



# Managing River Environments

## Stage A Planning and Preparation

A1: Define Your Topic & Title

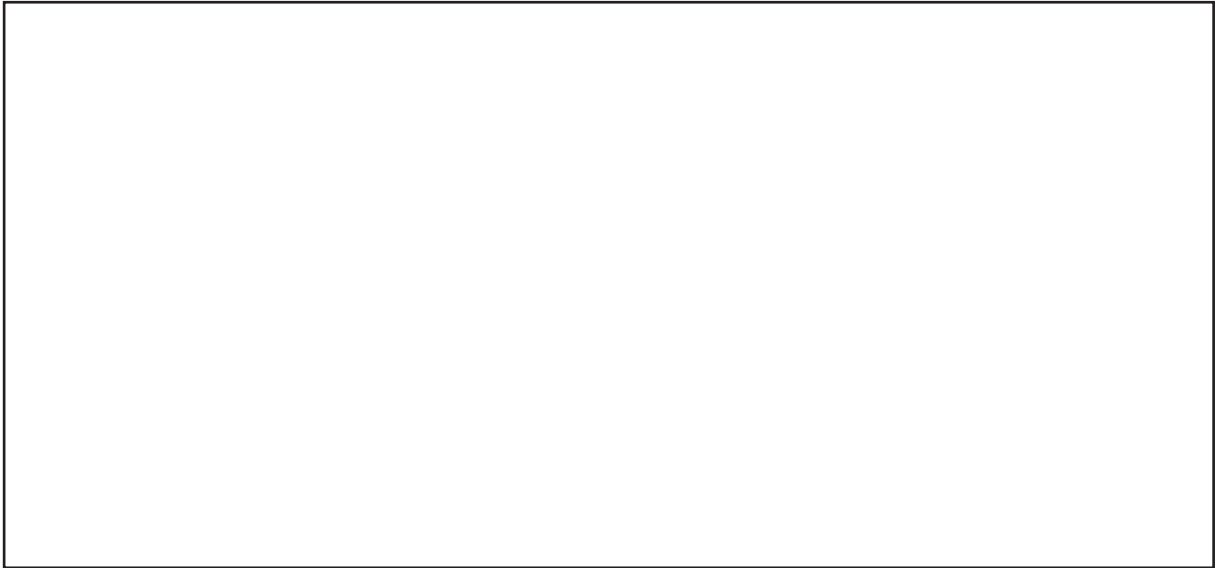
I. Field Site: Chuen Lung

II. Relevant Terms and Concepts:

1. Erosional processes (hydraulic action, abrasion, attrition & corrosion)
2. Transportation processes (traction, saltation, suspension & solution)
3. Depositional processes
4. River depth
5. River width
6. Width-depth ratio
7. Wetted perimeter
8. Hydraulic radius
9. Gradient
10. River velocity
11. River discharge
12. River efficiency
13. Pebble roundness
14. Channel shape
15. Fluvial landform (e.g. gorges, waterfalls, rapids, meanders, flood plains, deltas and etc.)
16. Human activities (dredging, destabilisation and erosion, agriculture, recreation and etc.)
17. Impact and consequences (e.g. flooding, erosion and mass wasting, pollution and disturbance / damage to the ecosystem and etc.)
18. Management strategies
19. People-environment interaction
20. Conflict
21. Change over space

III. Interested Concepts:

IV. Concept Map of the study:



V. Possible Titles:

1. An analysis of \_\_\_\_\_ in the study river to discover how it varies downstream.
2. What factors influence \_\_\_\_\_ in the study river.
3. How does \_\_\_\_\_ vary along the study river.
4. A comparative study of \_\_\_\_\_ in the upper course and middle course of the study river.
5. There is a proportional relationship between \_\_\_\_\_ and \_\_\_\_\_ in the study river.
6. What is the perception of the study river as both an opportunity and a threat in Chuen Lung.
7. How do \_\_\_\_\_ vary above and below key confluences on the study river.
8. An evaluation of the channel management in a short stretch of the study river.

(a) **Topic: Managing River Environments**

(b) **Title:** \_\_\_\_\_

(c) **Explanation of the Study:**  
(Scope of the study / Objectives / Geographical Questions / Problems / Phenomena / Focusing Questions / Hypothesis)



(d) **Related geographical concepts and perspectives (with references):**

**A2: Devise Your Investigation Plan**

VI. Possible Equipment

1. Abney level
2. Compass
3. Cotton gloves
4. Deionised water (Wash bottle)
5. Measuring tap - 3.5m
6. Measuring tap - 30m
7. Radius chart
8. Ranging poles
9. Stream flow meter
10. Vernier caliper

VII. Possible Sampling Methods

1. Transect - choose a straight reach of certain distance as a transect for investigation.
2. Simple Sampling - collect data items at a certain distance interval. For example, measure the depth across the river at every 10cm interval.
3. Random Sampling - For example, collect random pebbles which fall beneath the toe of your wader each time you take a step for measurement.
4. Systematic Sampling - For example, measure the river flow speed at regular depth or width of the river.

**(e) Data Collection Plan:**  
**(Methods / Techniques / Tools / Resources, Preparatory procedures, schedule)**

1. Data Items:

2. Equipment List:

3. Sampling Method:

4. Frequency of Number of Collection:

5. Procedures:

**Stage B Data Collection**

**(f) Data Recording Sheet:**

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**Stage C Data Processing, Presentation and Analysis**

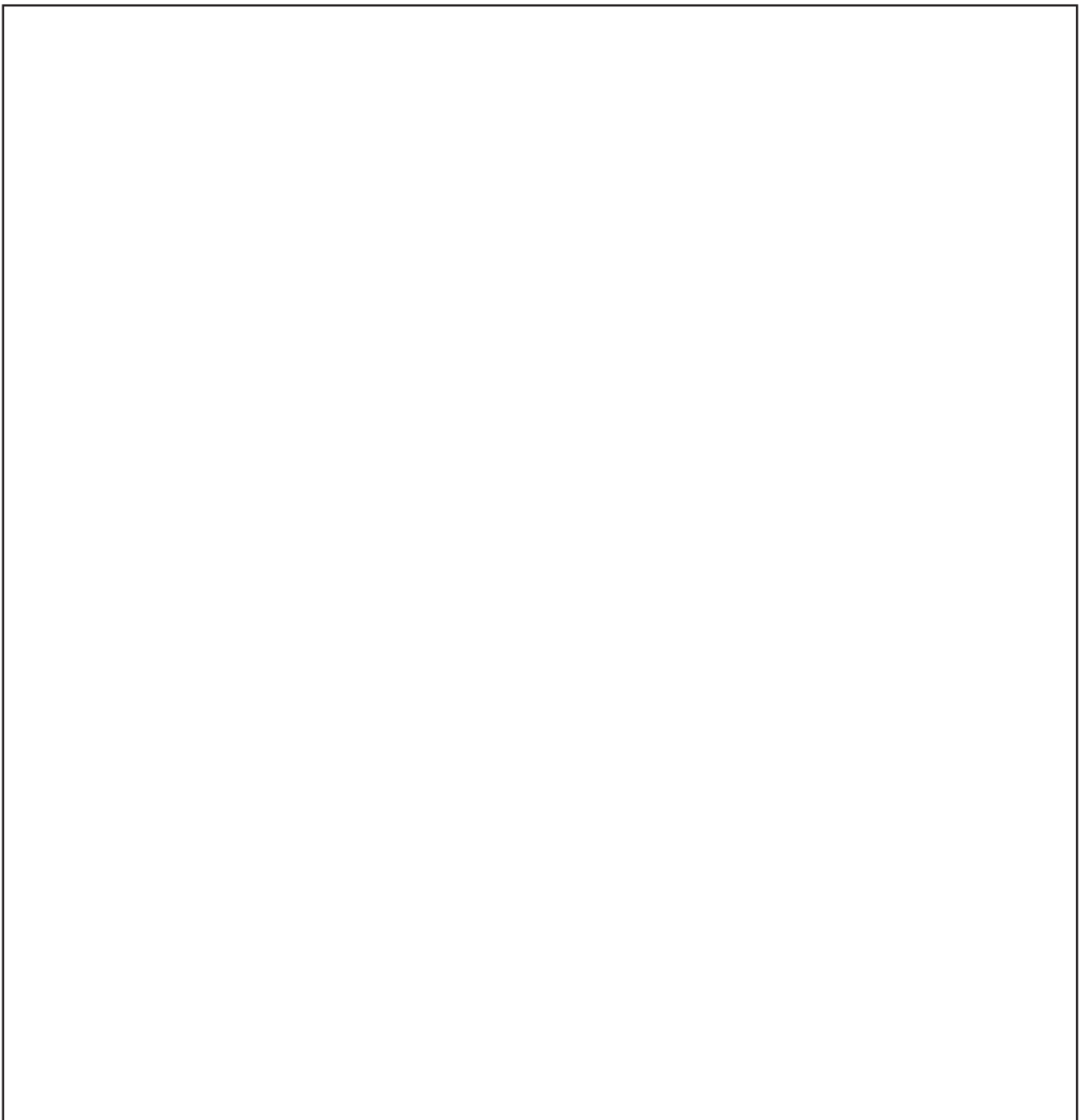
VIII. Possible Statistical Analysis

1. General Statistics - Mean, Mode and Median
2. Correlation - Scatter Diagram

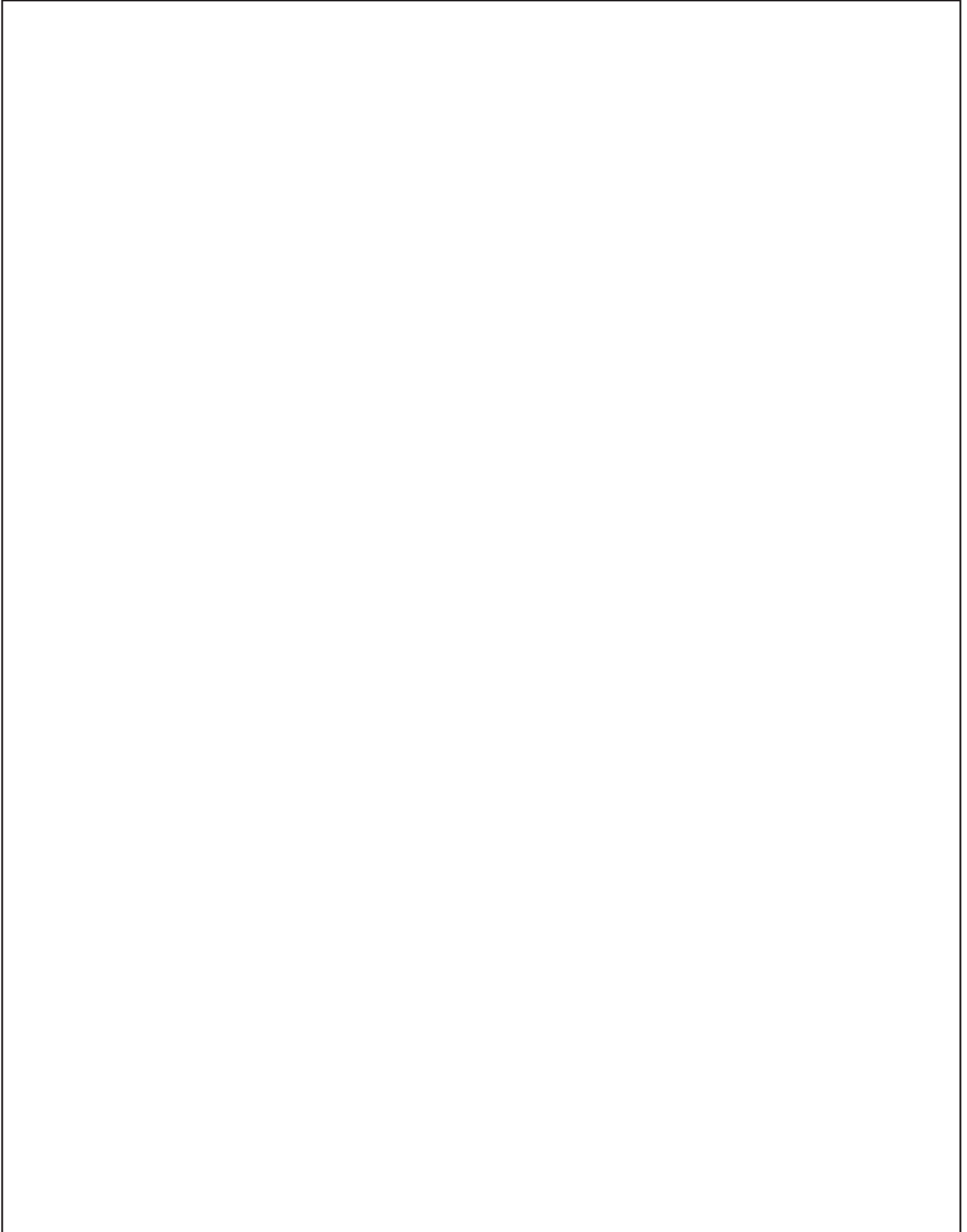
IX. Proposed Graphical or Map Presentation

1. Line Graph
2. Scatter Diagram
3. Cross-section Diagram

**(g) Data Processing, Presentation and Analysis:**



**Stage D Interpretation and Conclusion:**

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**Stage E Evaluation**

