

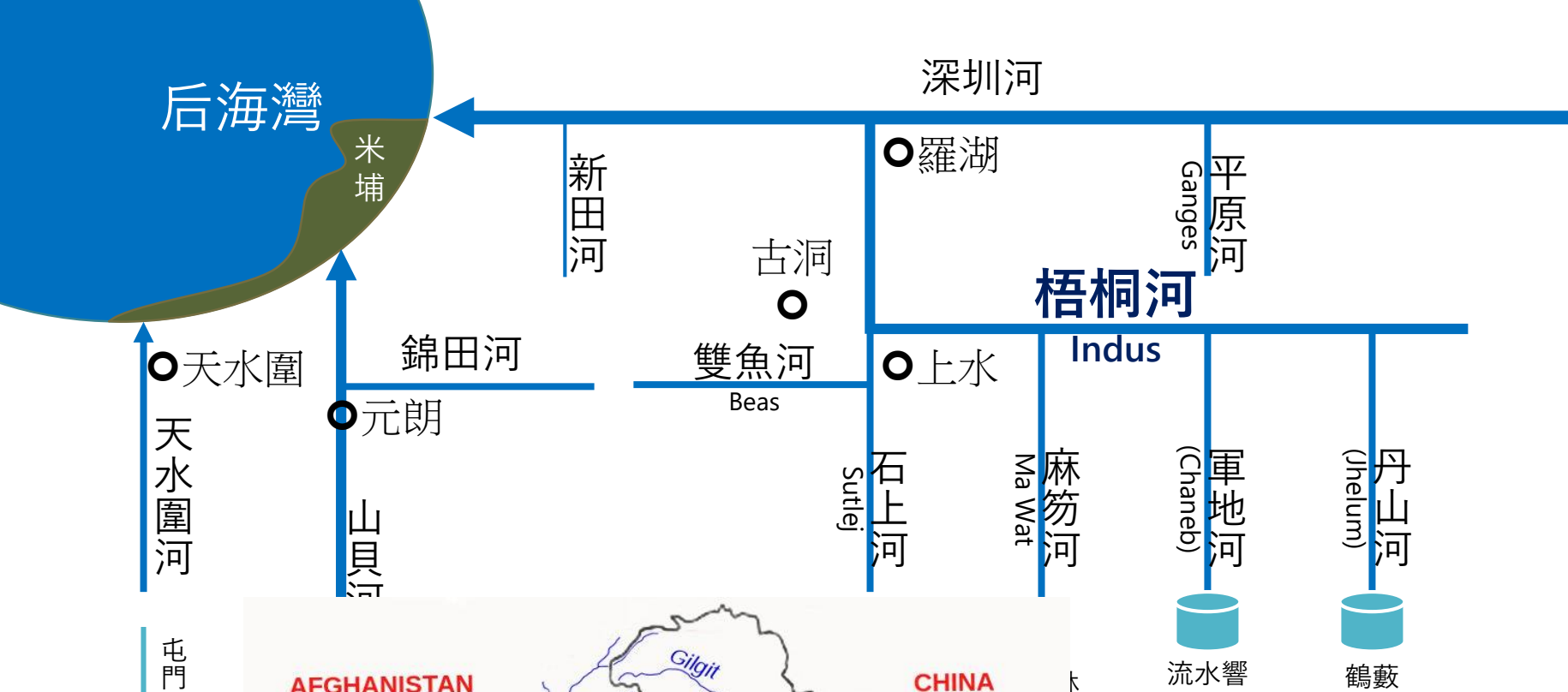
My River, My Community

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This is a black and white oblique aerial photograph showing a wide river valley. The river flows from the upper right towards the lower left. The valley floor is a mix of agricultural fields, some of which are irrigated, and small settlements. The surrounding landscape is dominated by steep, rugged mountains with visible ridges and gullies. The sky is clear and bright.

River Indus 梧桐河

25.11.74 Oblique aerial photo © Lands Dept. HKSAR

UAG 1044 152.53

OBLIQUE

HK 25.11.74 12500'

10070



深圳河
 $A = 350 \text{ km}^2$

UAG 1044 152.53



HK 25.11.74 12500' 10070

HK
5/11/74

OBLIQUE



Colluvial 崩積

Hillslope coupling
Mass movement
Debris flow
initiation & scour

Bedrock 基岩

Debris flow
Flash flood
Sediment
transport

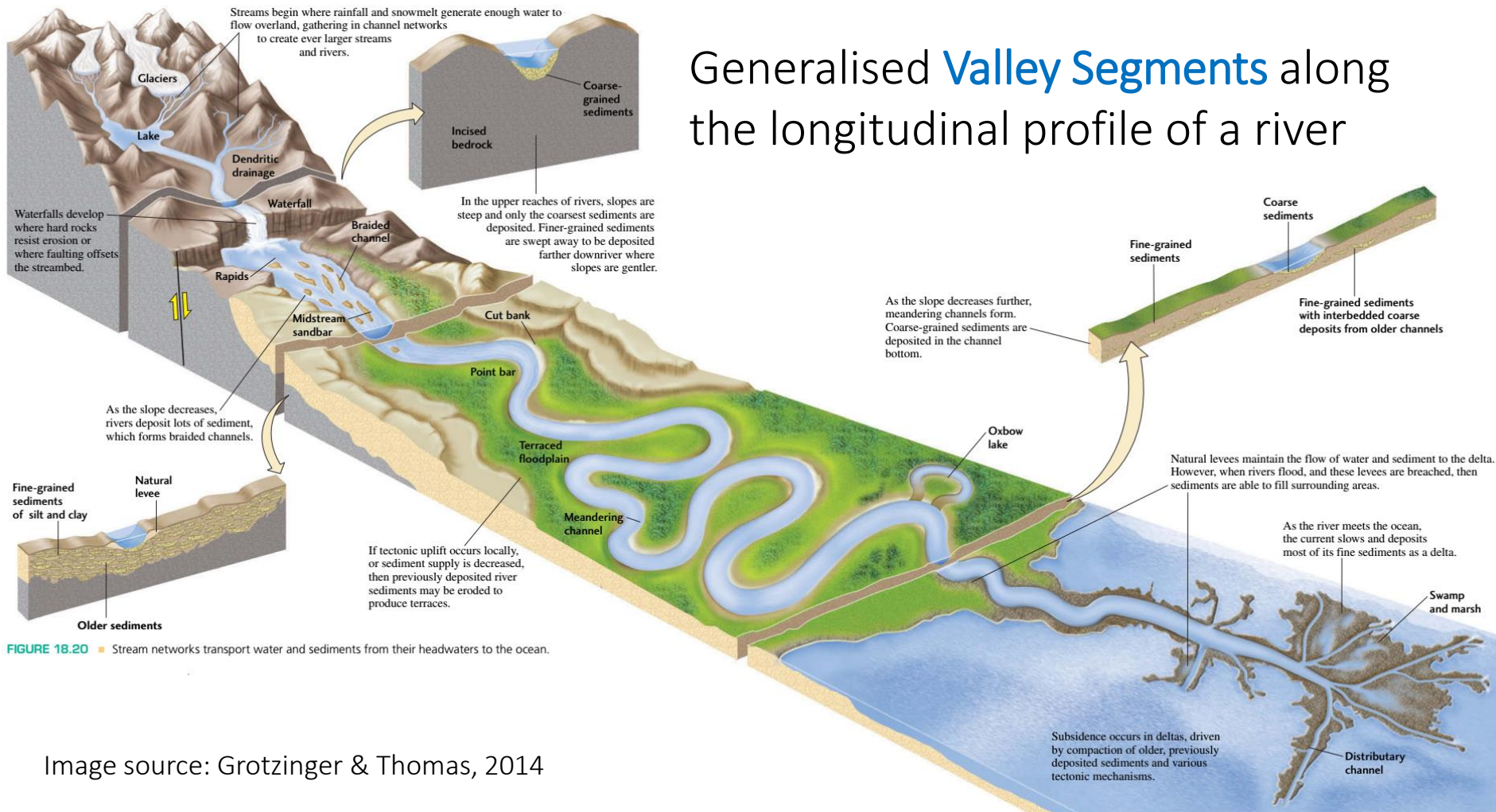
Alluvial 沖積

Sediment storage
Channel
migration
River avulsion
Flooding

Estuarine 河口

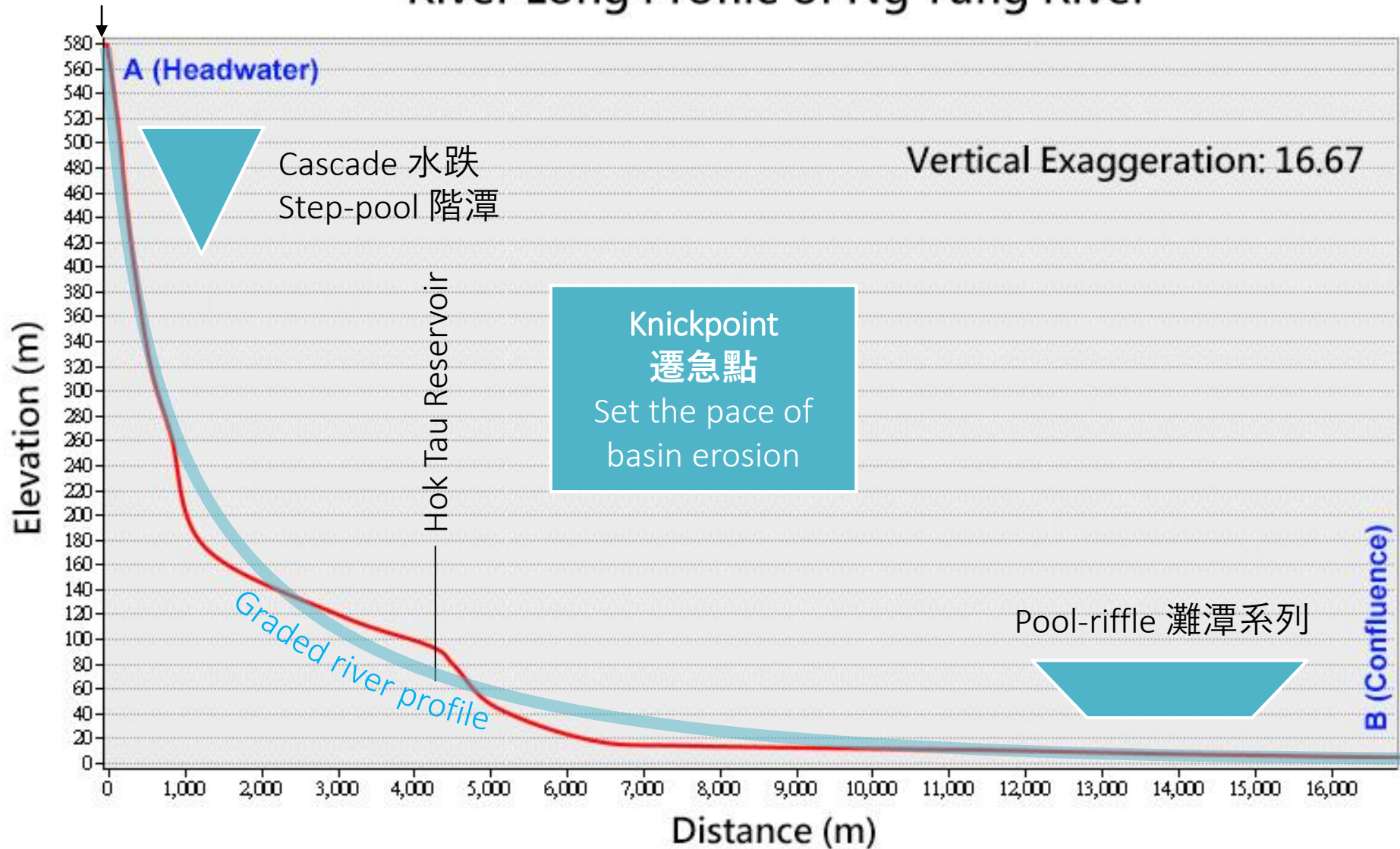
Tide
Wave
Alternating flow
direction

Generalised Valley Segments along the longitudinal profile of a river



Wong Leng

River Long Profile of Ng Tung River



吊燈籠
416m

黃嶺
639m

八仙嶺

沙頭角海

龜頭嶺
486m

屏風山
529m

黃鶴石澗

平山寨

屏鶴石澗

鶴藪水塘

丹山河

鶴藪谷地

郊野公園

鶴藪圍

丹竹坑

流水響水塘

聖地河

皇后山

PAT SIN 5-10-85 OBLIQUE 5000' CN9516

5.10.85 Oblique aerial photo © Lands Dept. HKSAR

WILD 15/10/04
NO 008 15/12

黃鶴石澗



↑ Source: Albert366 @fotop.net

Source: anlth2009@ discuss.com.hk →





吊燈籠
416m

黃嶺
639m

Dip slope (NNE)

escarpment

黃鶴石洞

Kp

Unconformity

Jtm

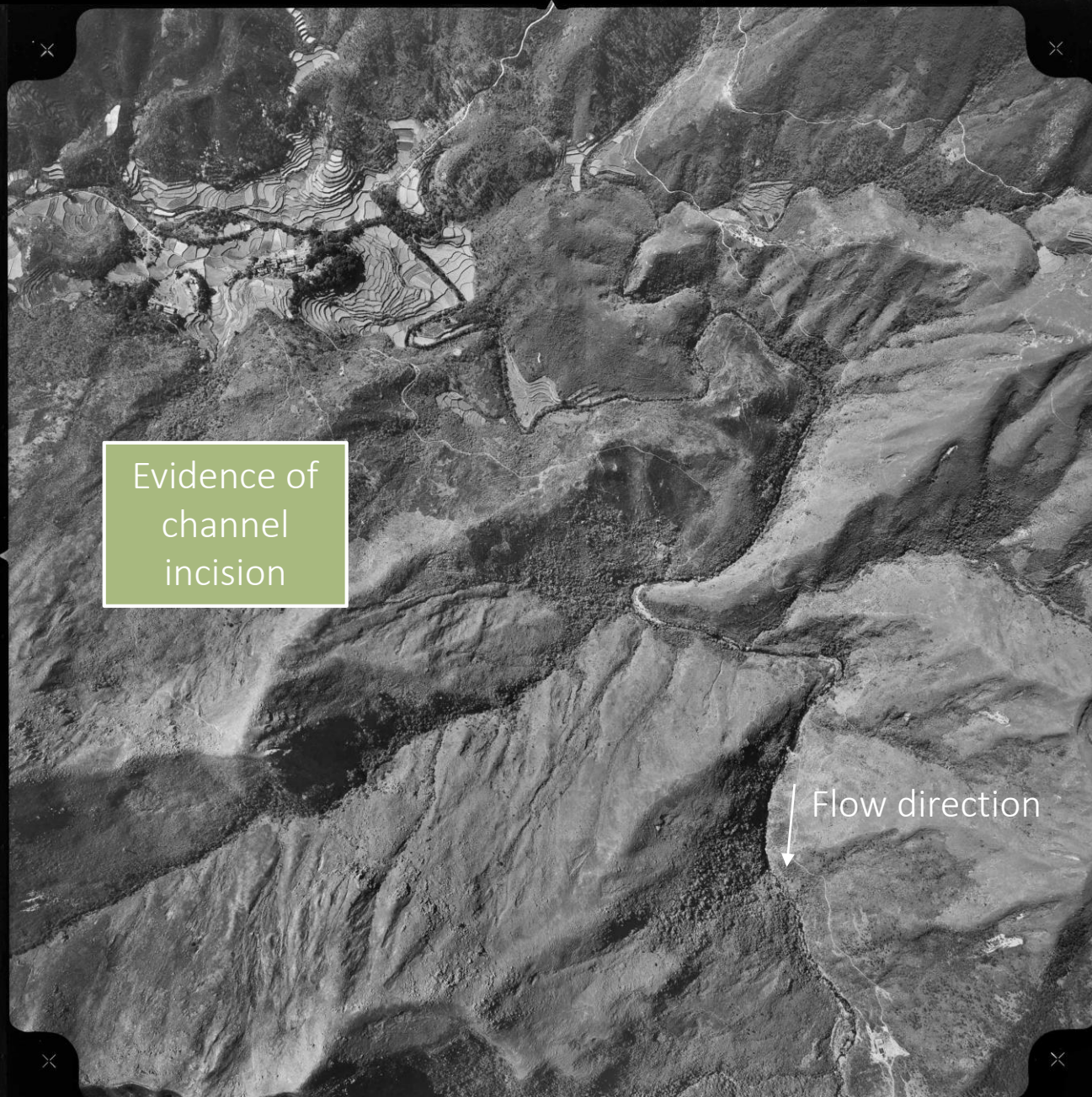
平山寨

Cuesta 單面山

丹山河

鶴藪谷地

Interlocking spurs



Evidence of
channel
incision

Flow direction

Looking upstream
towards Hok Tau



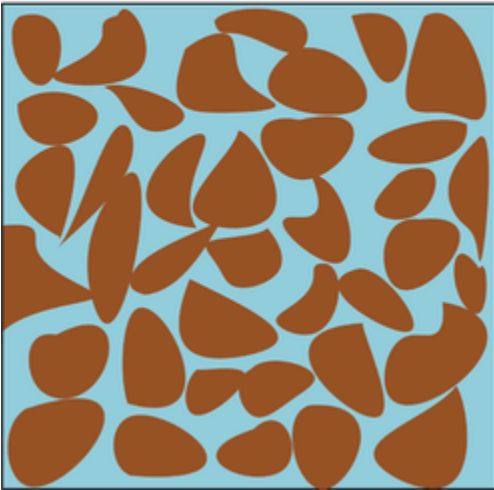
Interlocking spurs

Wetland



Saturation

All pores are filled with water



Gravitational water
重力水

Field Capacity

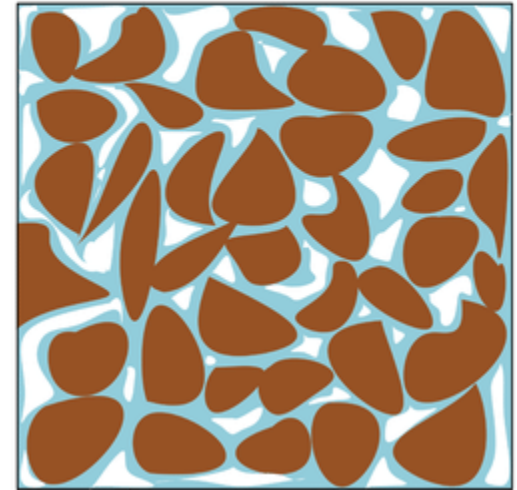
Water in larger pores has drained



Capillary Water
毛管水

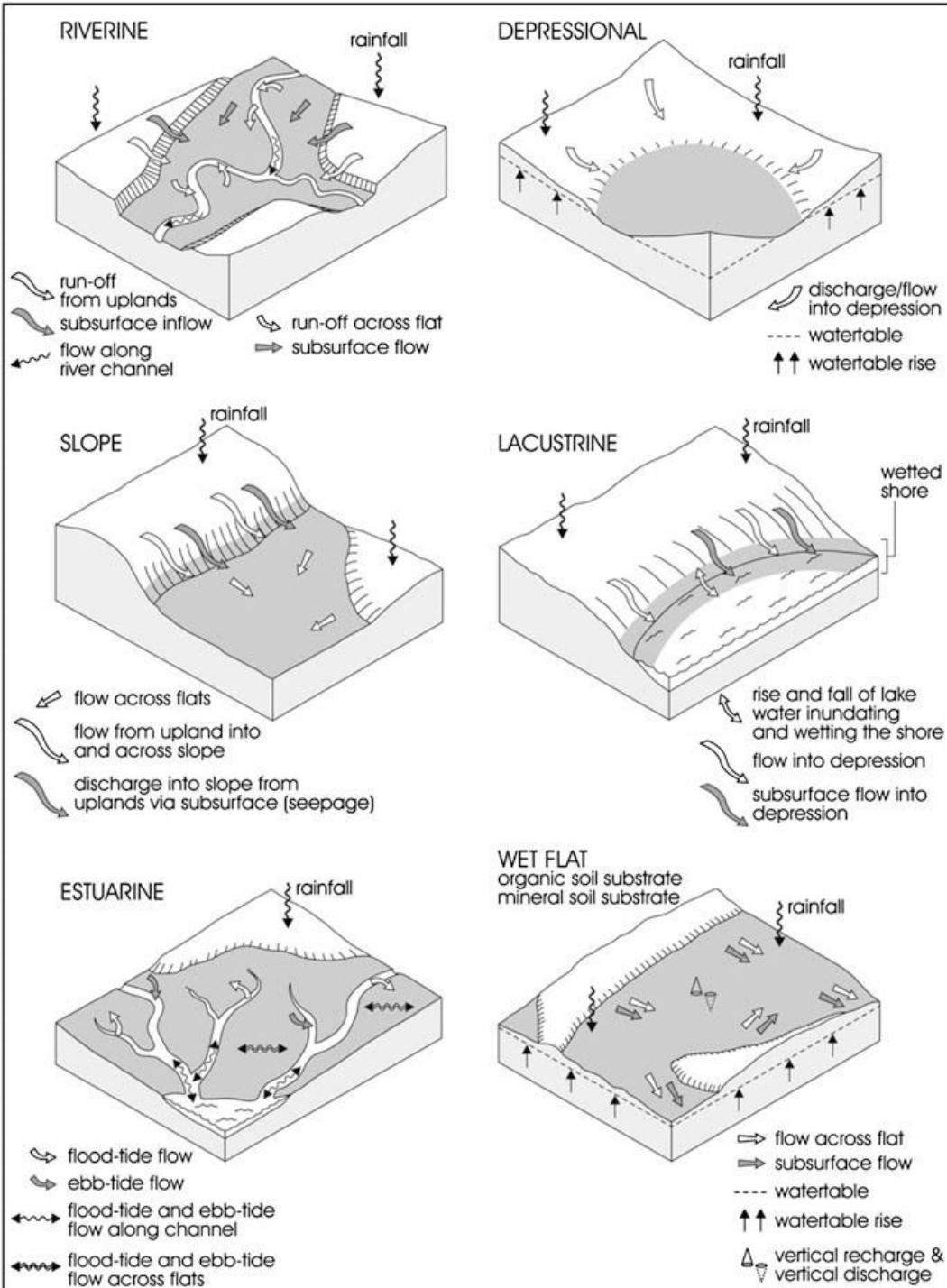
Permanent Wilting Point

Plants can no longer extract water



Hygroscopic water
吸著水

← "Plant" usable →

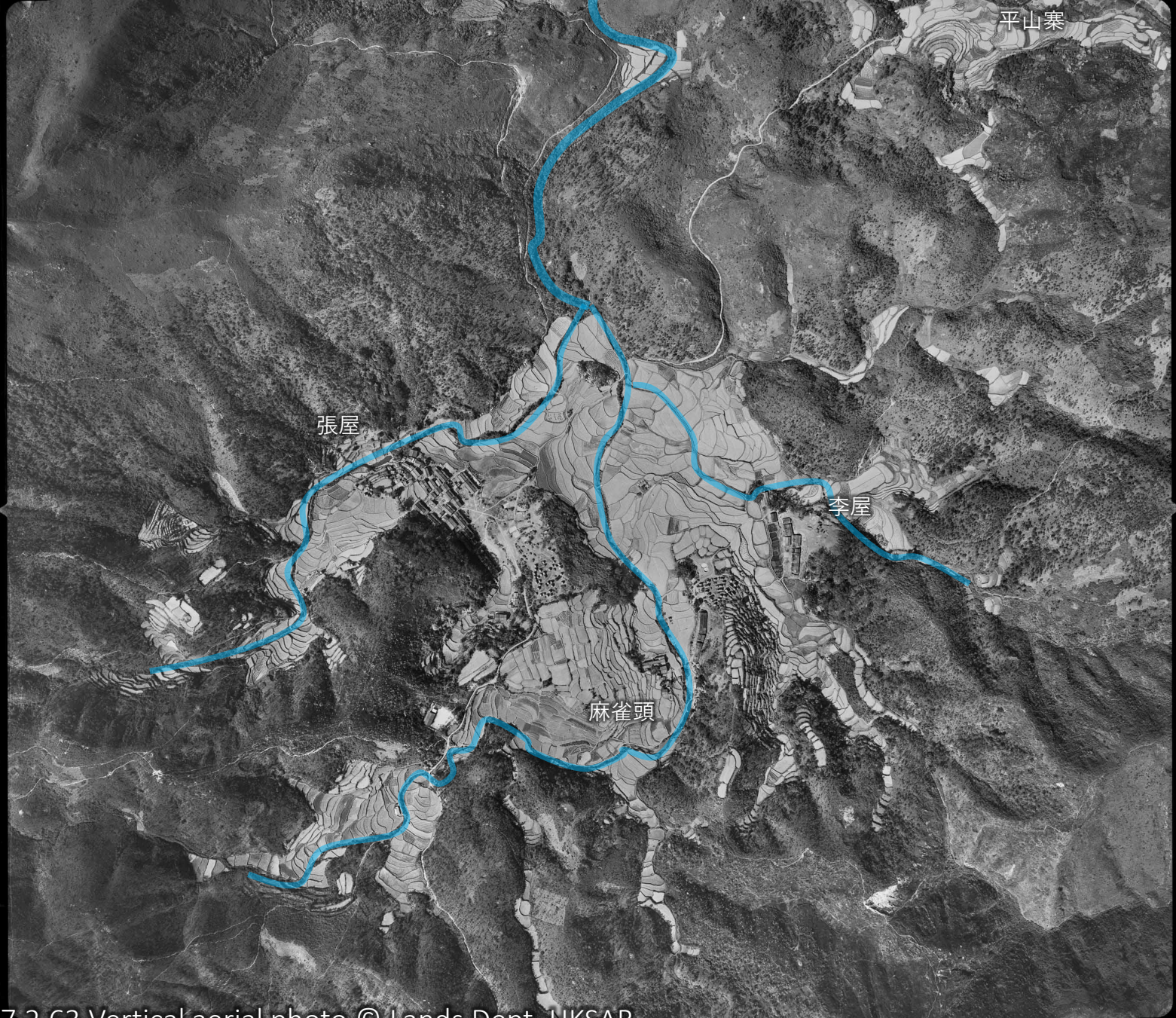


Six Natural Geomorphic Settings

1. Riverine
2. Depressional
3. Slope
4. Lacustrine fringe
5. Estuarine
6. Wet flat

Water table close to surface

Source: Semeniuk & Semeniuk (2016) Wetland Classification: Hydrogeomorphic System



平山寨

張屋

李屋

麻雀頭

平山寨

張屋

李屋

麻雀頭





Paddy Rice

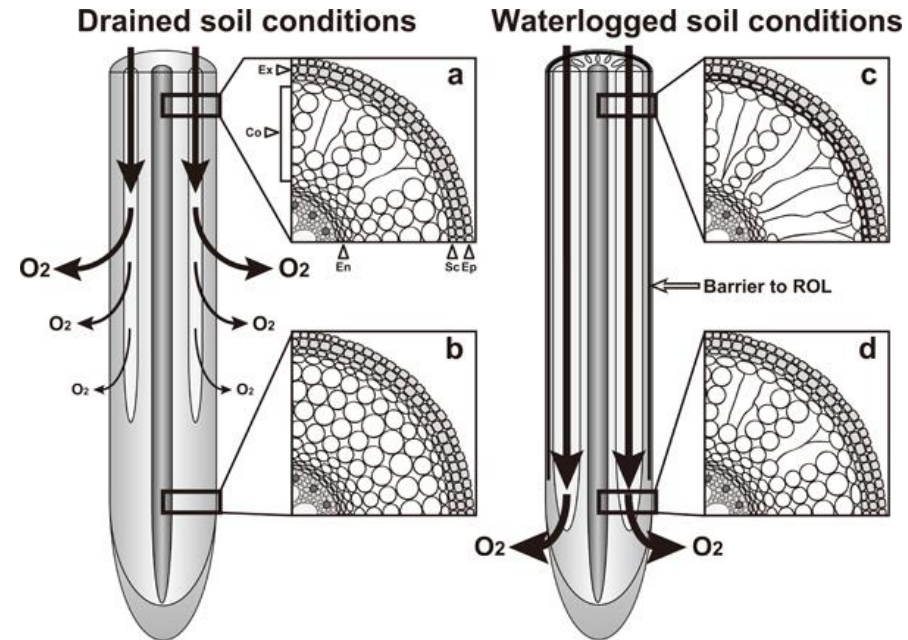
cultivated in flooded basins

Tolerant to waterlogging
(submerged roots) - hydrophytes

“Paddy” field: 5 – 10 cm of water
depth

To check weed

Die when fully submerged for a
few days



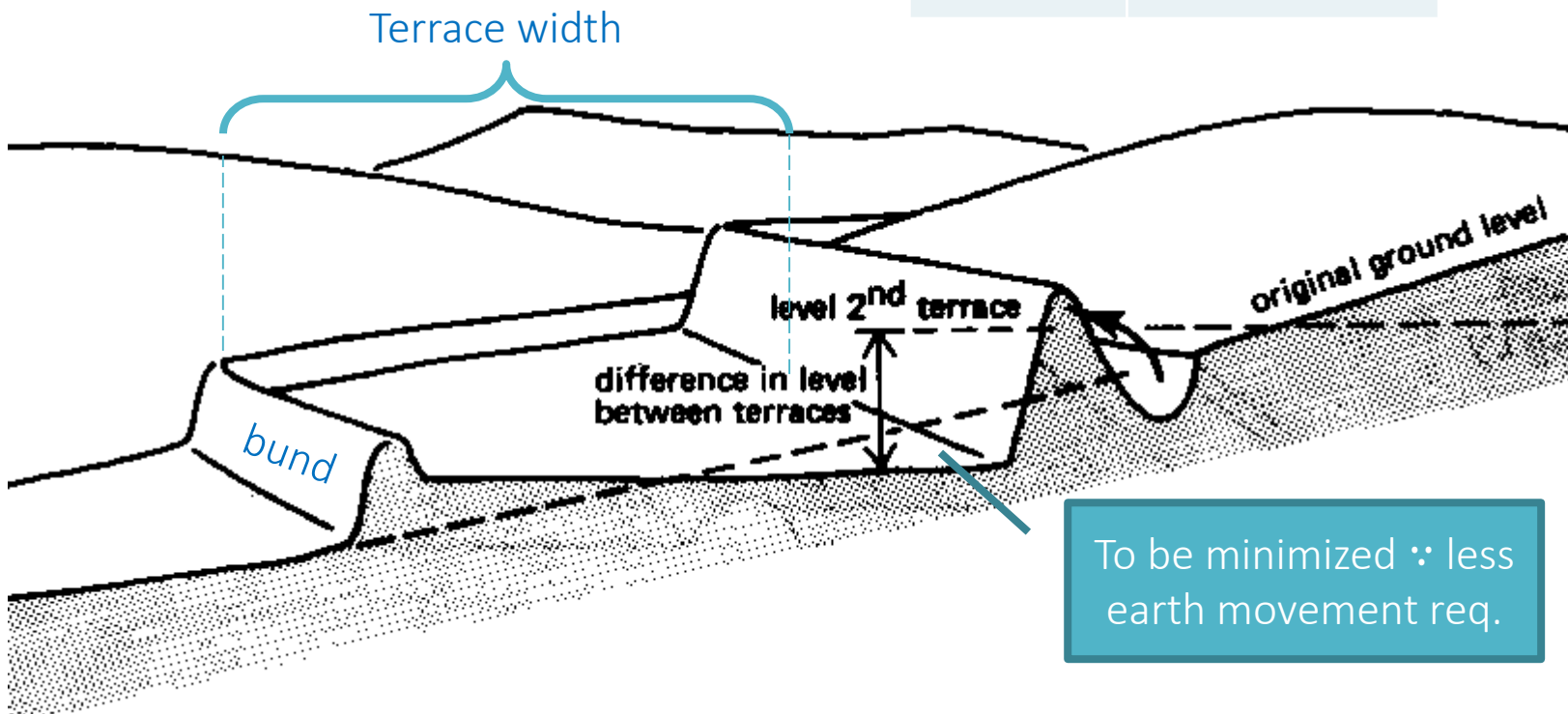
Aerenchyma (通氣組織) in rice roots
allows internal aeration



Terrace & Basin Irrigation

Other types:
Furrow,
Sprinkler,
Drip

Slope [%]	Avg. width [m]
0.2	45
0.5	28
1	20
4	5



Constructed Wetland
@ HK Wetland Park



Image source:
Wikimedia.org





Pool & riffle sequence
灘潭系列

5.11.80 Vertical aerial photo © Lands Dept. HKSAR



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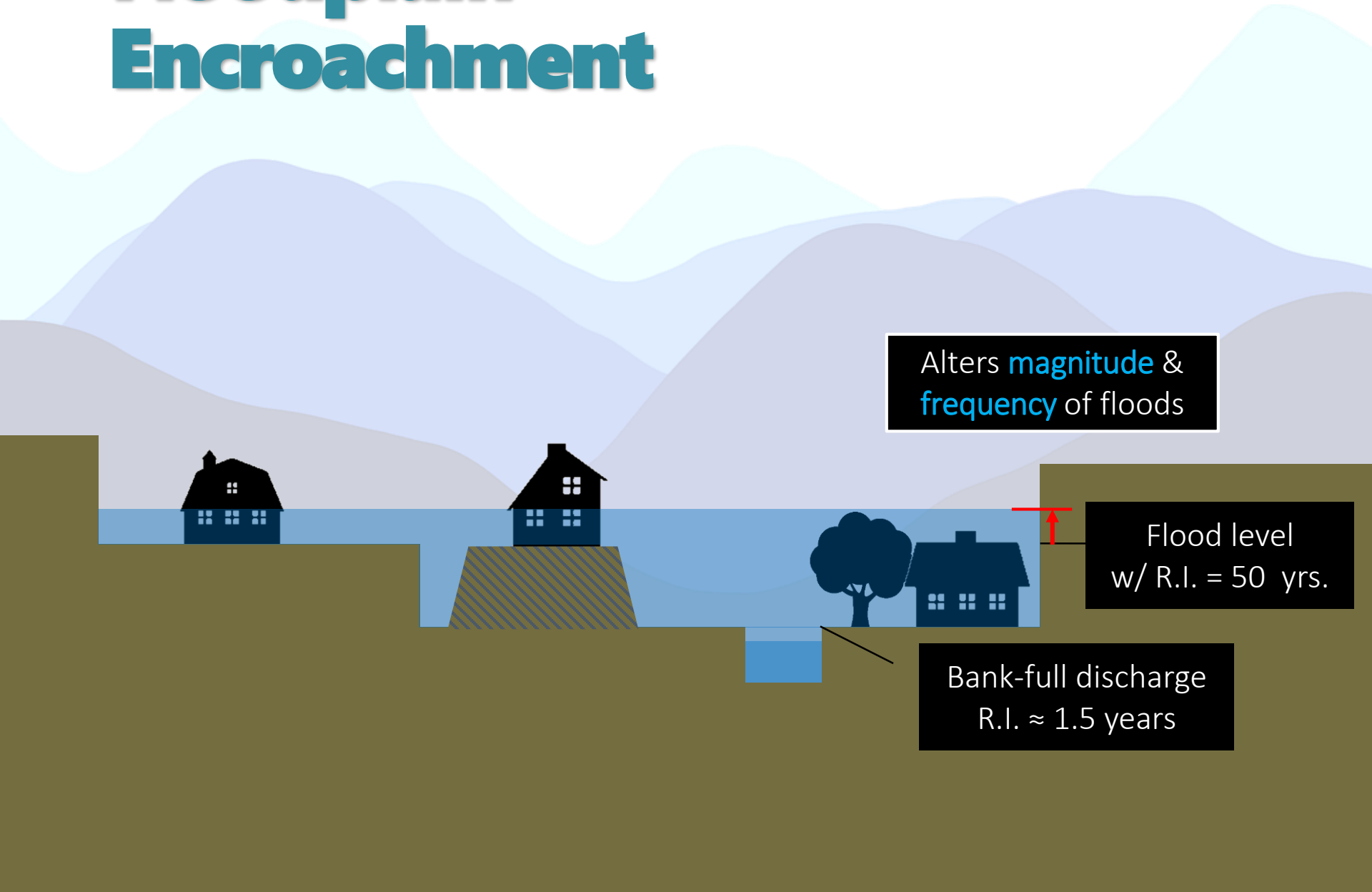


Floodplain Encroachment

Alters **magnitude** &
frequency of floods


Flood level
w/ R.I. = 50 yrs.

Bank-full discharge
R.I. \approx 1.5 years



Flood Control Channel

Types of Drainage	Design R.I. (Yrs)
Urban, trunk	200
Urban, branch & main rural	50
Village	10
Intensive agricultural land	2 – 5



A cross-section diagram of a flood control channel. The channel is a trapezoidal shape, filled with blue water, cut into a brown earth bank. On the left bank, there are two black silhouettes of houses. In the middle of the left bank, there is a black silhouette of a house on a small, hatched rectangular embankment. On the right bank, there is a black silhouette of a house next to a black silhouette of a tree. A thin black line points from the text box to the right bank.

Bank-full discharge
R.I. = 50 years









梧桐河

梧桐河位置及其流域

景觀

生態

文物古蹟

航拍影片

推介路線



梧桐河位置及其流域

河道管理

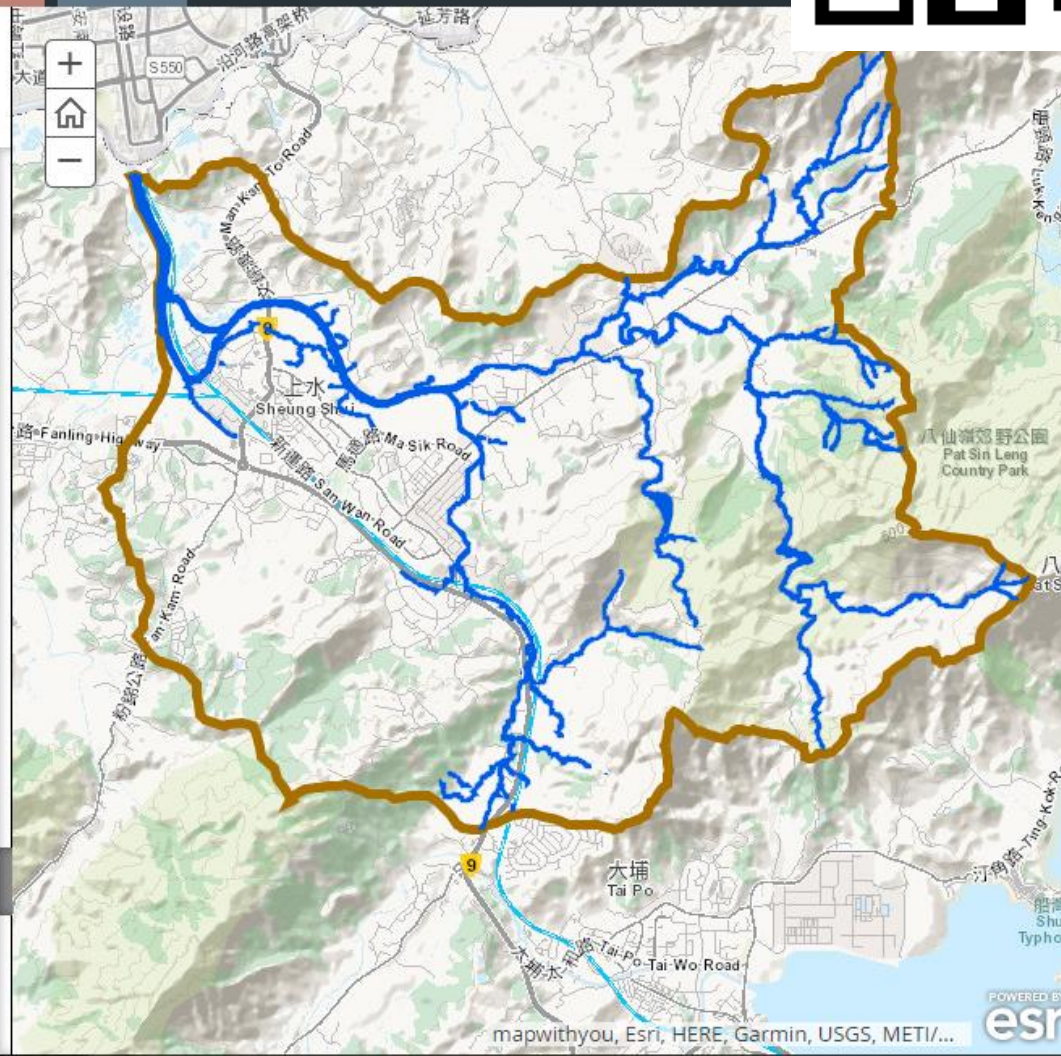
梧桐河舊稱鳳溪，由軍地河、丹山河、石上河、麻笏河等各支流匯聚而成，河道蜿蜒曲折，雨季期間經常氾濫。90年代為了發展上水、粉嶺一帶，梧桐河進行大規模防洪工程，昔日天然面貌已不復存在。

河水灌田

河流流域一帶土地肥沃，吸引大量農民聚居。部分農民使用「南番順」耕種方法，以水坑包圍中間的農田，能夠種出優質農作物的同時，濕地環境亦吸引不同動物棲息。河道工程竣工後，水量不復以往充沛，不少「南番順」農田改作旱地種植。

水務設施

流水響及鶴藪為軍地河及丹山河的源頭。流水響水塘及鶴藪水塘分別於1968年建成，收集附近的山水，用作灌溉附近農田。



Thank you.