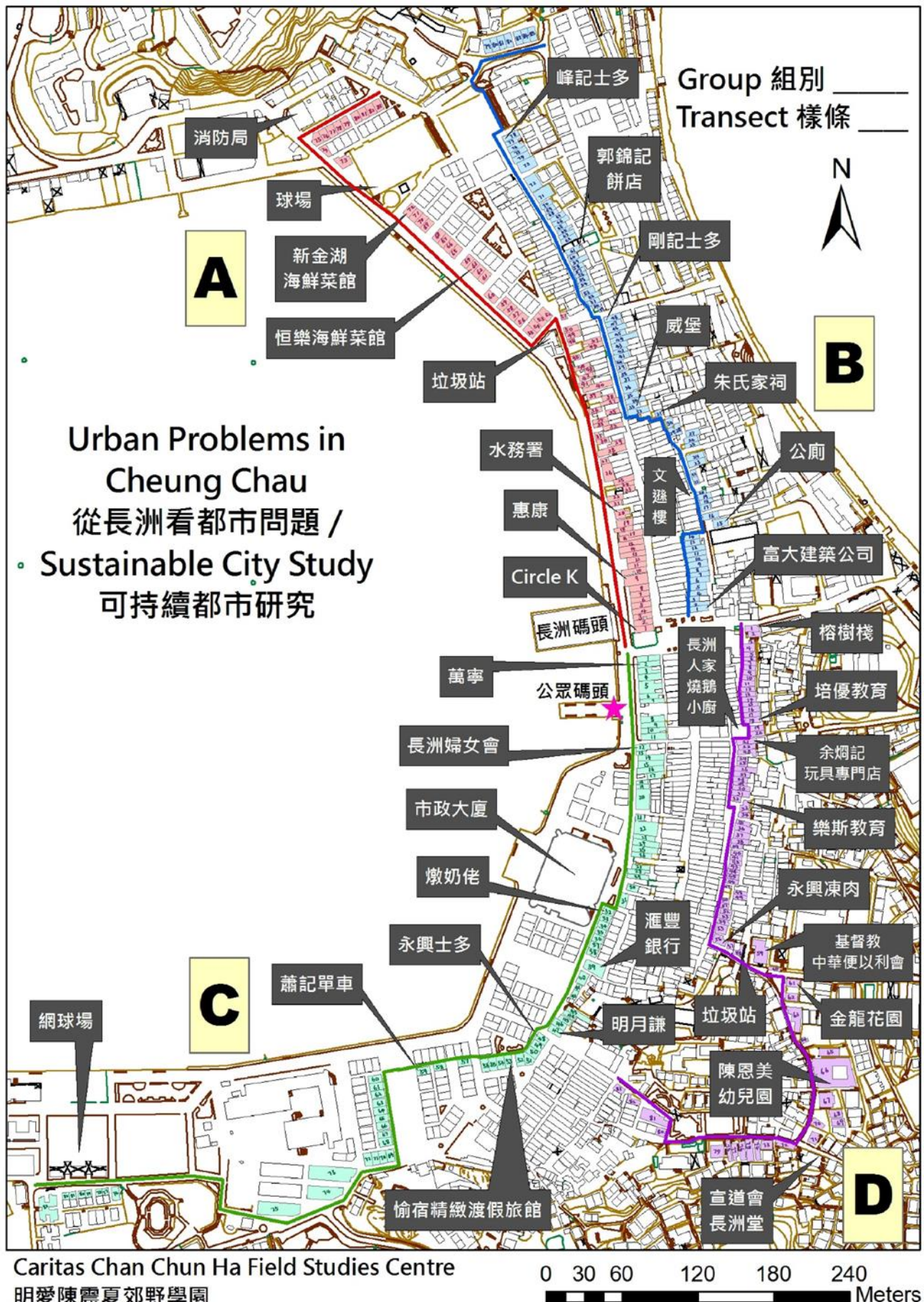
1. Are your hypotheses valid? Explain them with the choropleth maps.
Is there any supplementary information that can raise the validity of these hypotheses?
2. Explain and summarize the reasons generating the present situation in question 1.

STAGE 5 : EVALUATION & FURTHER INVESTIGATION

1. List the advantages and limitations of the date, time, location, scope of sampling & sampling methods of this fieldwork. Suggest possible improvements (Page 3).
2. Review the difficulties and limitations of the data collection methods this time. How to improve the validity and reliability of data (Page 4)?
3. According to the findings of studies today, suggest one relevant topic about urban problems of Cheung Chau for further investigation. Explain your planning of field study.
 - Focus of studies / topic
 - Date / time of fieldwork
 - Location of fieldwork
 - Data to be collected
 - Sampling methods & number of samples
 - Primary data collection methods & necessary instruments

Homework

After the fieldwork, please organize this fieldwork experience in field trip diary on page 12 to 13 as a reference for the revision of field-based question.





My Field Trip Diary

➤ Related modules: **Building a sustainable city**

➤ Key point of fieldwork/topic: _____

<ul style="list-style-type: none"> ▪ Date: _____ (Weekday/ Public holiday) ▪ Time: _____ ▪ Field site: _____ 	<ul style="list-style-type: none"> ▪ Weather condition: _____
<p>Is the above planning appropriate for the fieldwork?</p>	

➤ Primary data:

Data collection method	Data collected	Equipment/ Material (if any)	Merits/ Demerits of the data collection method (give examples)	Suggestion for improvement (give explanations)
<input type="checkbox"/> Measurement				
<input type="checkbox"/> Observation				
<input type="checkbox"/> Counting				
<input type="checkbox"/> Questionnaire/ Interview				
<input type="checkbox"/> Other (if any)				



➤ Secondary data (for supplementary information only):

Data collected	Use	Data obtained from
Apart from the above, what other secondary data could be used for further investigation?		

➤ Sampling method (if any):

Sampling method	Applied in the following	Merits/ Demerits

➤ Data processing and presentation:

Type of graph/ chart	Content shown and function of graph/chart

➤ For deeper learning or further study, I suggest modify the following aspects.

		Suggestion (give examples)
<input type="checkbox"/>	Key point of fieldwork/ topic	
<input type="checkbox"/>	Data to be collected and method of data collection	
<input type="checkbox"/>	Date and time of fieldwork	
<input type="checkbox"/>	Field site	