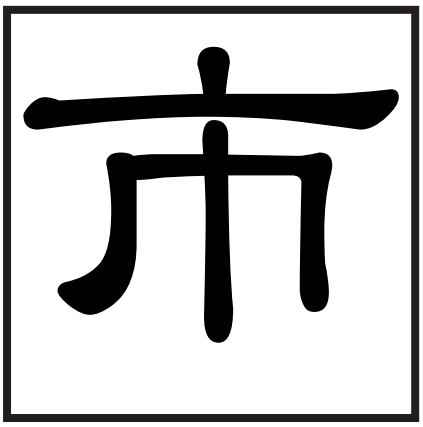


Spatial Distribution of Urban Activities in Sai Kung Town

Version 1.1

Objectives

1. To study the spatial distribution pattern of restaurants in Sai Kung Town.
2. To examine the factors shaping the distribution pattern of restaurants in Sai Kung Town.
3. To investigate the impacts of developing Hong Kong UNESCO Global Geopark on Sai Kung Town and nearby areas.
4. To discuss how to develop Sai Kung Town in a sustainable way.

Equipment List

Items	Quantity	Checked	Returned
1. Base map (Individual)	x1	❑	❑
2. Clipboard (Individual)	x1	❑	❑
3. Compass (Individual)	x1	❑	❑
4. Colour pencils	x1	❑	❑
5. Counter	x1	❑	❑

Field Work

1. Refer to the field studies maps.
2. Walk around the specific Zones A, B or C at Sai Kung Town shown on the map.
3. In the specified Zone, observe and examine the spatial distribution pattern of different restaurants (only ground floor restaurants are object for observation) according to the following items. Mark the location of different types of restaurants on the map.
   (a) Western Restaurants & Bars (b) Cafes (c) Chinese Seafood Restaurants
   (d) Chinese Restaurants (e) Asian Restaurants (f) Dessert Shops
   (g) HK Style Tea Houses & Noodles and Congee Shops (h) Fast Food Shops & Tuck Shops
4. Observe the numbers, major types of served customers and the environment of the restaurants.
5. Count the number of pedestrians passing by 5 minutes at specific checkpoint. Record all data on the data recording sheet 8.1.

Data Sheet

Group: _____ Date: _____

Table 8.1 - Number of pedestrians flow within 5 minutes at the specified checkpoint.

Time of observation: _____
(counting the number of pedestrians at the same time with other groups)

Checkpoint	1	2	3	4	5	6	7	8
Number of pedestrians (Local)								
Number of pedestrians (Tourists)								

Data Processing

1. Assign and fill different colours to the types of restaurants, complete a map to show the spatial distribution pattern of the restaurants at Sai Kung Town.
2. Count the number and classify the order of different restaurants during the walk. Record all data on data summary sheet 8.2
3. Assess the environment of the restaurants by using the following criteria. Record all data on data summary sheet 8.2.
   a. Restaurant design b. Restaurant decoration c. Restaurant area

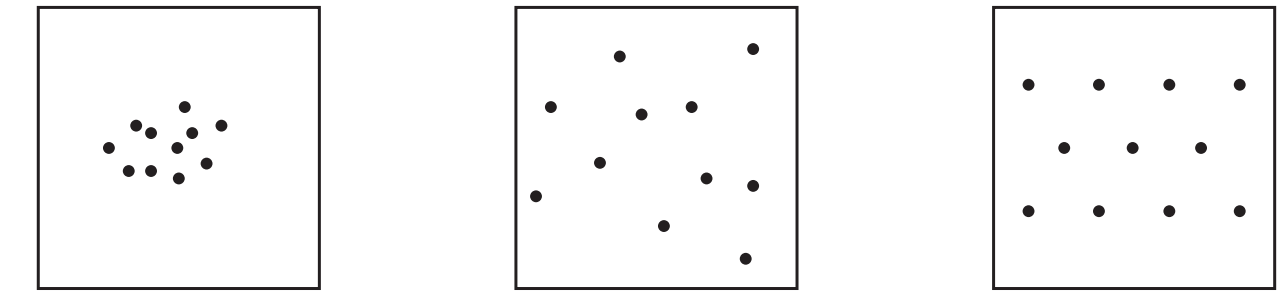
Data summary sheet 8.2 - Assessment form for types and environment of the restaurants

Type	Number	Restaurant appearance (new or old)	Restaurant environment (1-3 marks)	Order (high/middle/low)	Major type of customers (local/ tourists)
(a) Western Restaurants & Bars					
(b) Cafes					
(c) Chinese Seafood Restaurants					
(d) Chinese Restaurants					
(e) Asian Restaurants					
(f) Dessert Shops					
(g) HK Style Tea Houses & Noodles and Congee Shops					
(h) Fast Food Shops & Tuck Shops					

Nearest Neighbour Index

1. Give each specified restaurant a number on the specific zone on the map.
2. Use the Nearest Neighbour Index to measure and analyse the spatial distribution pattern of each restaurant type in each zone.
3. To find ($\overline{D}$), measure the straight-line distance (in cm) between each restaurant and its nearest neighbour on the map. Complete Data recording sheet 8.4.
4. Calculate the area (a) (in m^2) of the zone.
5. Count the total number of specific restaurants (n) of the specific zone.
6. Calculate the nearest neighbour value (Rn) by substituting all data into the formula in Data recording sheet 8.5.
7. Refer to Figure 8.3, determine the spatial distribution pattern of the restaurants .

Figure 8.3 - Nearest Neighbour Index



Rn 0 — Clustered

1.00 — Random

2.15 — Regular

$$Rn = \frac{\bar{D}(Obs)}{0{\cdot}5\sqrt{\frac{a}{n}}}$$

Rn = nearest neighbour value

$\overline{D}$(Obs) = mean observed nearest neighbour distance

a = area under study

n = total number of points

Data recording sheet 8.4: Record of specified restaurants in Sai Kung Town

Zone: _____ Type of Restaurant: _____

(a) Restaurant no.	(b) Nearest neighbour	Distance between (a) and (b)on the map (cm)	Calculate the actual distance (m)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
Total			m
Mean observed nearest neighbour distance ($\overline{D}$)			m

Data recording sheet 8.5 : Nearest Neighbour Index

Zone _____

$\overline{D}$(Obs) = _____ m

a (Area) = _____ (sq. m)

n (Total no.) = _____

Rn = _____

Sai Kung Town

Zone A: Rn = _____

Zone B: Rn = _____

Zone C: Rn = _____

Area of Zone A: 41,250 sq. m Area of Zone B: 38,449 sq. m Area of Zone C:38,739 sq. m

Data recording sheet 8.4: Record of specified restaurants in Sai Kung Town

Zone: _____ Type of Restaurant: _____

(a) Restaurant no.	(b) Nearest neighbour	Distance between (a) and (b) on the map (cm)	Calculate the actual distance (m)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
Total			m
Mean observed nearest neighbour distance ($\bar{D}$)			m

Data recording sheet 8.5 : Nearest Neighbour Index

Zone _____

$\bar{D}$(Obs) = _____ m

a (Area) = _____ (sq. m)

n (Total no.) = _____

Rn = _____

Sai Kung Town

Zone A: Rn = _____

Zone B: Rn = _____

Zone C: Rn = _____

Area of Zone A: 41,250 sq. m Area of Zone B: 38,449 sq. m Area of Zone C:38,739 sq. m

Conclusion

- The spatial distribution pattern of _____ restaurant at Zone ____ is _____.
- The spatial distribution pattern of _____ restaurant at Zone ____ is _____.

Discussion Questions

1. What are the characteristics of the restaurants in terms of

   (a) Location (b) Frequency of occurrence (c) Order (d) Environment

   in Sai Kung?

2. Based on the field studies and collected data (data recording sheet 8.4), what are the reasons causing the spatial distribution pattern of the following restaurants?

Western Restaurants & Bars	Chinese Seafood Restaurants	HK Style Tea Houses & Congee and Noodle Shops

3. Through your observation and data collection, prove the hypothesis: “The number of restaurants decreases with increasing distance away from Sai Kung town centre.”

4. How has the establishment of Hong Kong UNESCO Global Geopark affected the economic, social and environmental development of Sai Kung Town and or the nearby area?

5. Sai Kung Peninsula has the prestige of “Leisure Garden of Hong Kong. How can the future development of Sai Kung Town achieve the balance between environmental conservation and economic development?