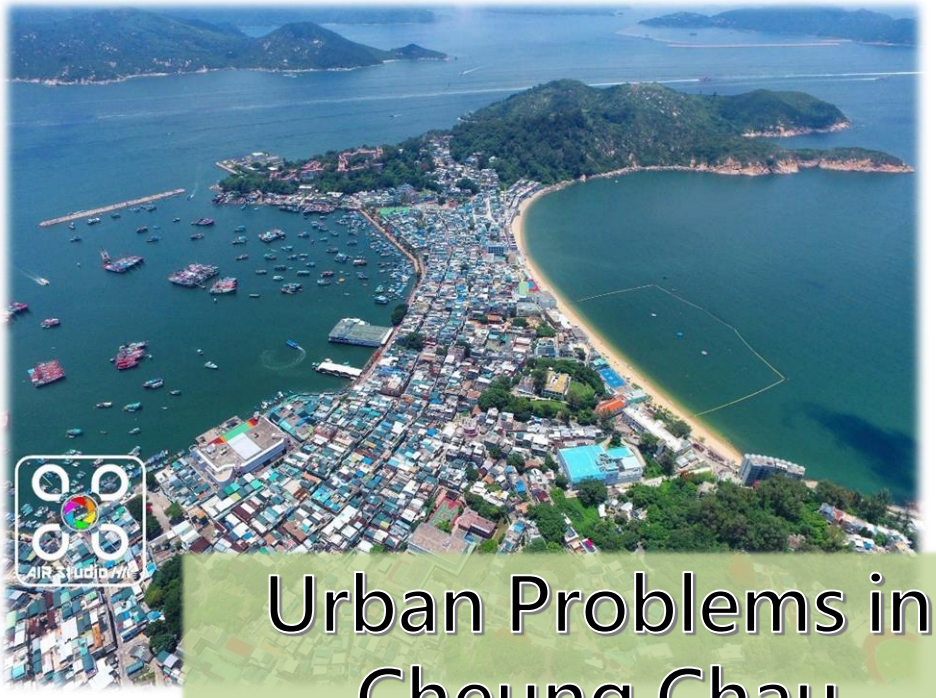
明愛陳震夏郊野學園
Caritas Chan Chun Ha Field Studies Centre



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
Date of fieldwork : _____ Time of fieldwork : _____ to _____ Monday to Friday / Saturday / Sunday & Public holiday			
Location of fieldwork : Whole island / Central part / Southern part / Northern part of Cheung Chau Scope of sampling of location : Point / Line / Area Sampling methods : Random / Systematic / Stratified / Quota / Convenience / Purposive			
Scope of sampling of transects: Point / Line / Area Sampling methods : Random / Systematic / Stratified / Quota / Convenience / Purposive			
Scope of sampling of buildings: Point / Line / Area Sampling methods : Random / Systematic / Stratified / Quota / Convenience / Purposive			

STAGE 2 : DATA COLLECTION

Methods of data collection:

A) 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 ● Flow rate of pedestrians & vehicles ● Types of street obstruction ● Width of streets				
Building quality ● Surface of buildings ● Windows & pipes of buildings ● Structure of buildings				
Environmental hygiene ● Air quality ● Noise level ● Rubbish & sewage ● Offensive smell				
Town planning ● 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)

何時需要權重？
When weighting is needed?

建築物編號 Building no.	行人 Pedestrians (數量 no.) [a]	車輛 Vehicles				加權總和 Weighted sum [S] = [a]+[c]+[e]
		類別一 Type 1: _____ (數量 no.) [b]	加權指數一 Weighted index 1 [c] = [b] x ___	類別二 Type 2: _____ (數量 no.) [d]	加權指數二 Weighted index 2 [e] = [d] x ___	

階段 STAGE 2：數據蒐集 DATA COLLECTION

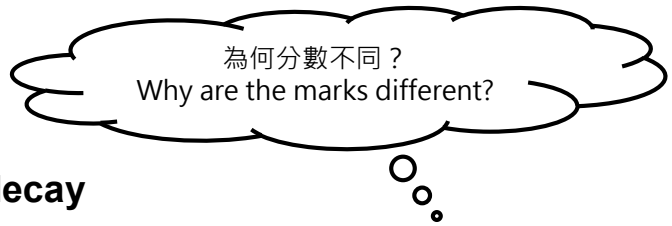
組別 **Group**：_____
樣條 **Transect**：**A／B／C／D**

表格 Table 2：街道闊度 Width of streets

建築物編號 Building no.	街道阻塞類型 Types of street obstruction	街道原本闊度 Original width of streets (步距 foot span) [g]	街道可用闊度 Usable width of streets (步距 foot span) [h]	可用闊度百分比 Percentage of usable width (%) [P] = [h] / [g] x 100	街道可用闊度 Usable width of streets (米 m) [U] = [f] x [h]	每分鐘每米闊度流量 Flow rate per meter per minute [R] = [S] / [U] x 2

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

階段 STAGE 2：
數據蒐集 DATA COLLECTION



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） （μg/m^3：0-50 / 51-100 / 101-150 / 151 or above 或以上）	0	1	2	3
E. 噪音污染 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

階段 STAGE 2：數據蒐集 DATA COLLECTION

組別 **Group**：_____
樣條 **Transect**：**A／B／C／D**

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

建築物編號 Building no.	土地利用 Land use		樓宇質素欠佳 Poor building quality				環境衞生惡劣 Poor environmental hygiene					缺乏城市規劃 Lack of town planning				
	地下 G/F	一樓 1/F	A 0/1/2/3	B 0/2/4/6	C 0/3/6/9	總分 total	D 0/1/2/3	E 0/1/2/3	F 0/2/4/6	G 0/3/6/9	總分 total	H 0/1/2/3	I 0/1/2/3	J 0/2/4/6	K 0/3/6/9	總分 total

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	Street congestion	
		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	Poor building quality Min. value：_____ Max. value：_____	Poor environmental hygiene Min. value：_____ Max. value：_____	Lack of town planning 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

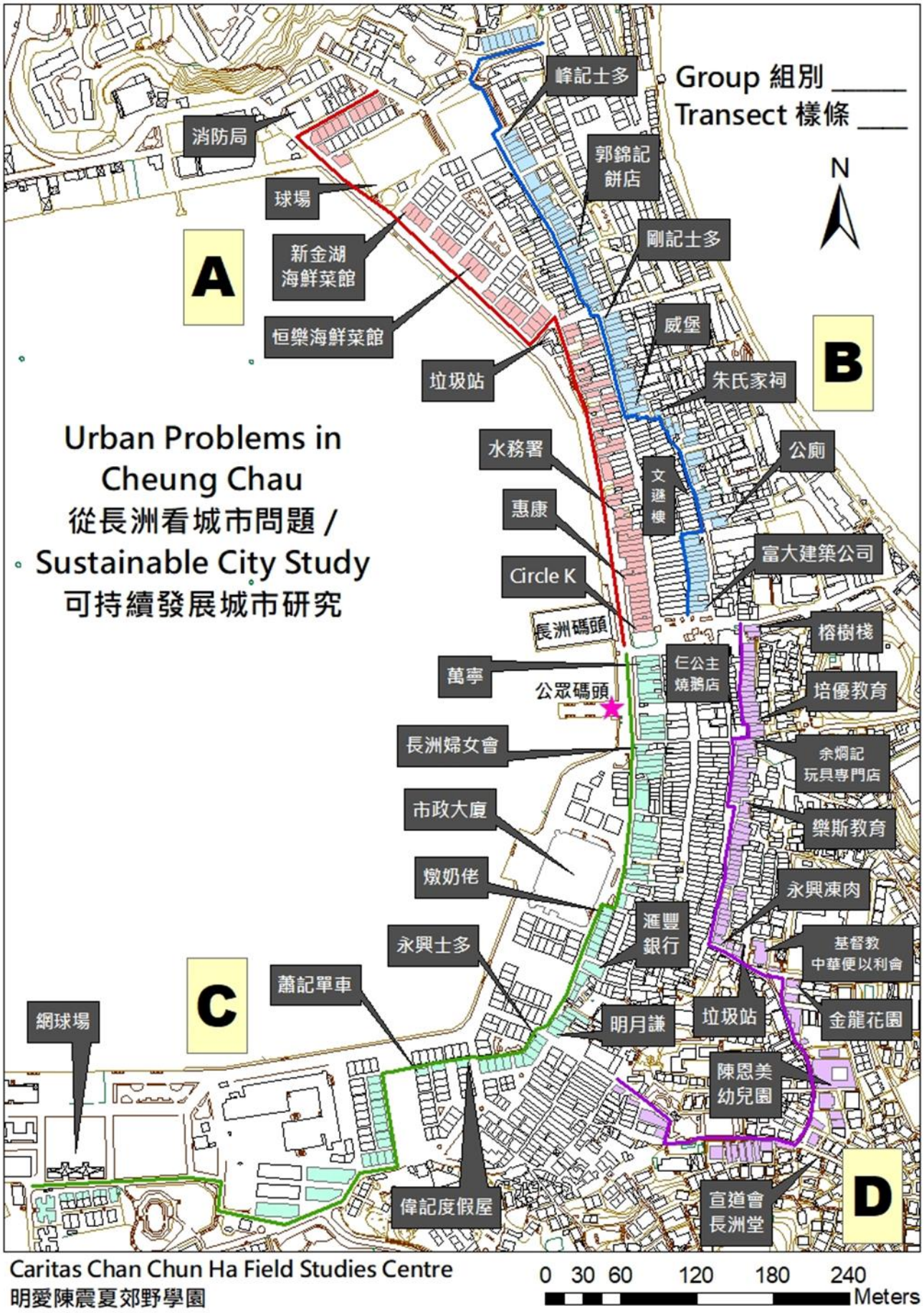
1. List the advantages and limitations of the date, time, location, scope of sampling & sampling methods of this fieldwork. Suggest possible improvements (Page 3).

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.


Group 組別 _____
Transect 樣條 ___
N
A
B
C
D
消防局
球場
新金湖
海鮮菜館
恒樂海鮮菜館
垃圾站
峰記士多
郭錦記
餅店
剛記士多
威堡
朱氏家祠
公廁
文遜樓
水務署
惠康
Circle K
長洲碼頭
富大建築公司
榕樹棧
仁公主
燒鵝店
萬寧
公眾碼頭
培優教育
長洲婦女會
余燜記
玩具專門店
市政大廈
樂斯教育
燉奶佬
永興凍肉
滙豐
銀行
永興士多
基督教
中華便以利會
蕭記單車
垃圾站
金龍花園
網球場
明月謙
陳恩美
幼兒園
偉記度假屋
宣道會
長洲堂
Urban Problems in
Cheung Chau
從長洲看城市問題 /
Sustainable City Study
可持續發展城市研究
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0 30 60 120 180 240
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My Field Trip Diary

- Related modules: **Building a sustainable city**
- Key point of fieldwork/topic: _____

▪ Date:_____ (Weekday/ Public holiday) ▪ Time:_____ ▪ Field site: _____	▪ Weather condition:
Is the above planning appropriate for the fieldwork?	

- 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)
❑ Measurement				
❑ Observation				
❑ Counting				
❑ Questionnaire/ Interview				
❑ Other (if any)				

- Secondary data:

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	Merits☺/ Demerits☹

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

		Suggestion (give examples)
❑	Key point of fieldwork/ topic	
❑	Data to be collected and method of data collection	
❑	Date and time of fieldwork	
❑	Field site	