

"My River, My Community" Scheme

Workshop and Guided field-trip to Sheung Yue River Catchment

27 April 2018

How to conduct fieldwork along Sheung Yue River

Anthony K. C. Yeung & Tony W. K. Leung

Hong Kong Geographical Association

About Sheung Yue River Field Study

Relevance to the DSE GEOG curriculum

This field study is related to 'Managing Rivers and Coastal Environments – A continuing challenge' (Compulsory Part)

Objectives

- To investigate the variation of stream characteristics (river geometry) along the course of the river;
- To examine the variation of the degree of stream pollution along the course of the river; and
- To investigate **how stream pollution is affected by human activities** along the river.



Planning & preparation Data collection **Data processing** & presentation **Interpretation &** conclusion **Evaluation**

(A) Background information:

About Sheung Yue River: Topography, land uses, etc.

- also known as River Beas
- in the northern New Territories
- flows from Kai Kung Leng (難公嶺), through Long Valley (塱原) and Sheung Shui (上水), joins up with Shek Sheung River (石上河) and eventually flows into Ng Tung River (梧桐河)





conclusion

Evaluation

(B) **Enquiry questions**:

- 1. What changes occur in **river geometry** with distance downstream? (NOT to be discussed in this Workshop)
- What changes occur in the <u>degree of</u> <u>stream pollution</u> with distance downstream?



(C) Pre-requisite knowledge / Knowledge recap:

Stream pollution

• Ammonia & nitrate - fertilizer,

decomposition of organic matter and

untreated sewage

• E. Coli - animal faecal contamination

Conducting Enquiry Field Study: (2) Data collection



The Field Study Sites

- site location
- A Ta Shek Wu Shek Tong (打石湖石塘)
- B Kiu Tau (橋頭)
- C Ying Pun Tsuen (營盤)
- D Tsui Keng Tsuen (蕉徑村)
- E JC Beas River Lodge (賽馬會碧溪莊)
- F Yin Kong Tsuen (燕崗村)
- G Ho Sheung Heung (河上鄉)
- H Long Valley (塱原)

Conducting Enquiry Field Study: (2) Data collection

Planning & Observations preparation

Data collection

Data processing

& presentation

Interpretation

& conclusion

Evaluation

- Floating matter
- Green algae
- Sewage fungus
- Smell
- Water colour
- Turbidity

Land use type

- Around
- Upstream

Chem & biol Properties

- Acidity
- Ammonia
- Nitrate
- E. coli

Stream management strategy

- Channelisation works
- Туре

Conducting Enquiry Field Study: (2) Data collection

Planning & preparation Data collection Data processing & presentation Unterpretation

Interpretation & conclusion

Evaluation

Assessing River Water Quality in a Secondary School Environment









Conducting Enquiry Field Study: (4) Interpretation & conclusion

Planning & preparation

Stream water → Dam → Irrigation **Effects of stream pollution on cultivation?**





Evaluation

conclusion

Conducting Enquiry Field Study: (4) Interpretation & conclusion

Polluted irrigation water
→ Organic farming?

Long Valley



Planning &

Evaluation

Planning & preparation Data collection Data processing & presentation Interpretation & conclusion **Evaluation**

(1) Selection of sample points: appropriate?





(2) Indicators appropriate? Other indicators:

Planning & preparation

Data collection

Data processing & presentation

Interpretation & conclusion

Evaluation









Planning & preparation Data collection Data processing & presentation Interpretation & conclusion **Evaluation**

(4) Secondary data needed:

River Water Quality in HK – EPD Annual Report







Planning & preparation Data collection Data processing & presentation Interpretation & conclusion **Evaluation**

(4) Secondary data needed: Comparison with past years' data









How to conduct field study in Sheung Yue River



