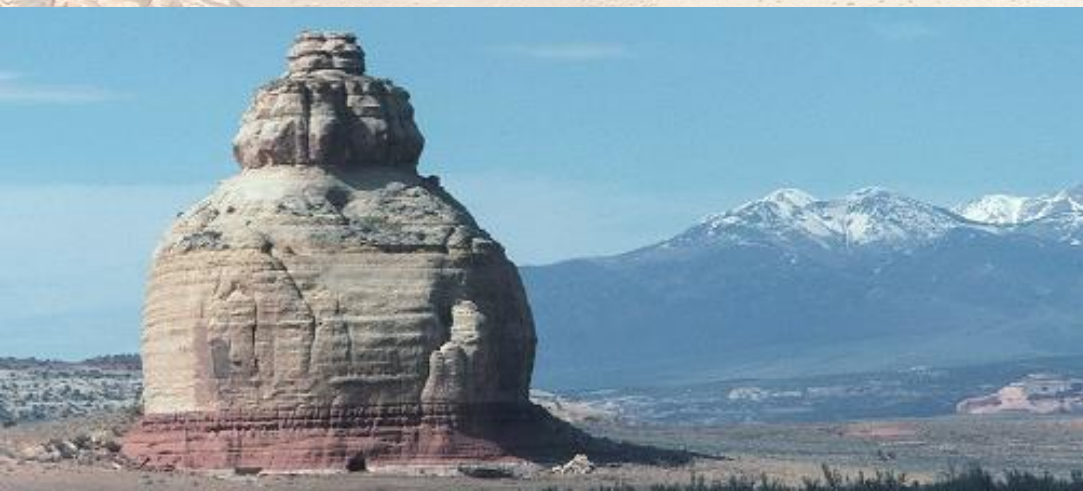
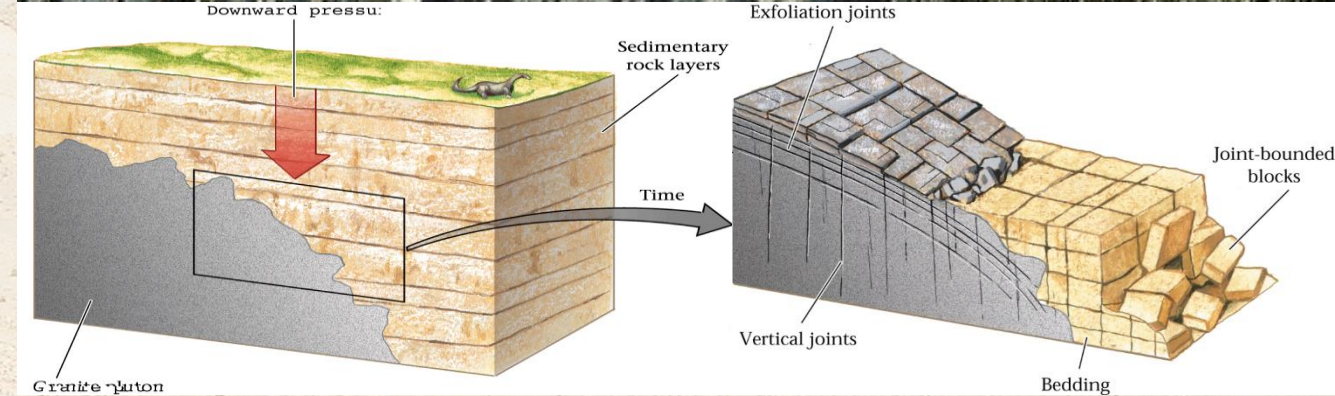
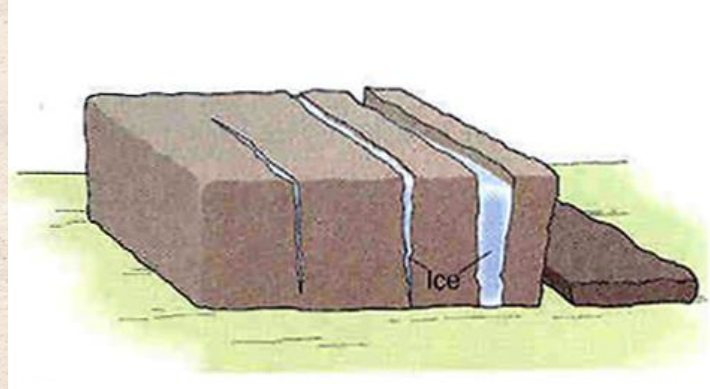
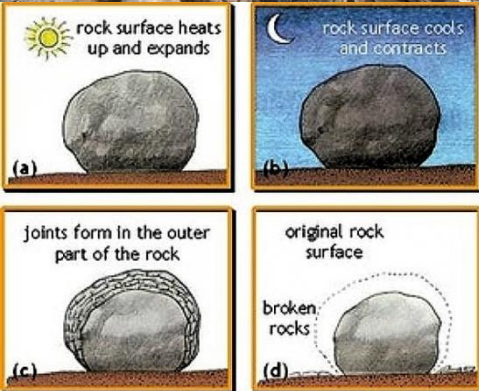


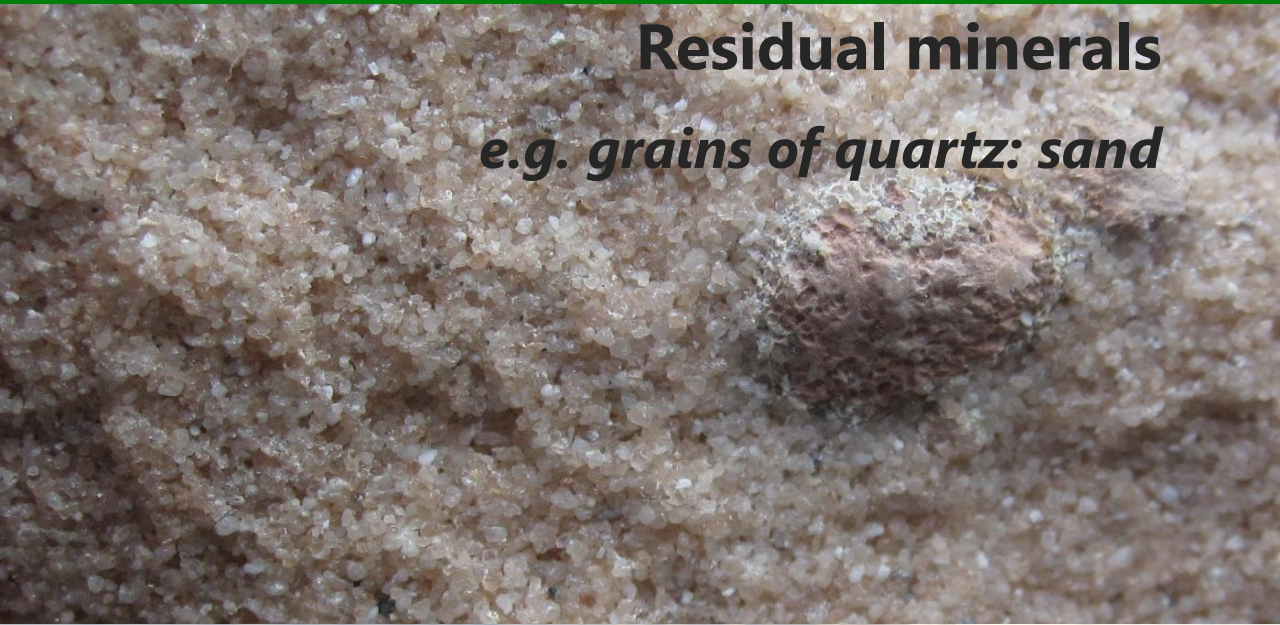


Landscape Evolution

Coastal Landscapes







Residual minerals
e.g. grains of quartz: sand

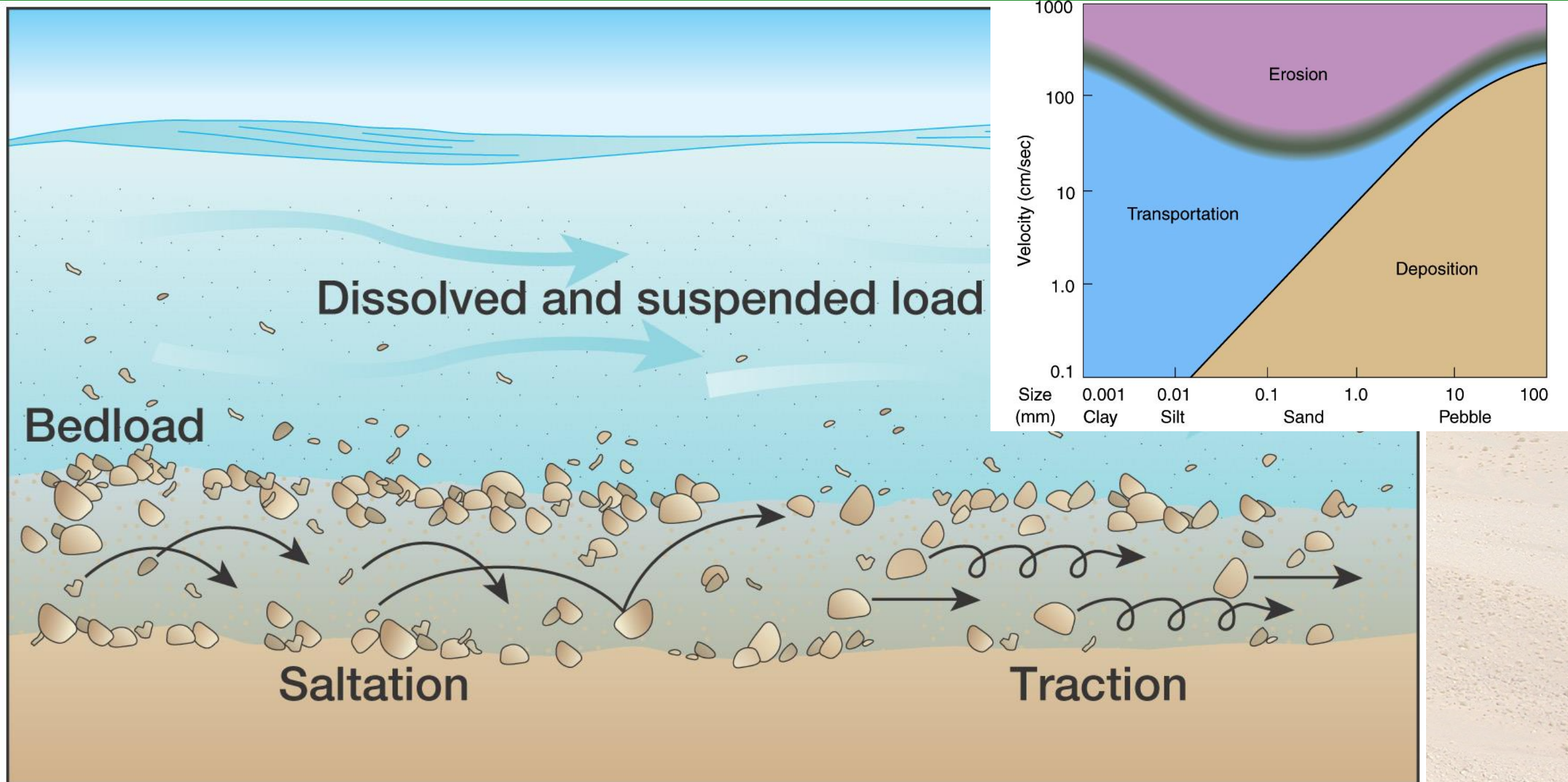


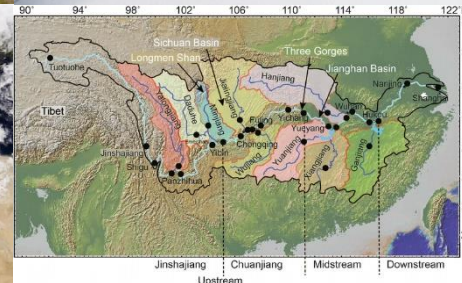
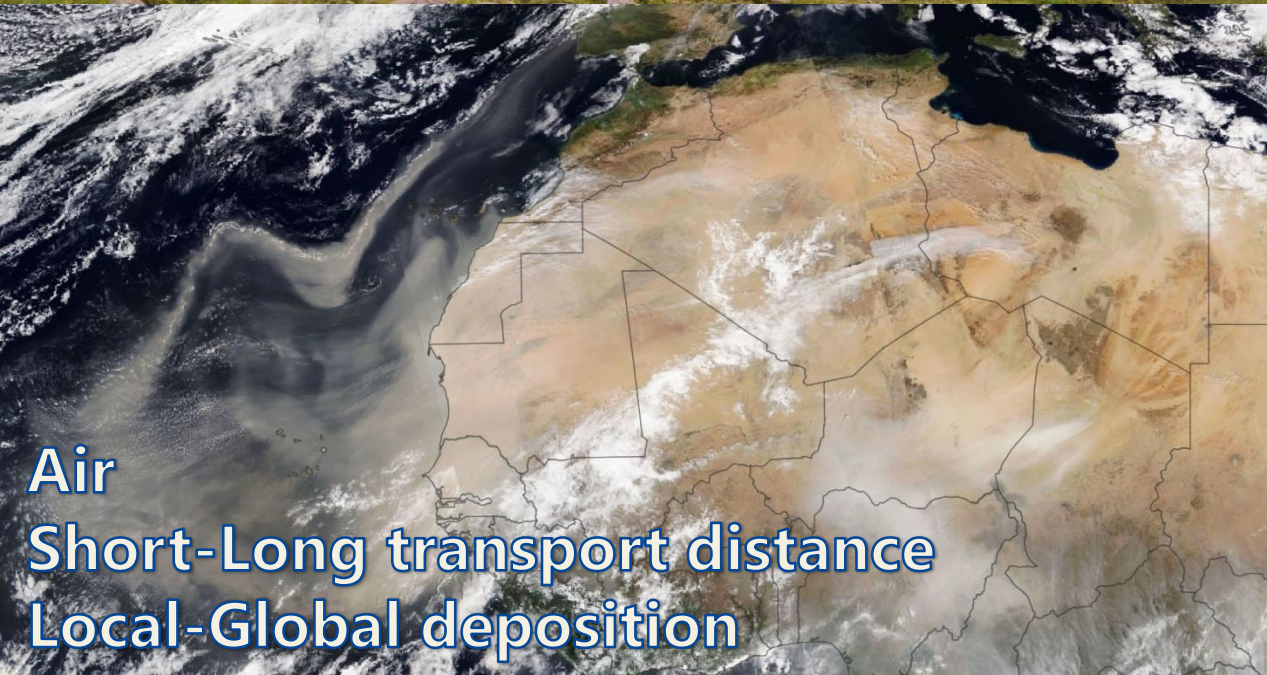
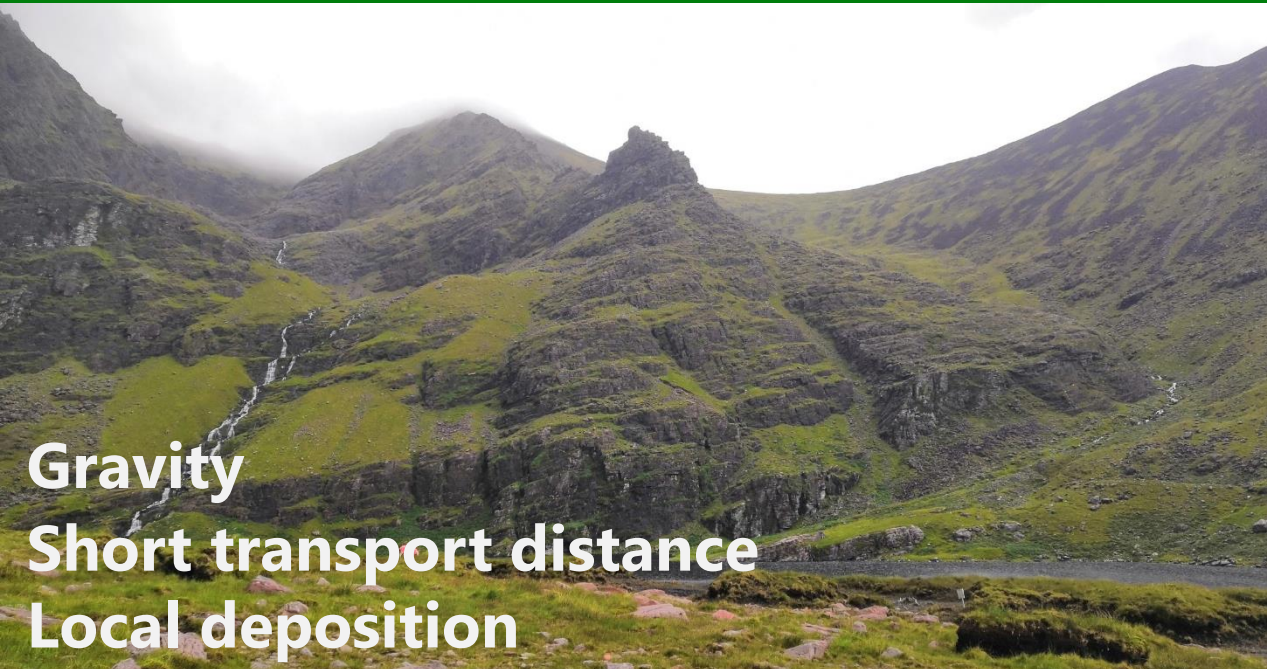
New minerals
e.g. clays

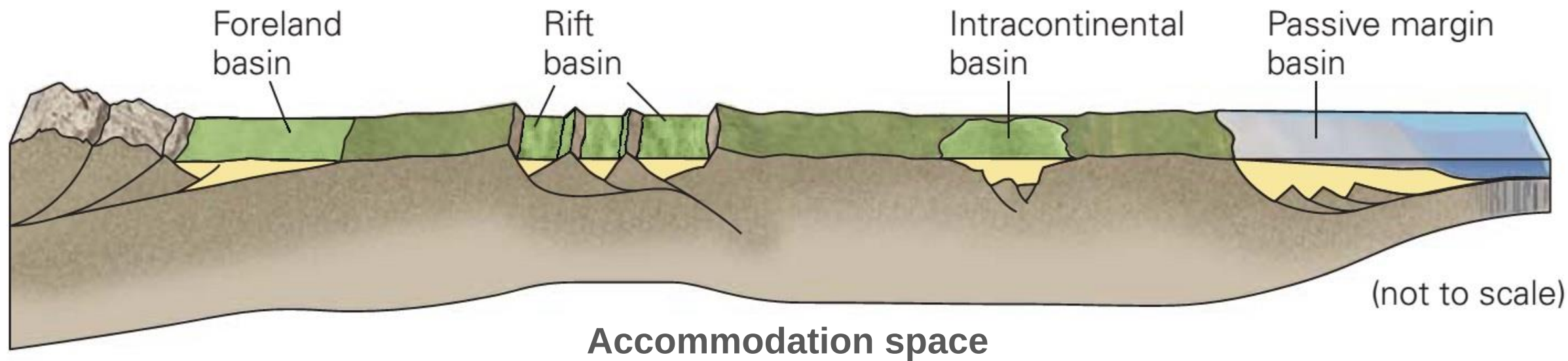


Solutes
e.g. sea salt







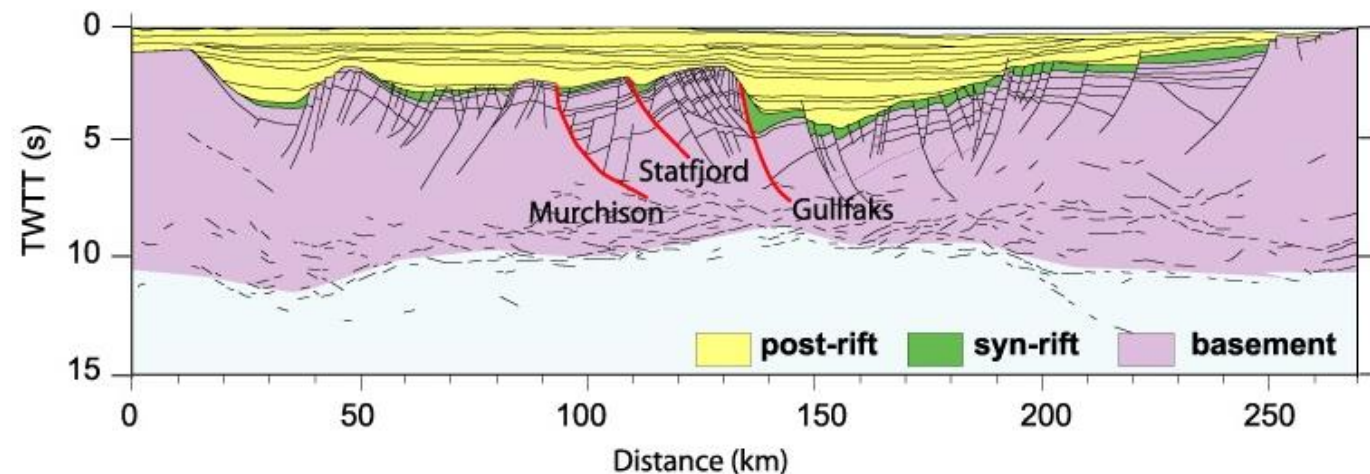
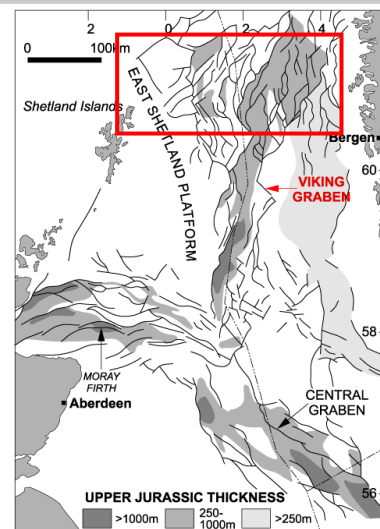


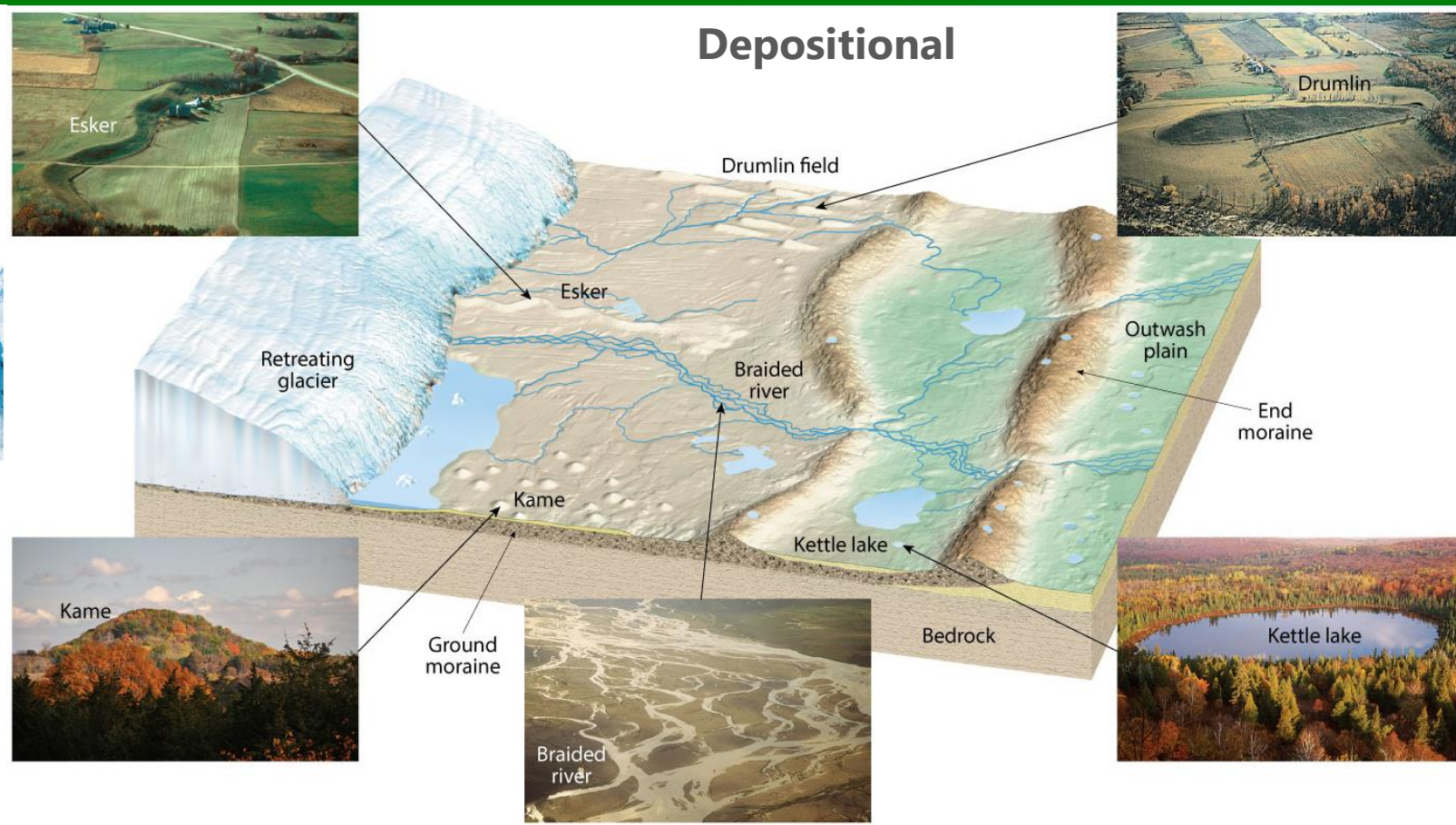
Weight of the mountain belt pushes down the crust's surface.

Downward slip on faults produces narrow troughs.

The basin forms in the interior of a continent, perhaps over an old rift.

Subsidence occurs over thinned crust at the edge of an ocean basin.





Transport - processes

- Water

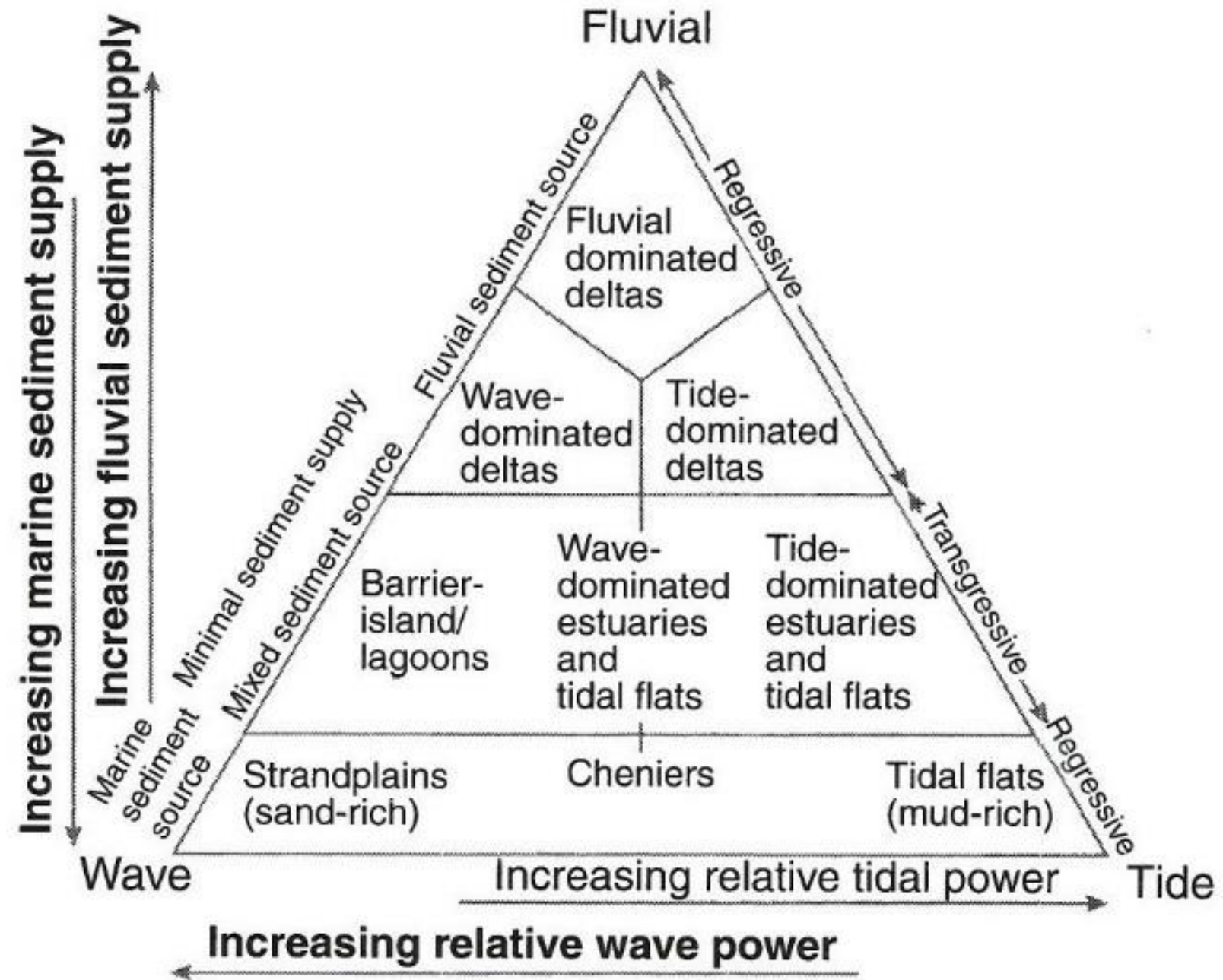


Weathering

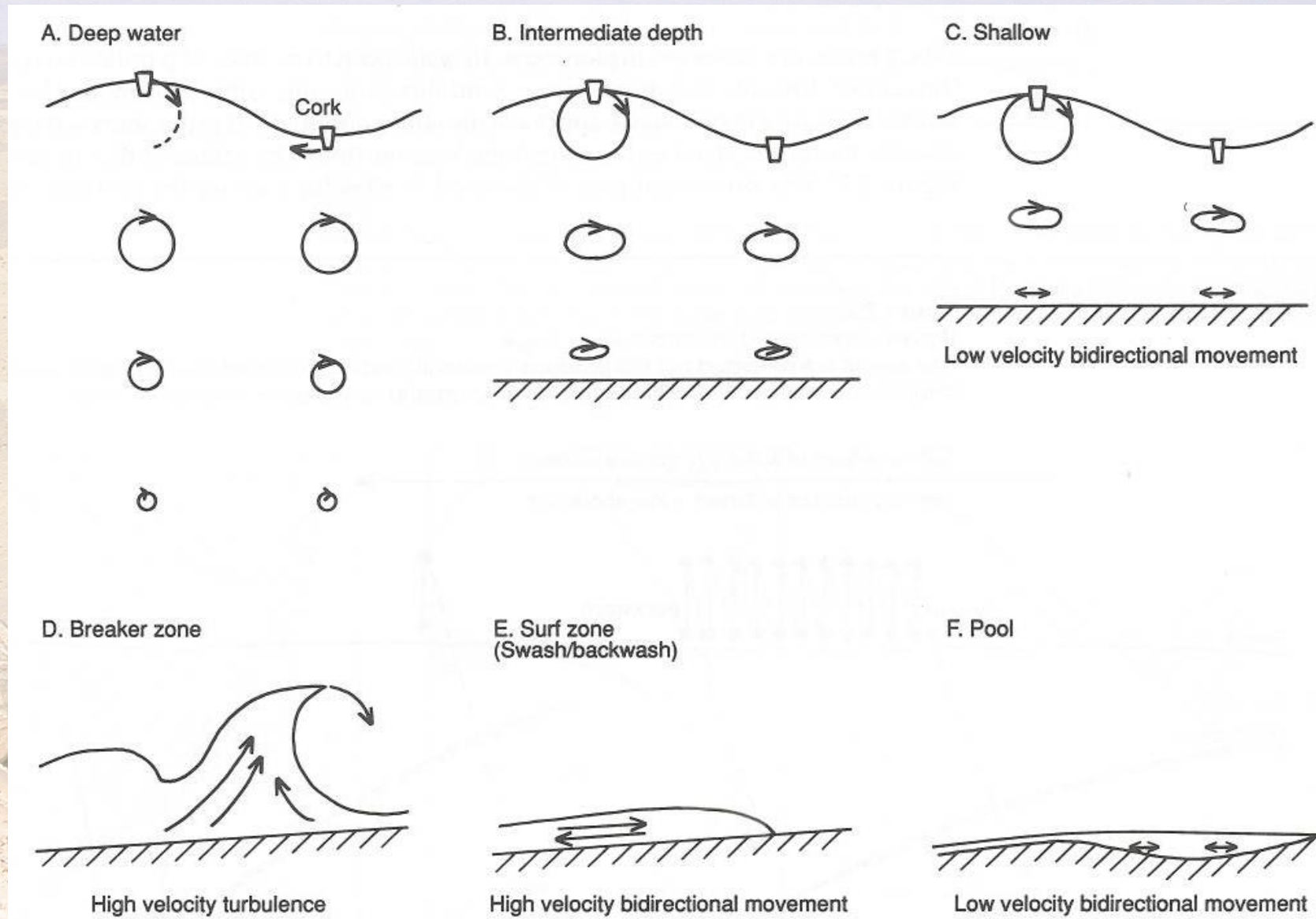
- Mechanical weathering
- Chemical weathering
- Biological weathering



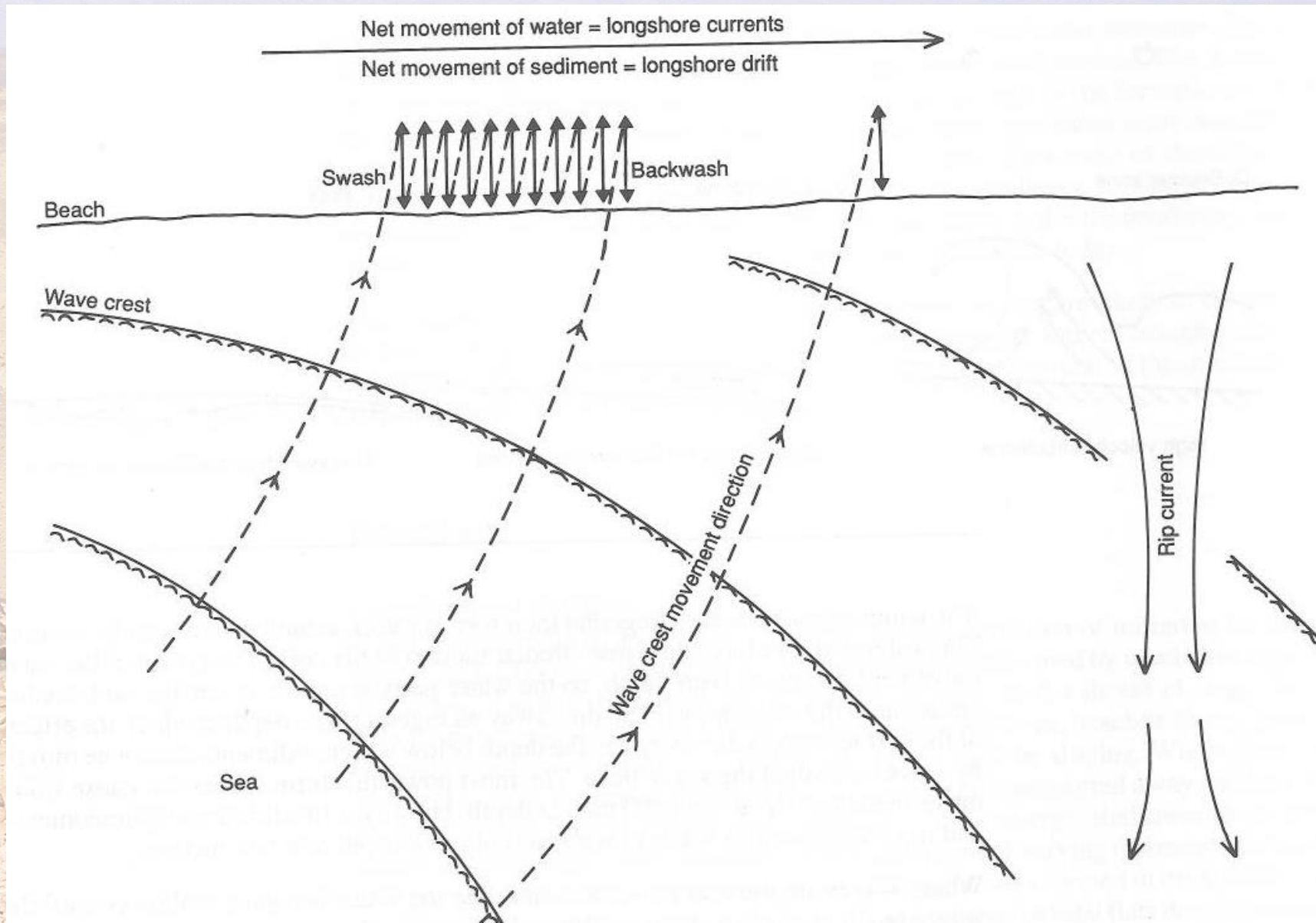
How do coastal landscapes form?



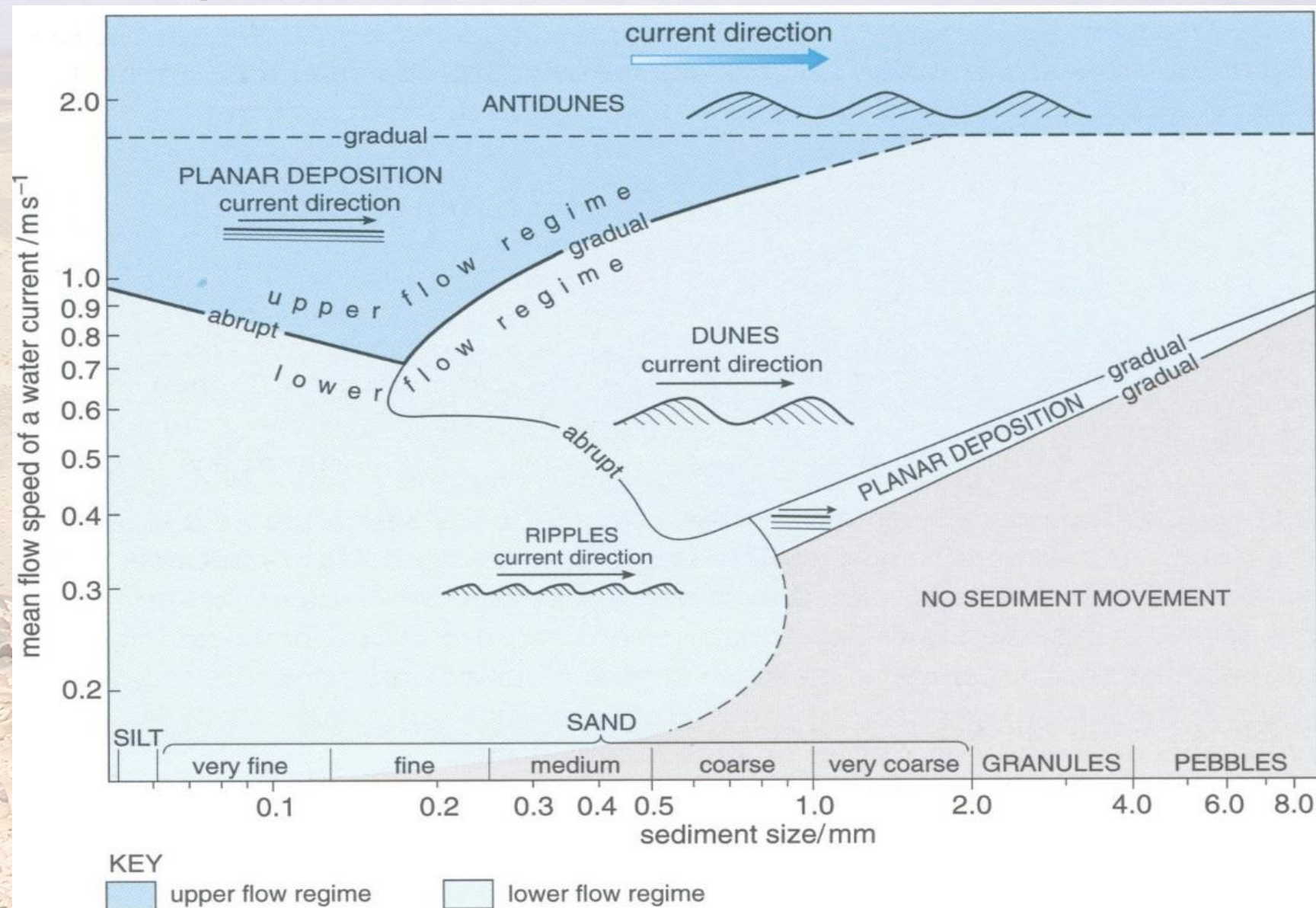
How do coastal landscapes form?



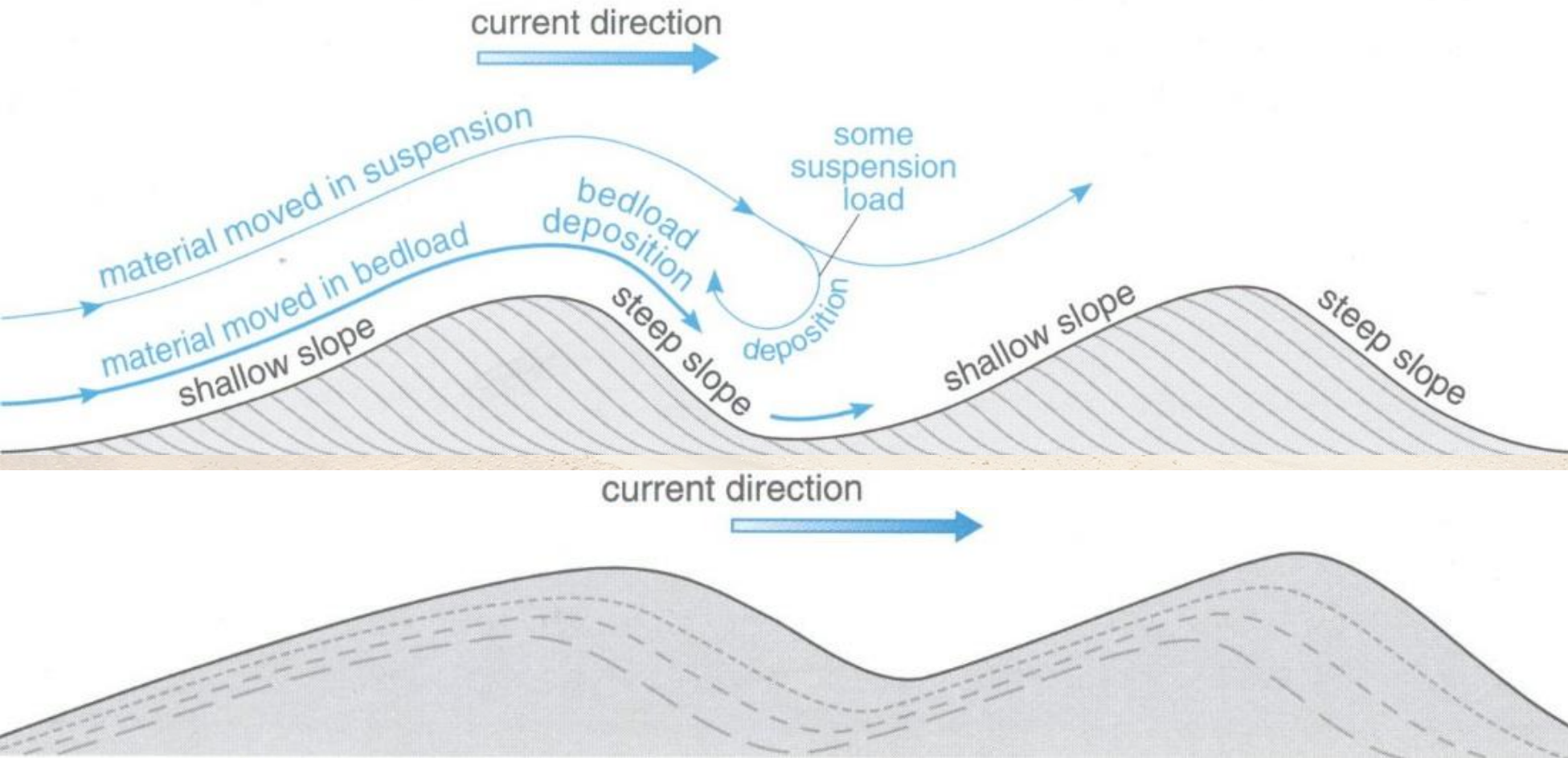
How do coastal landscapes form?



How do coastal landscapes form?



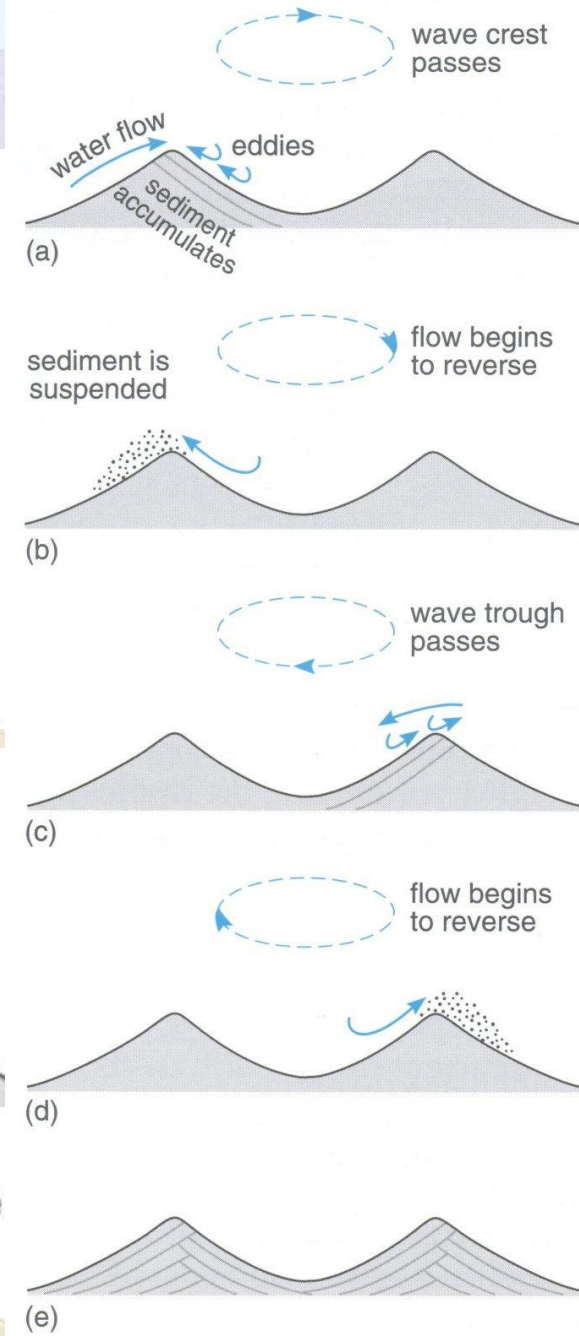
How do coastal landscapes form?



KEY



↑ successive position of ripples



How do coastal landscapes form?



Solway Coast - Galloway

How do coastal landscapes form?

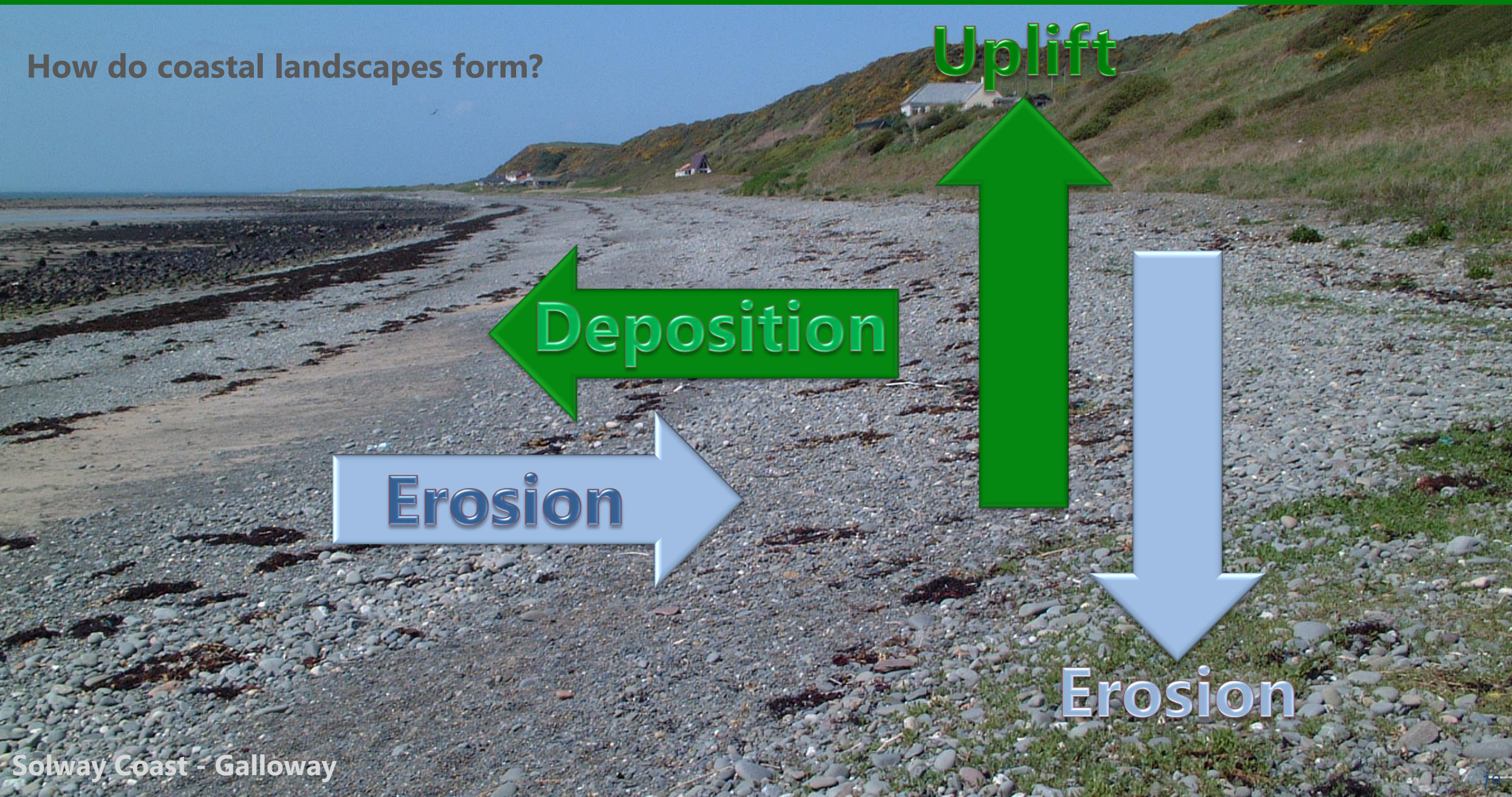
Uplift



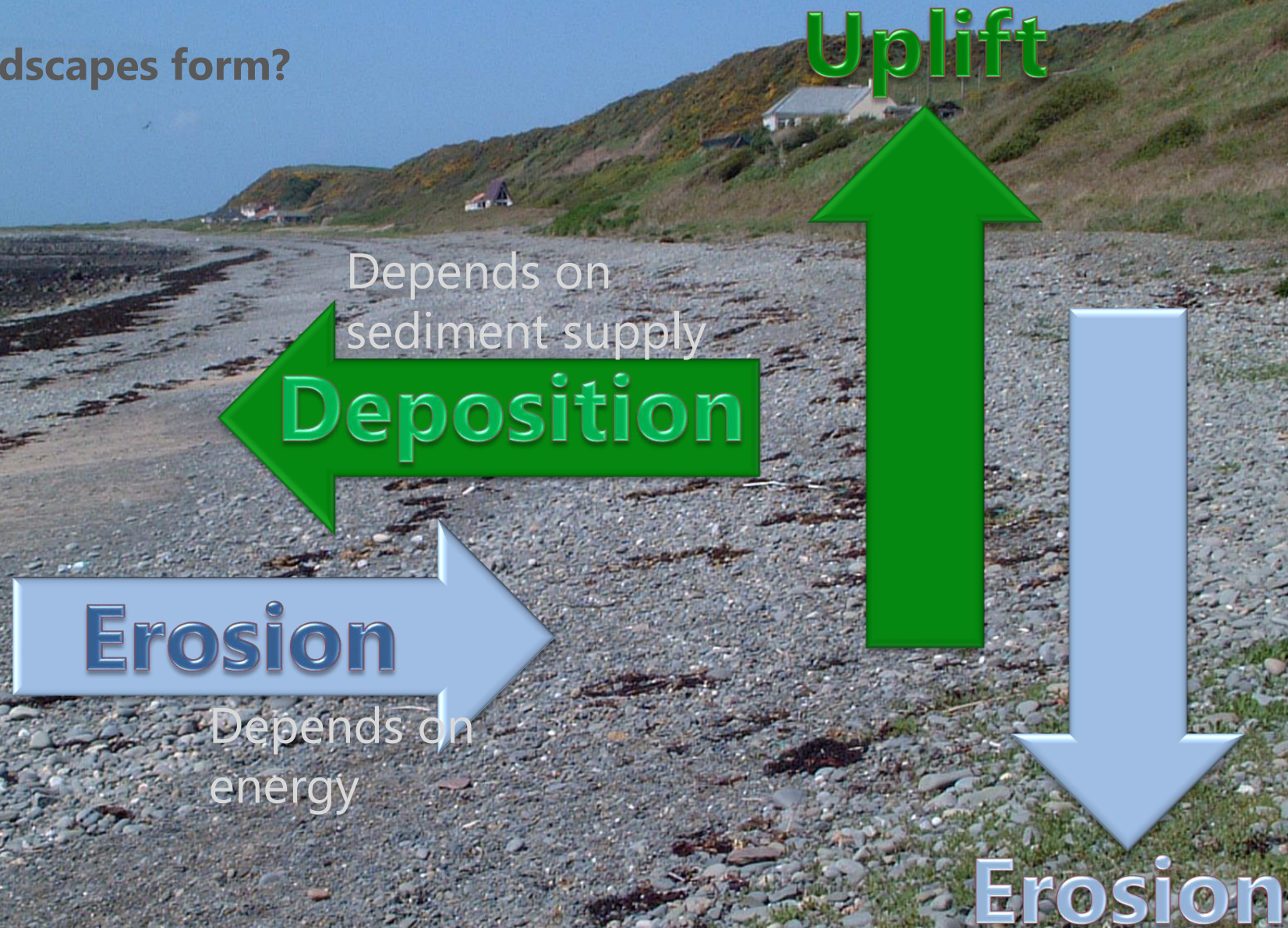
Erosion



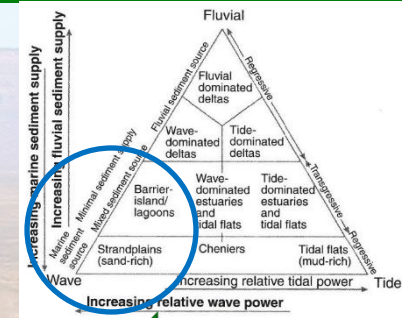
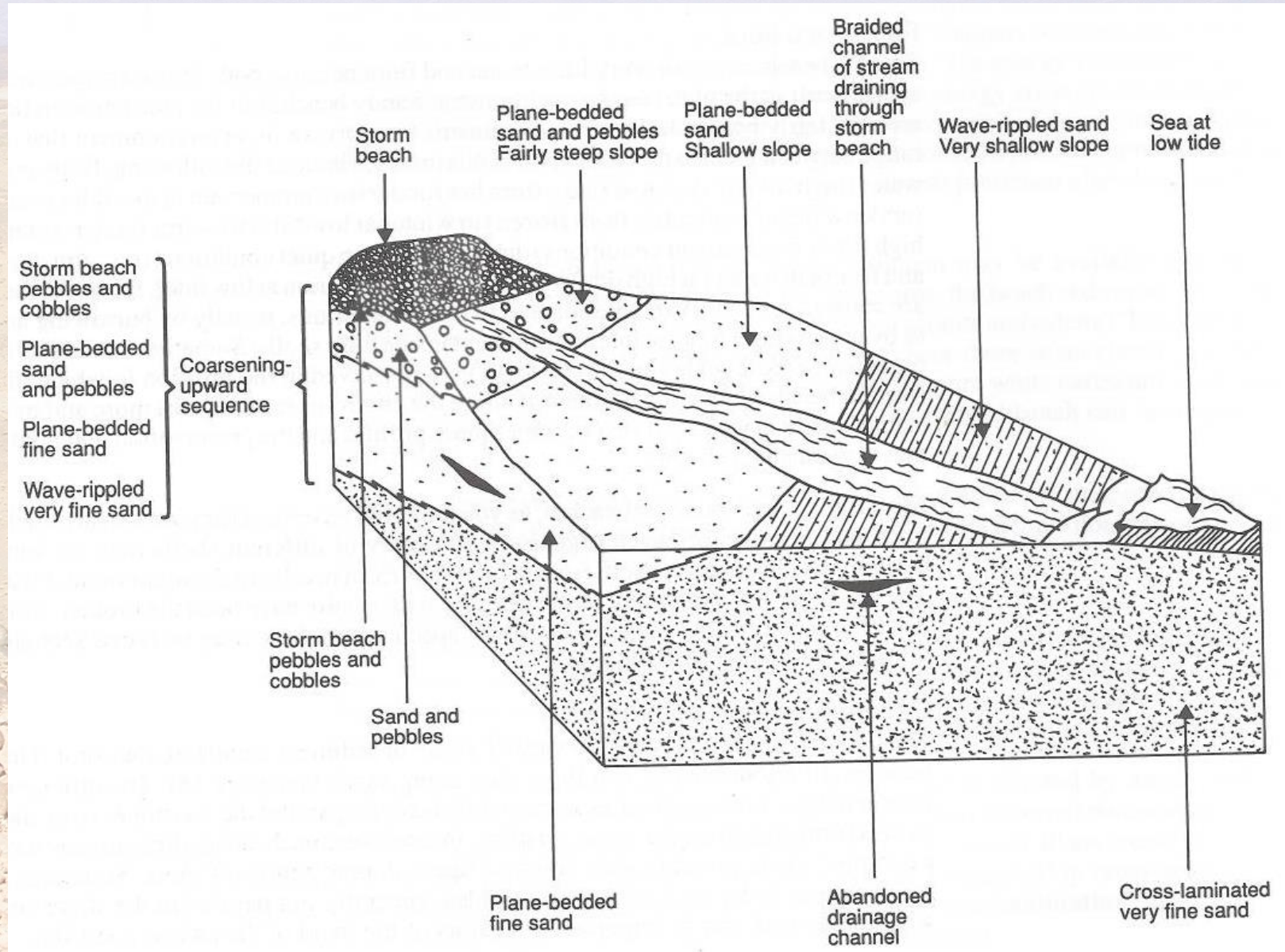
How do coastal landscapes form?



How do coastal landscapes form?

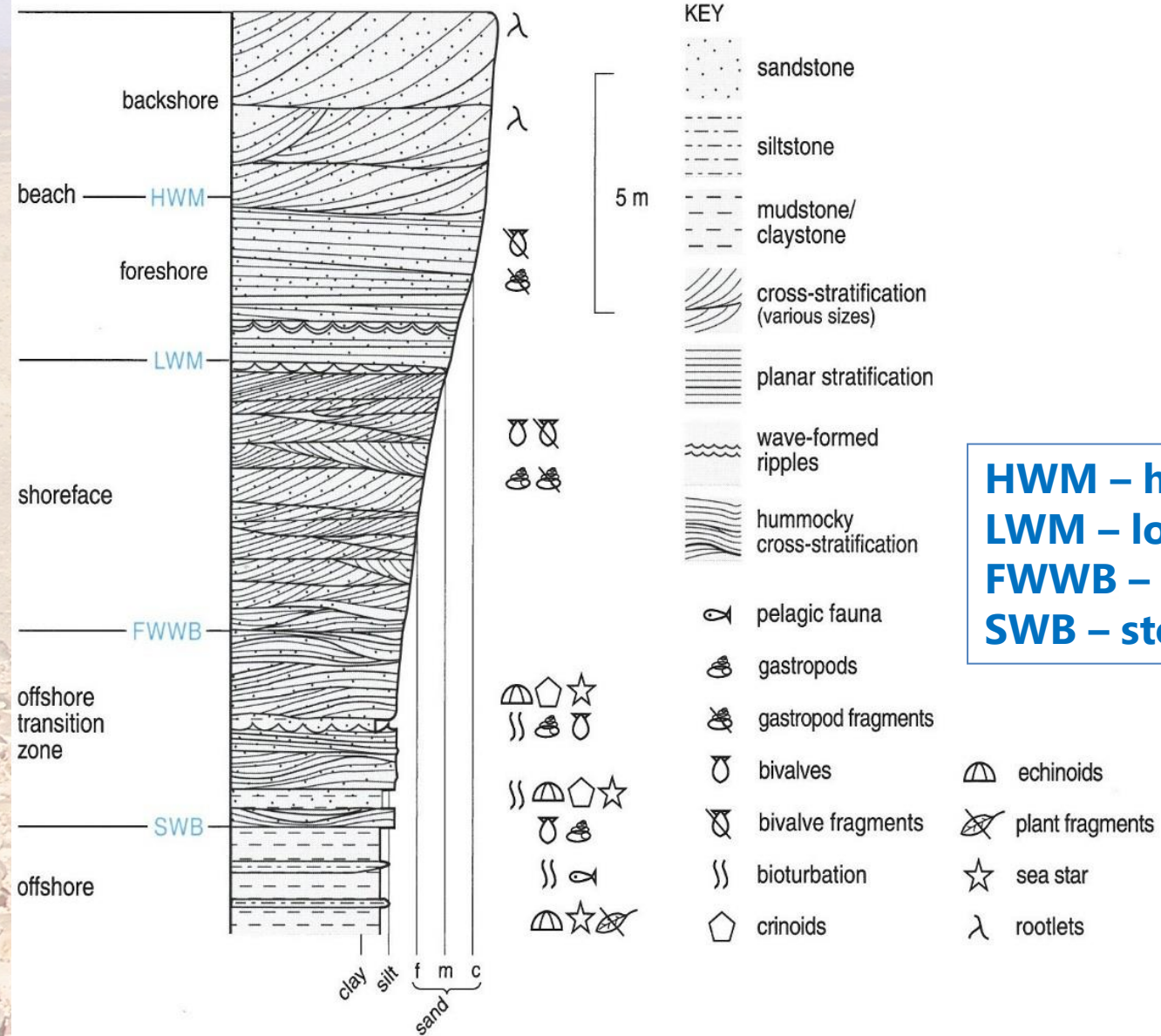


Prograding Beaches

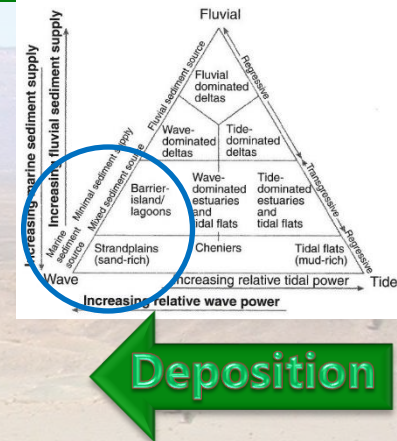


Deposition

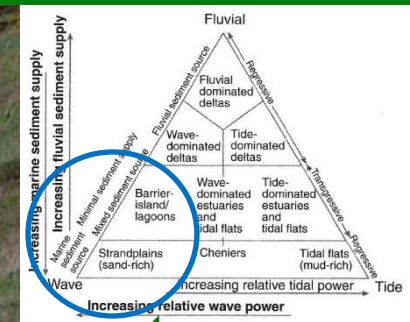
Prograding Beaches



HWM – high water mark
LWM – low water mark
FWWB – fair weather wave base
SWB – storm wave base

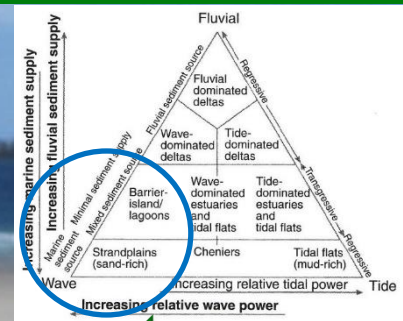


Prograding Beaches | Solway Coast, Galloway



Deposition

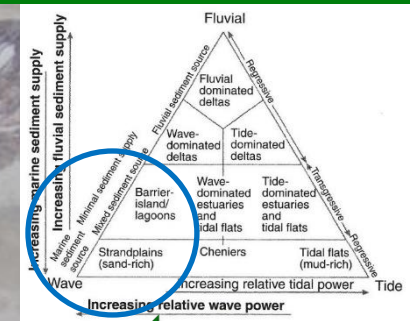
Strandplain beaches | *Uig, Isle of Lewis*



Deposition

Erosion

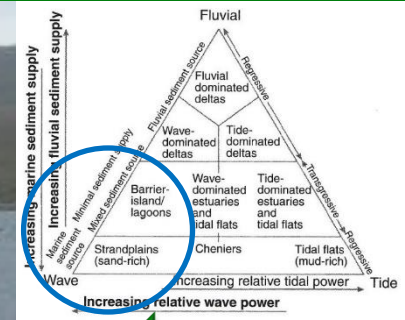
Strandplain beaches | *Uig, Isle of Lewis*



Deposition

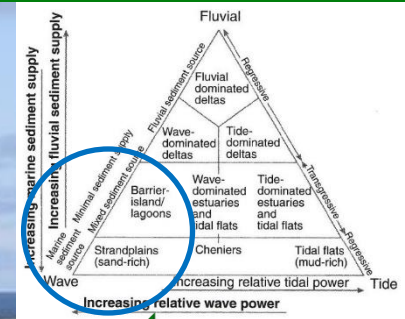
Erosion

Spit | Mainland, Shetland



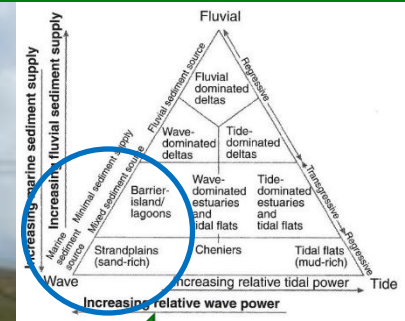
Deposition

Tombolo | *St. Ninian's Isle, Shetland*



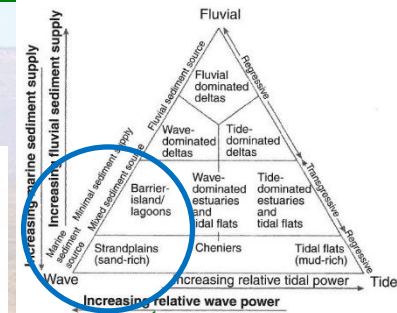
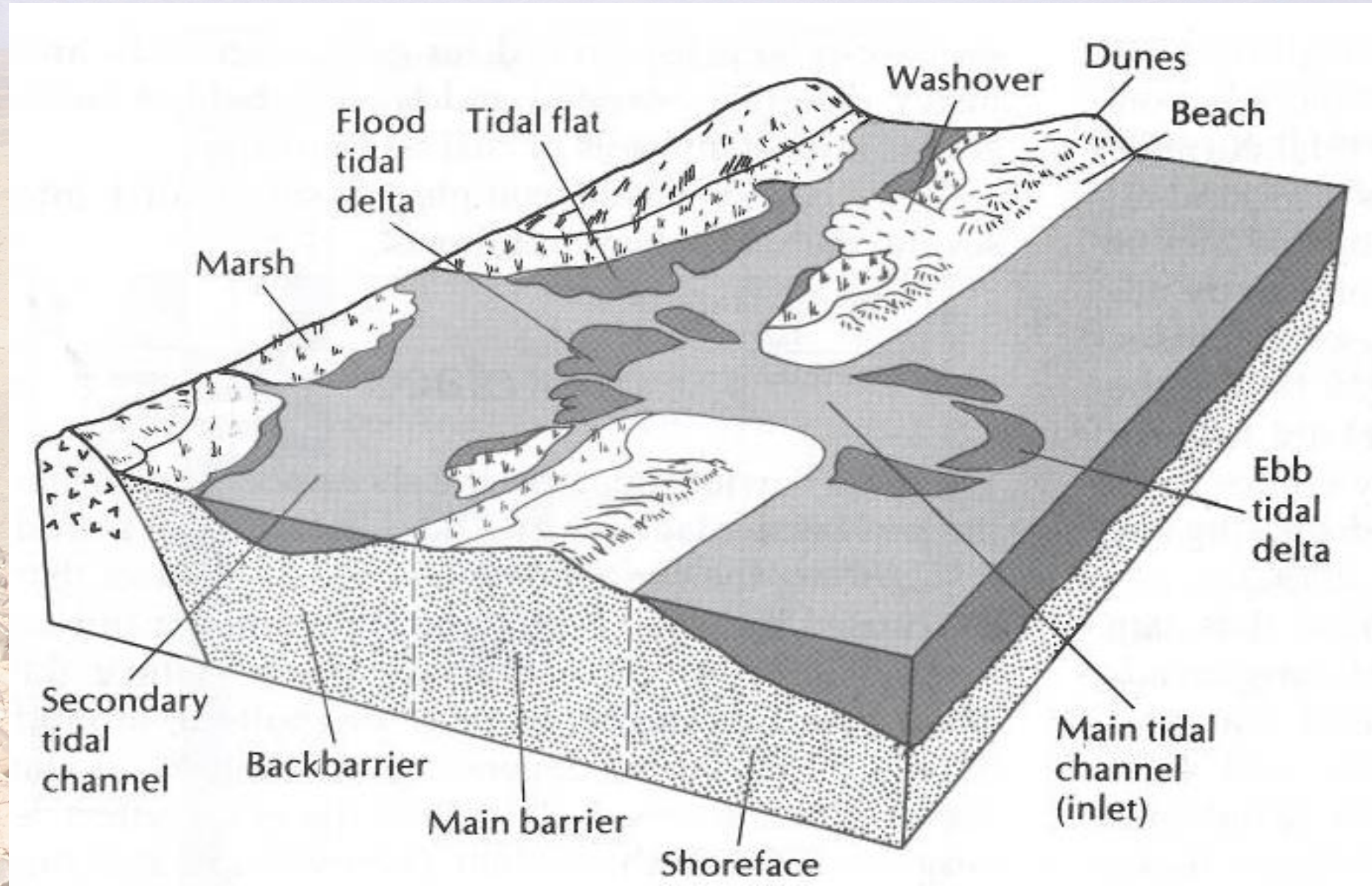
Deposition

Barrier beach | Yell, Shetland



Deposition

Barrier Islands



Deposition

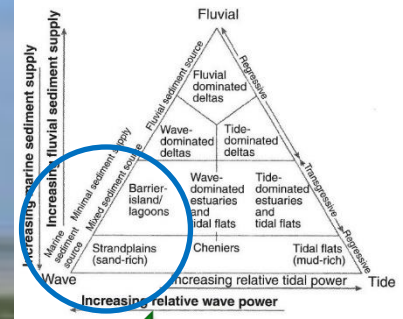
Barrier Islands | Benbecula



Sea

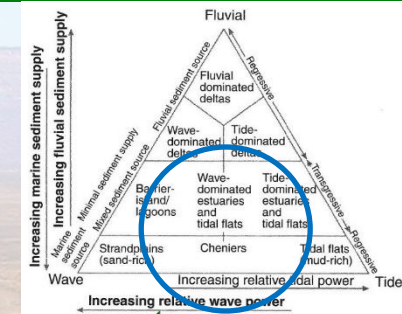
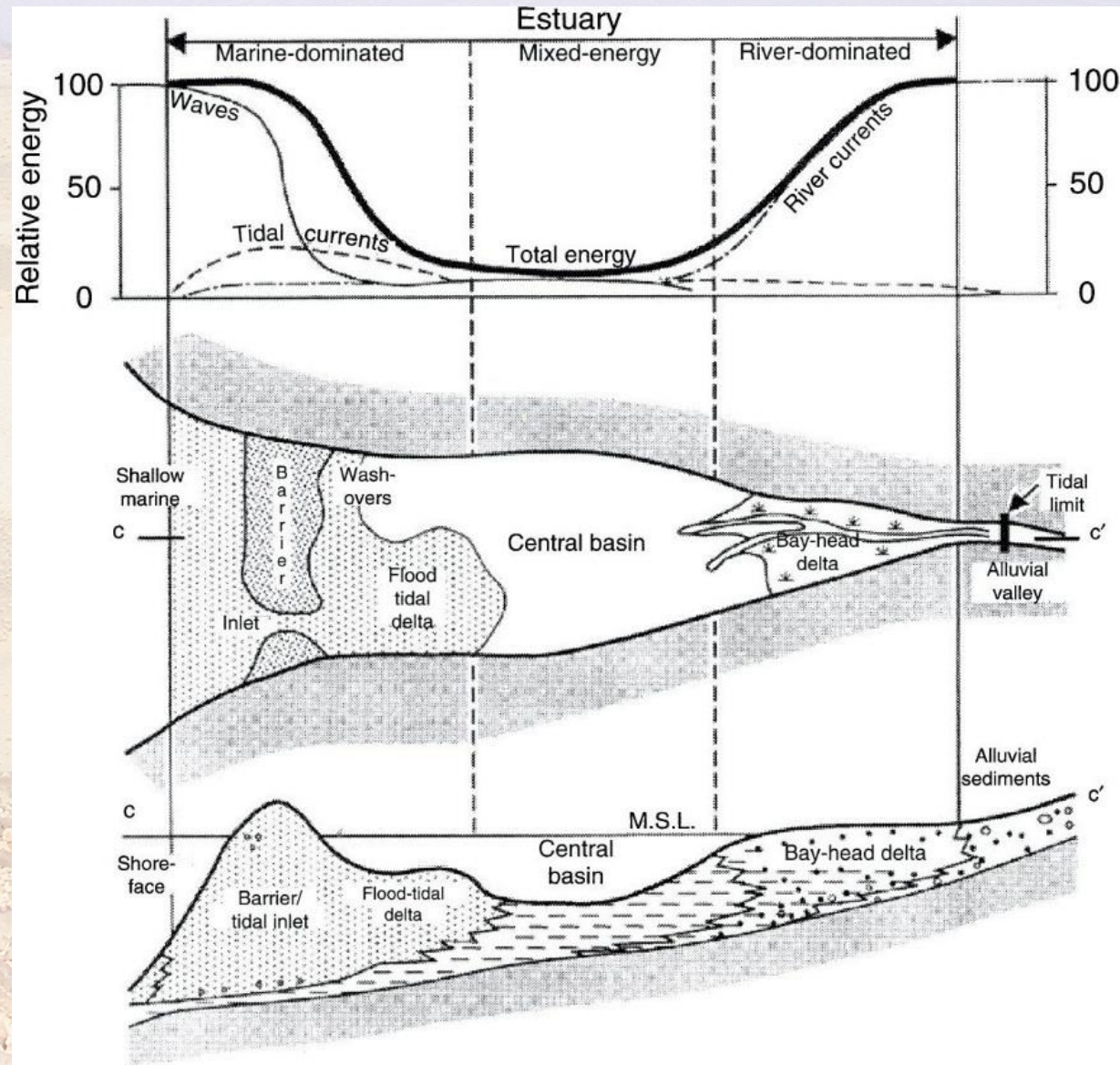
Linear
barrier
island

Sandy
lagoon
sediments



Deposition

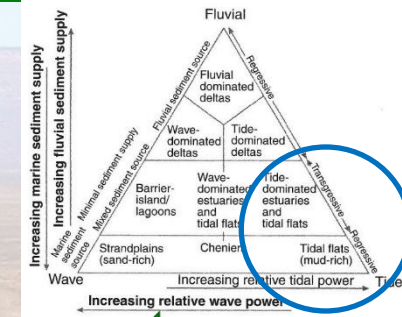
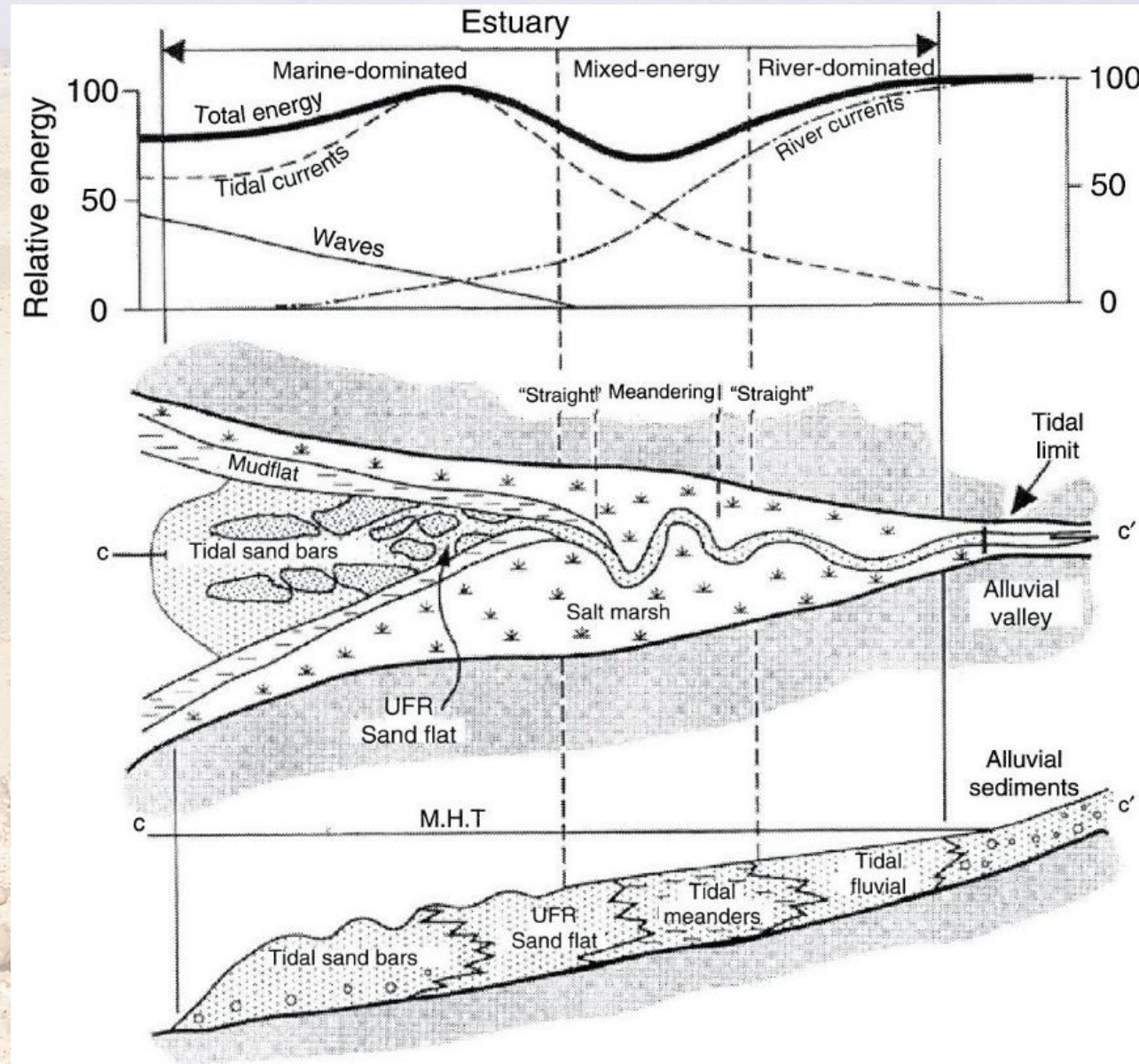
Estuaries | Wave-tide dominated



Deposition

Erosion

Estuaries | Tide dominated



Deposition

Erosion



Estuaries | *Rockcliffe, Galloway*

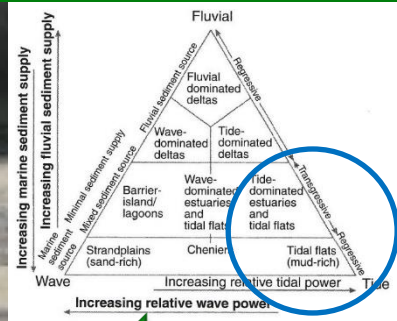
Intertidal muds

Saltmarsh

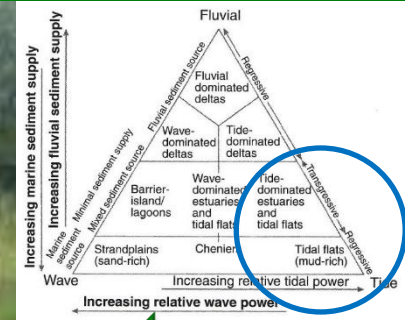
Fluvial channel

Intertidal muds

Saltmarsh



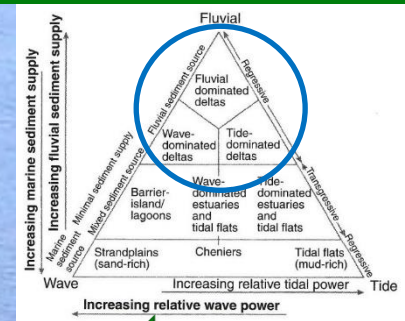
Estuaries | Cree, Galloway



Deposition

Erosion

Deltas



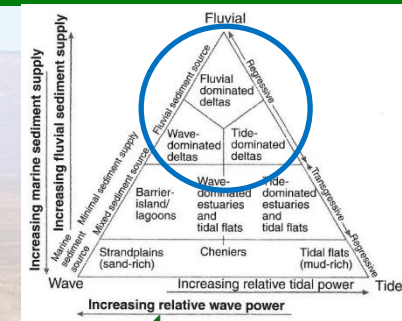
Deposition

Deltas

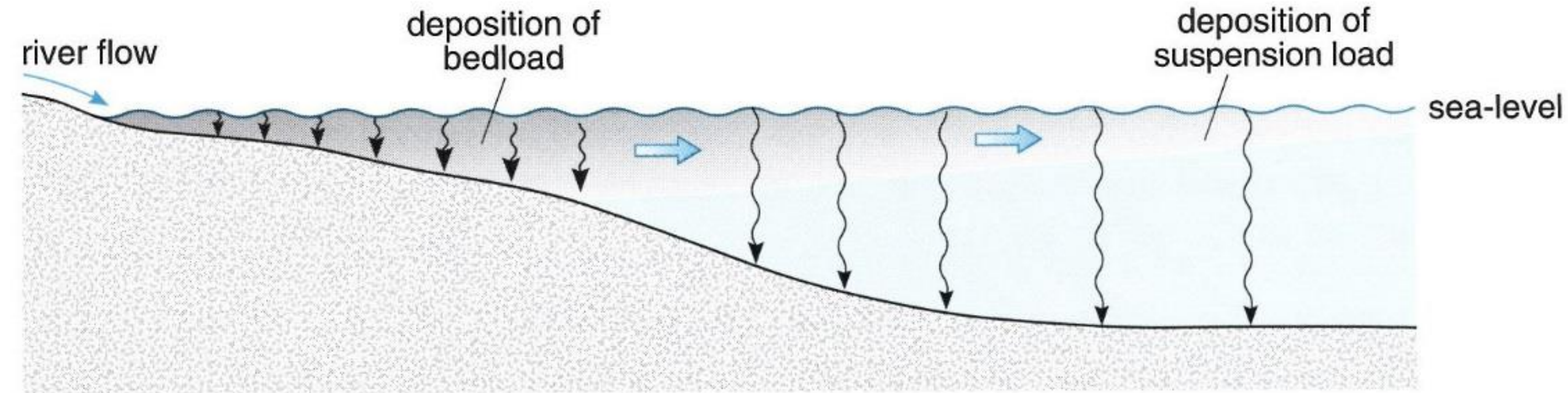


Coarse

Fine



Deposition

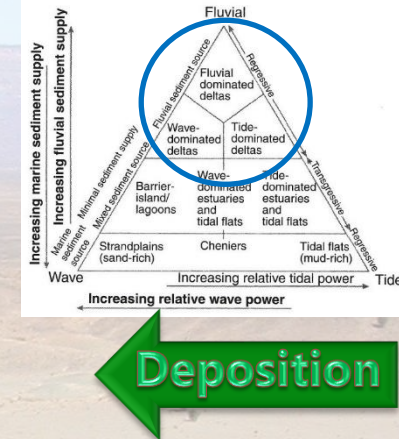
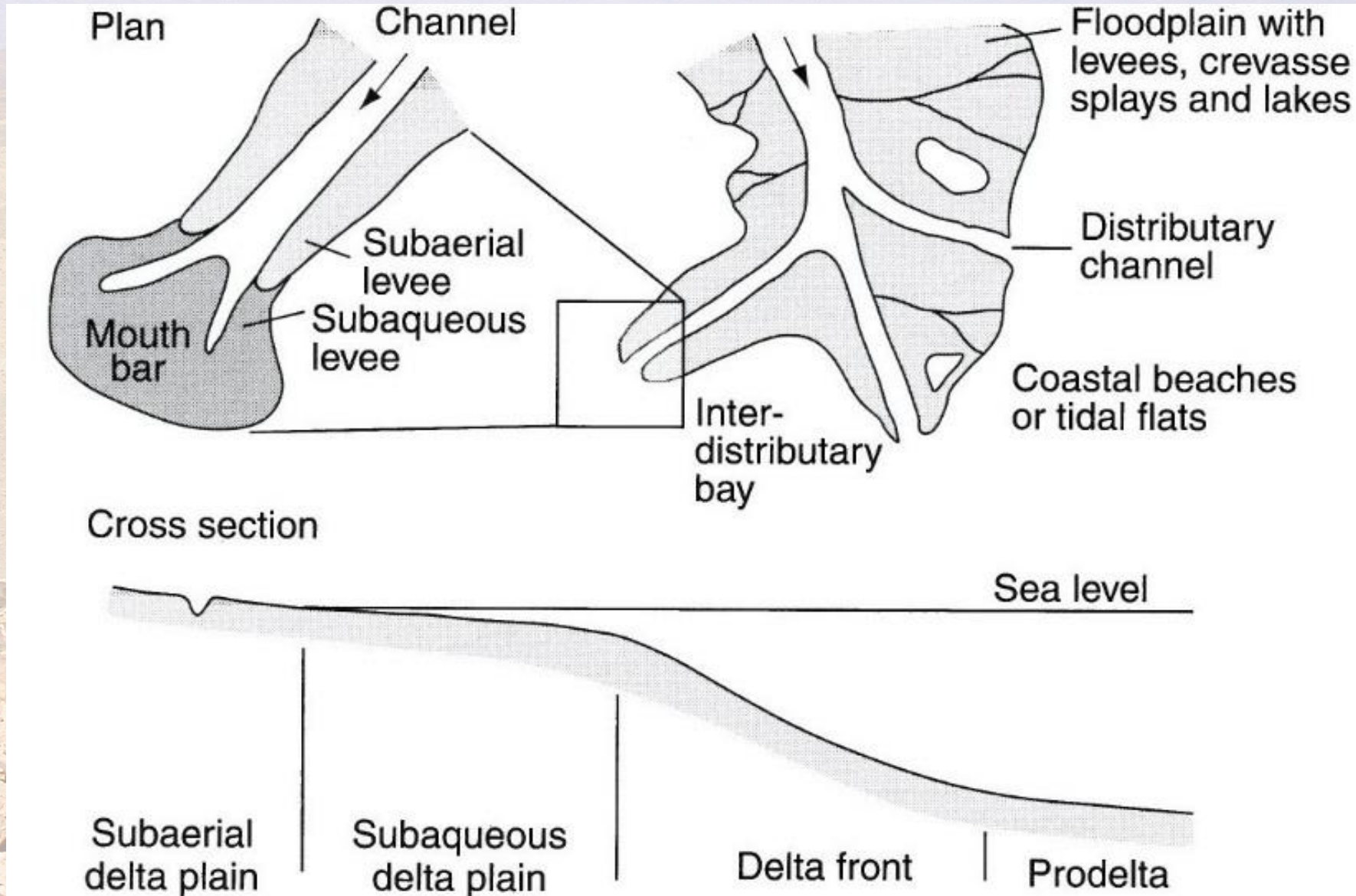


KEY

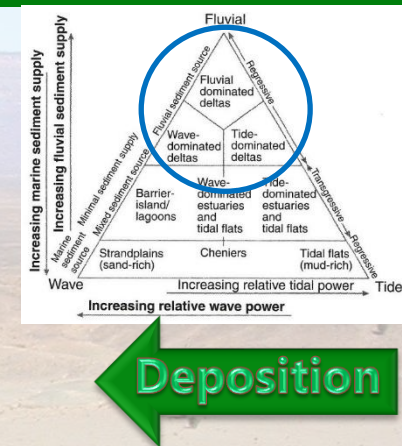
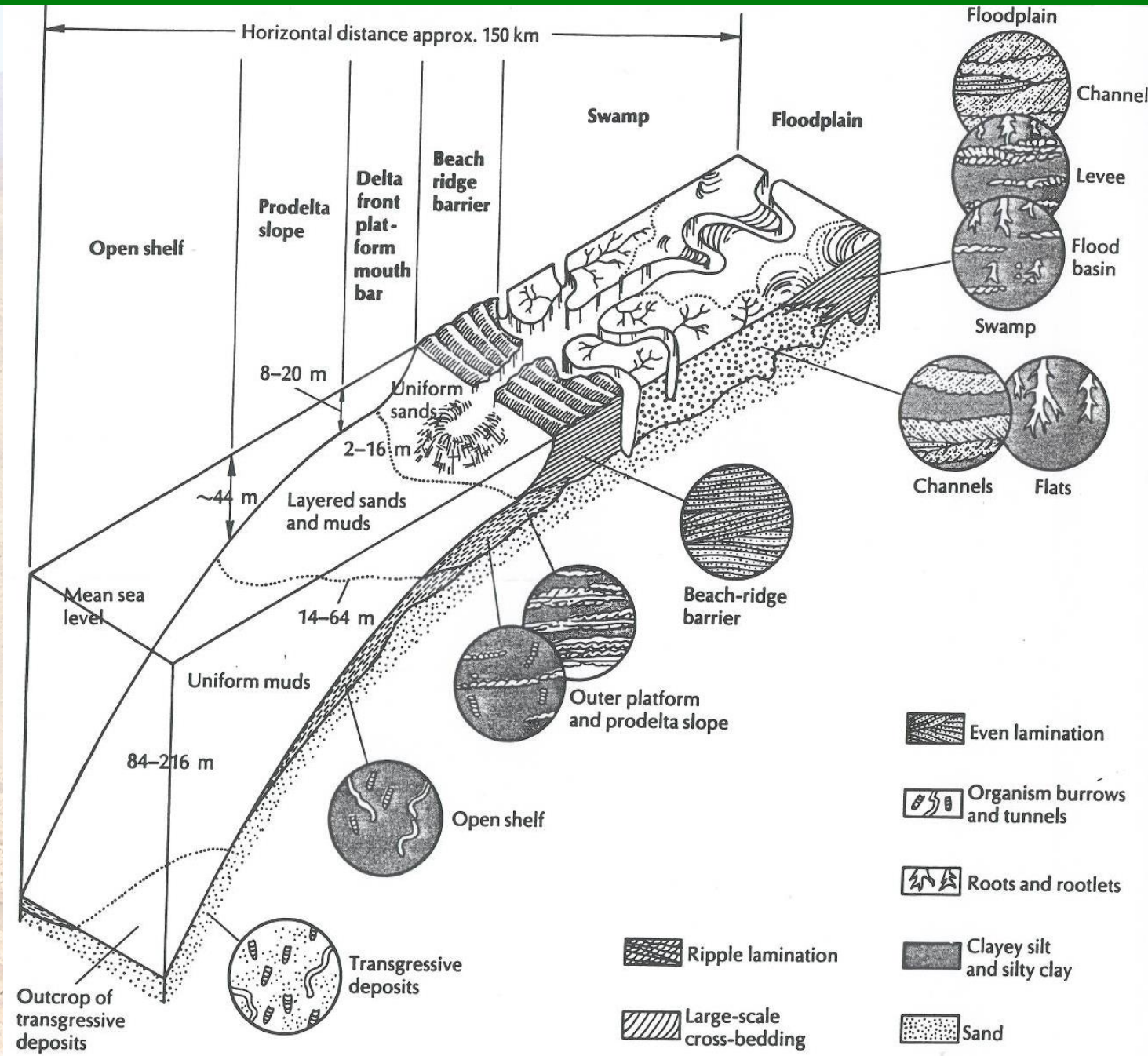
→ surface flow of sediment load

⌋⌋ deposition of sediment

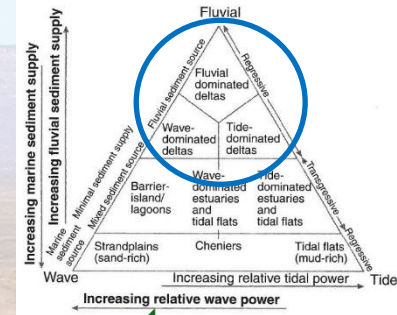
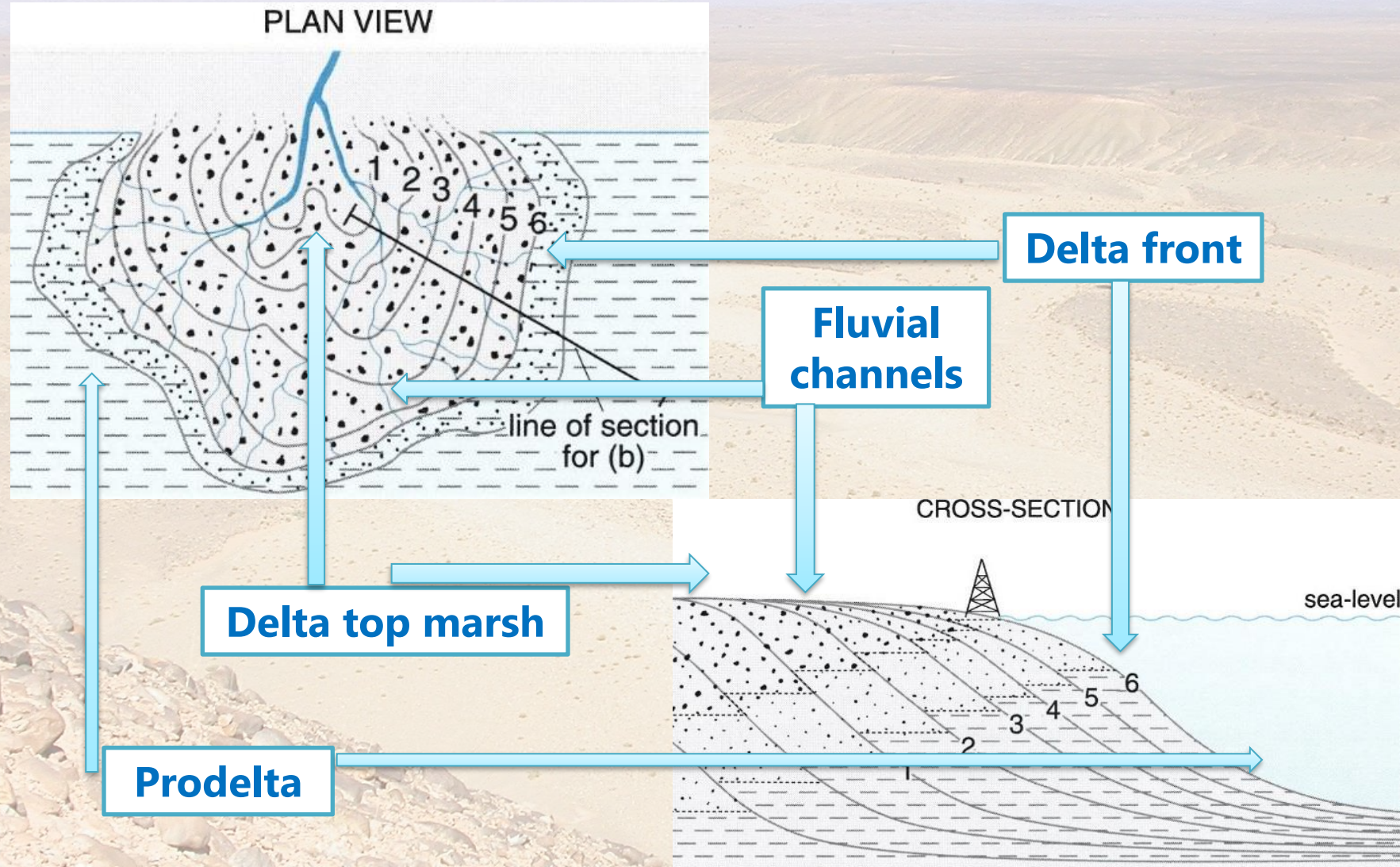
Deltas



Deltas



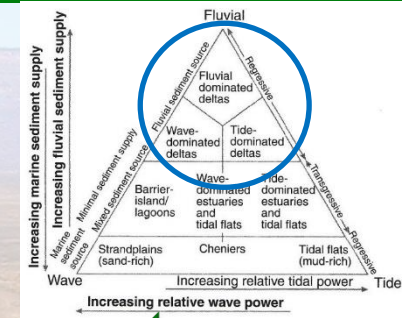
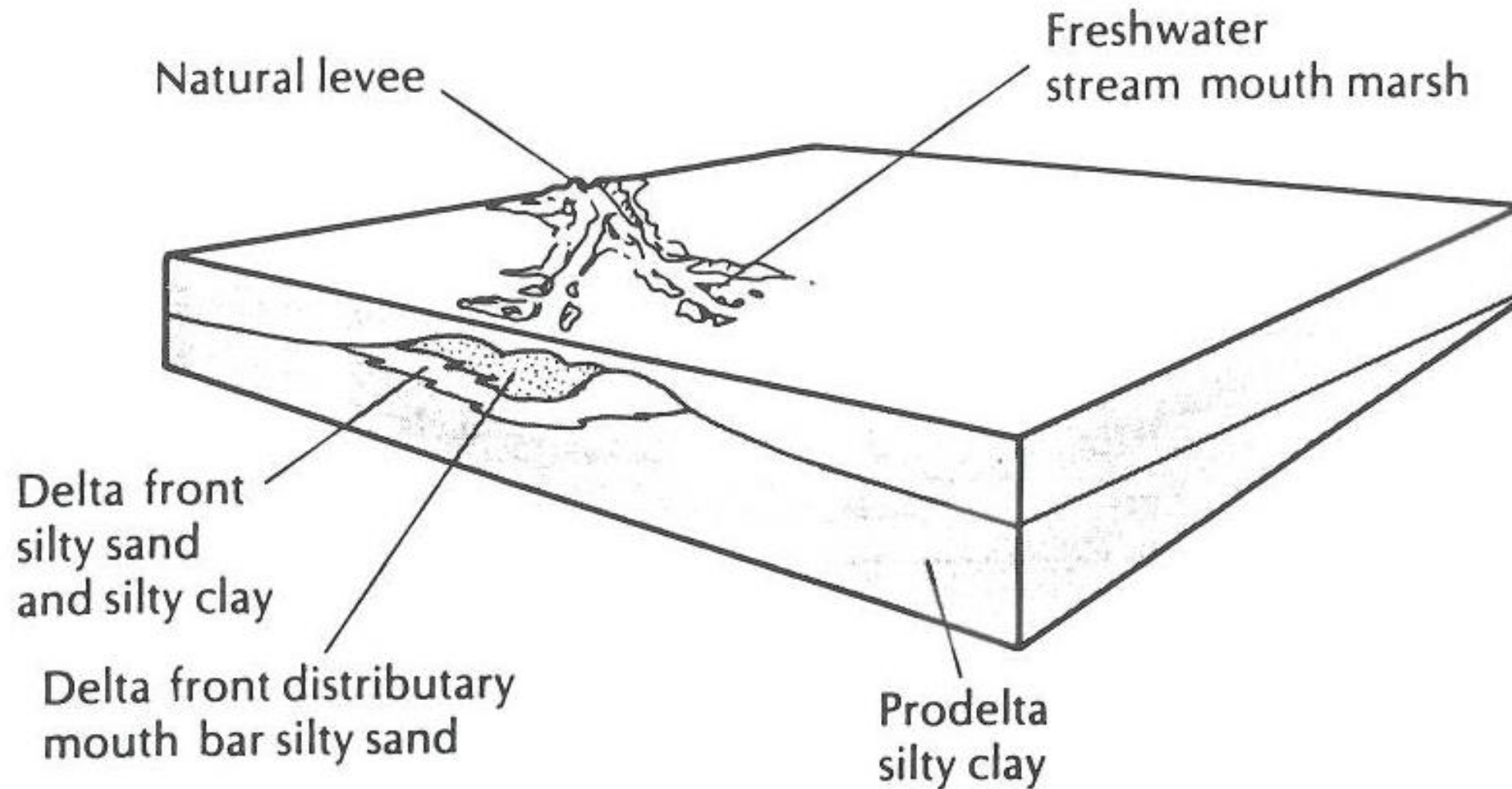
Deltas



Deposition

Deltas

A Initial progradation



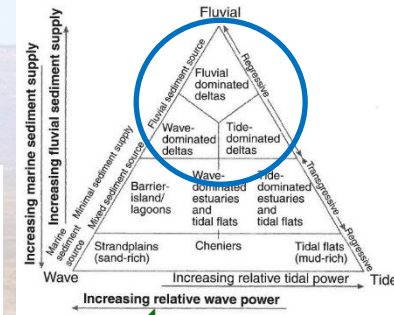
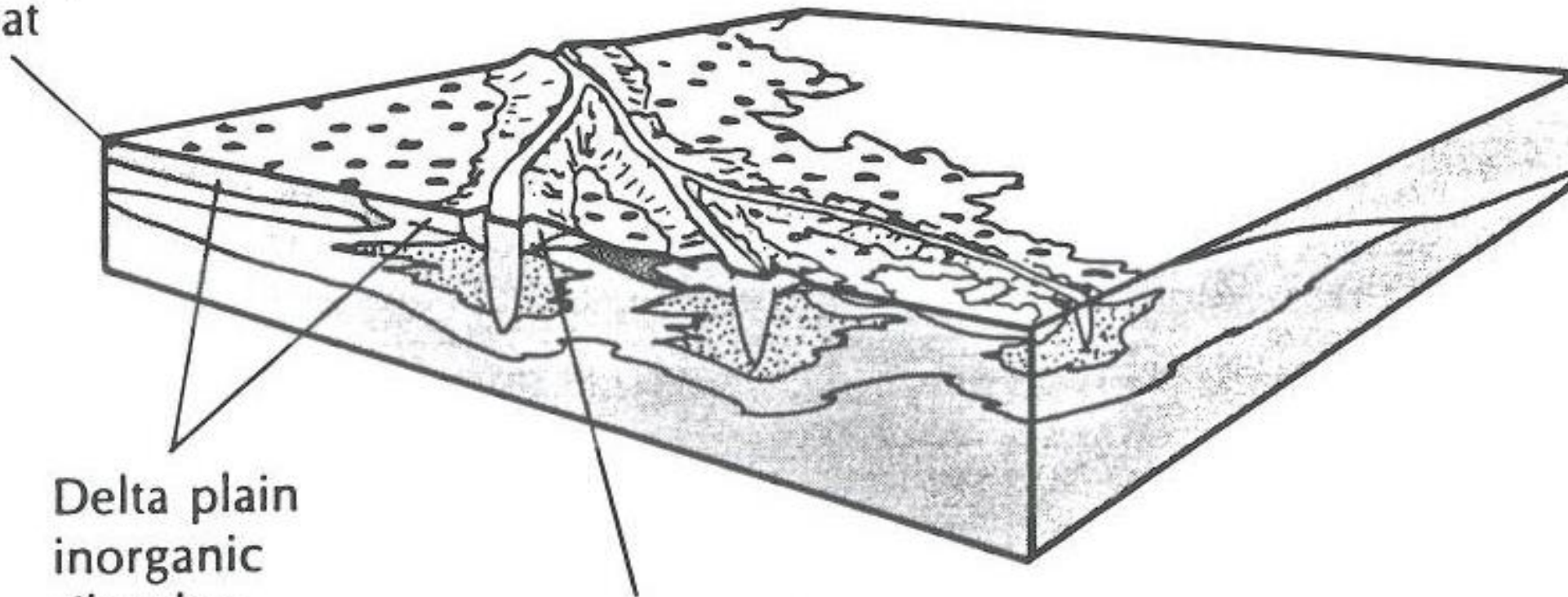
Deltas

B Enlargement by further progradation

Delta plain
peat

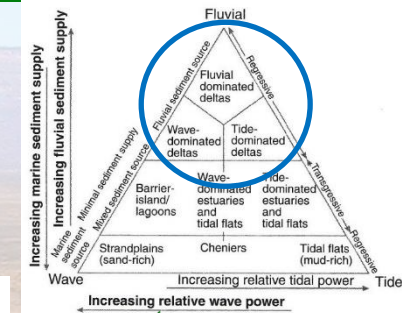
Delta plain
inorganic
silty clay

Delta plain natural levee
clayey silt and silty clay



Deposition

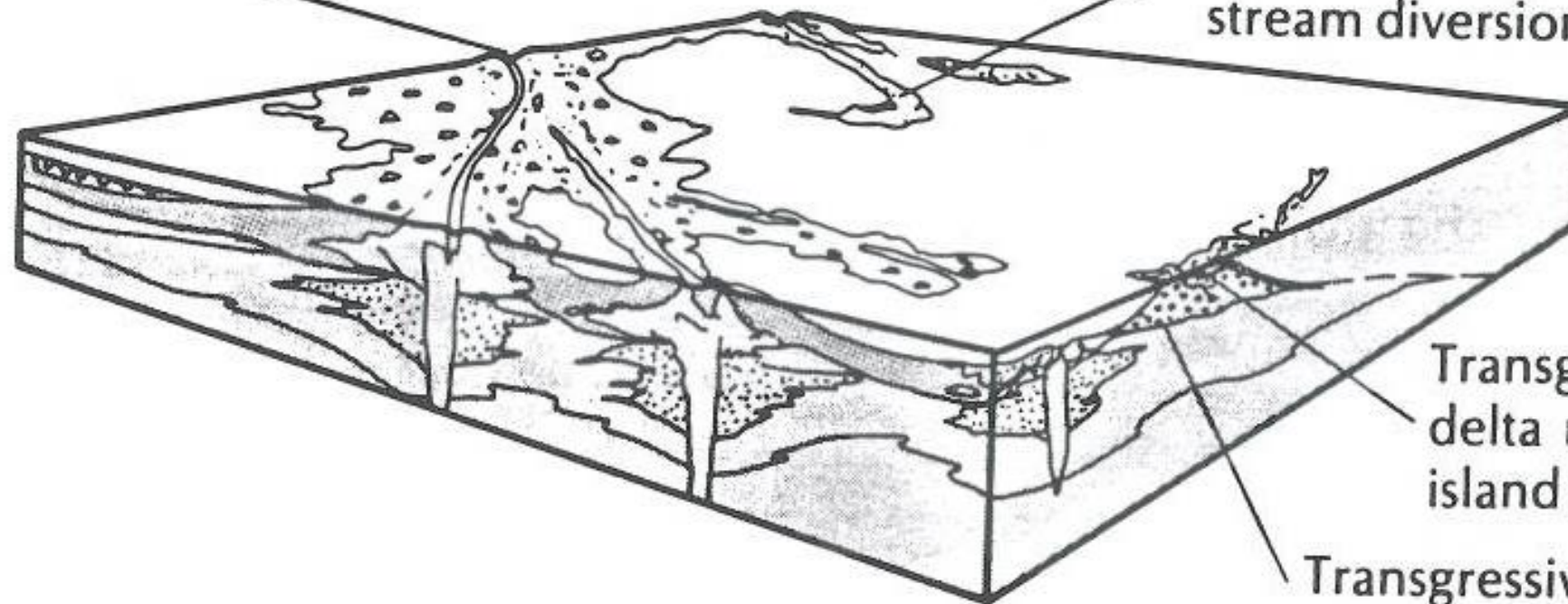
Deltas



C Distributary abandonment and transgression

Abandoned distributary

New distributary
resulting from
stream diversion



Transgressive
delta margin
island sand

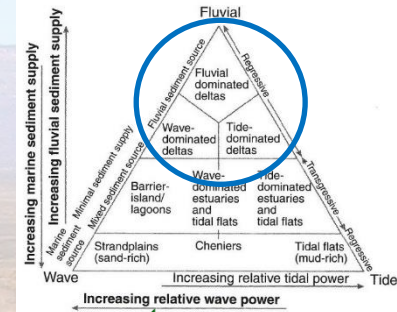
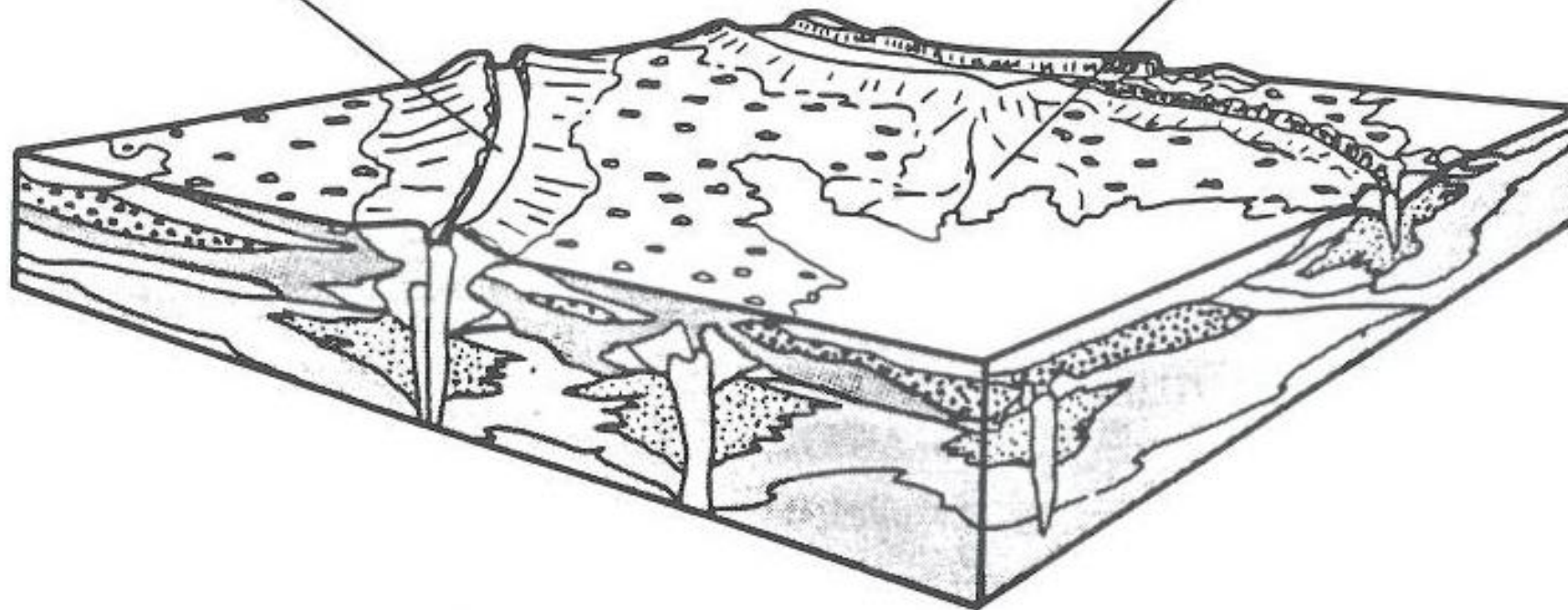
Transgressive
bay deposits

Deltas

D Repetition of cycle

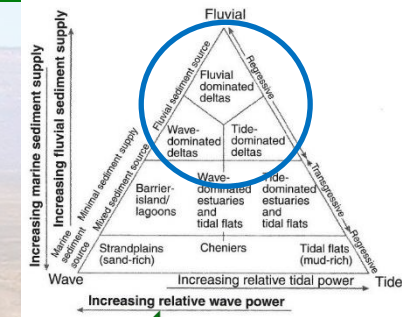
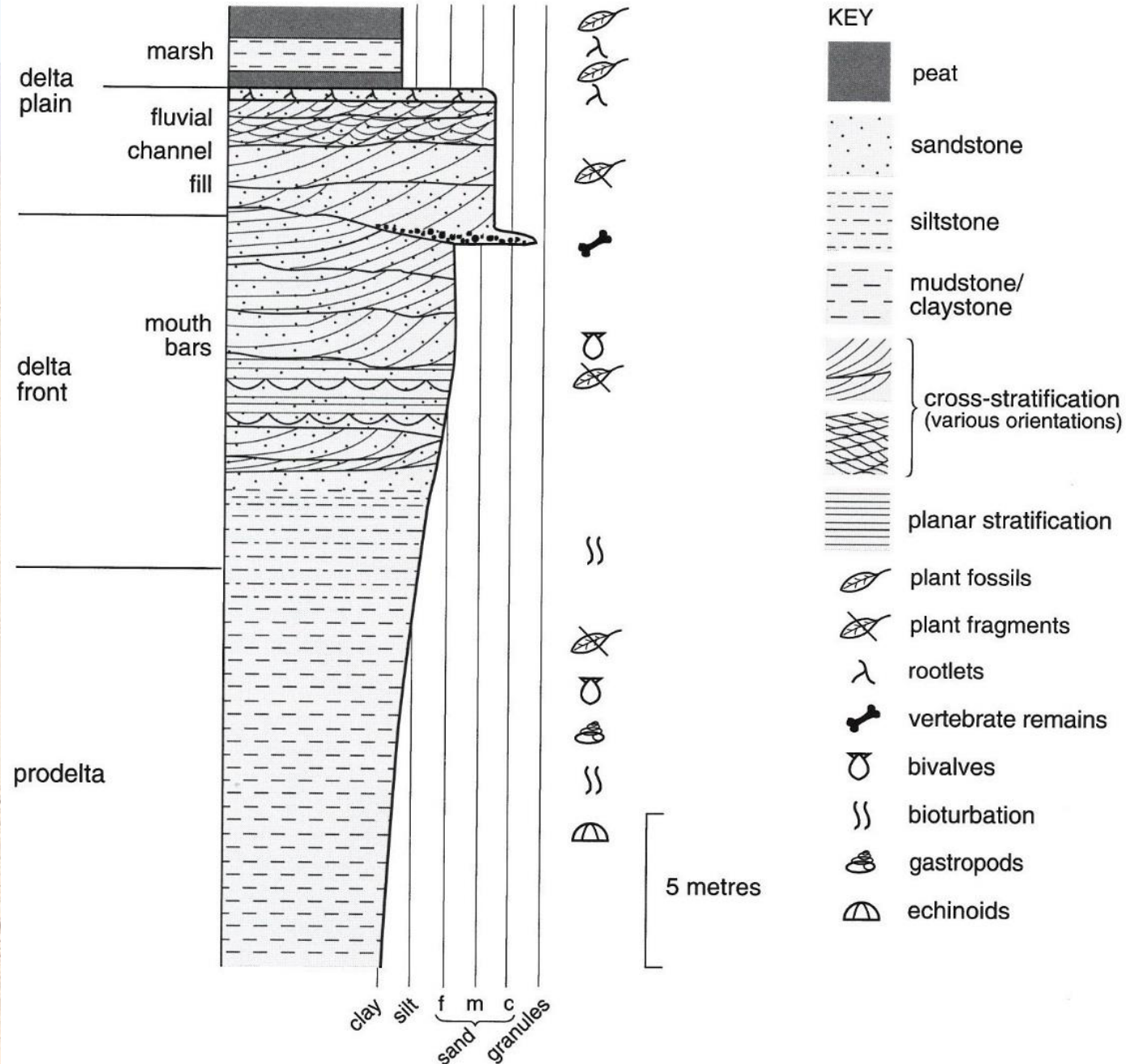
Reoccupation of old distributary course

Crevasse deposit



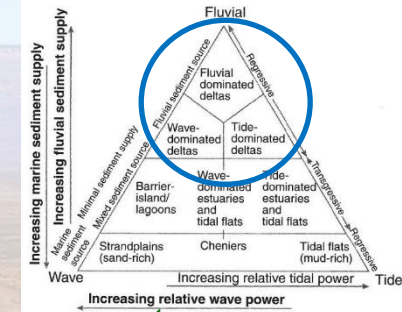
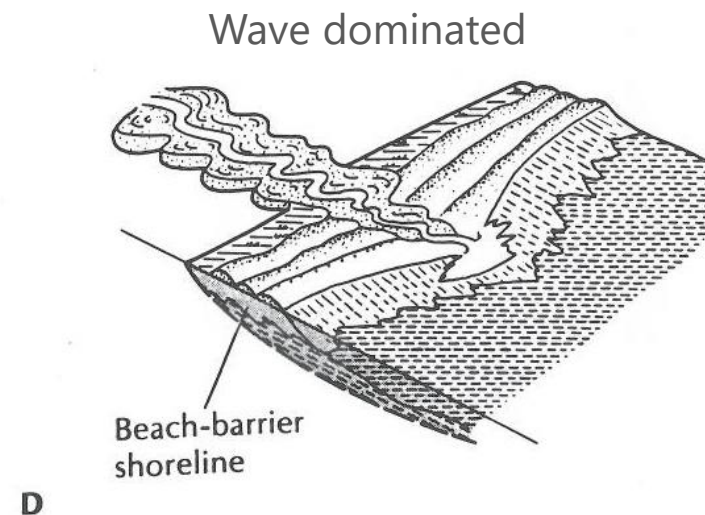
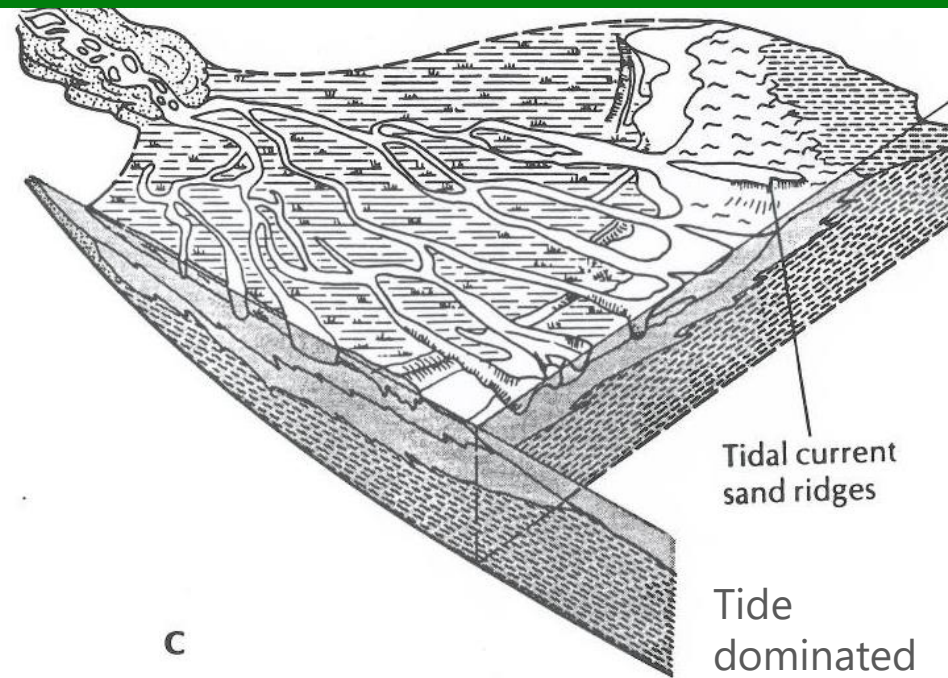
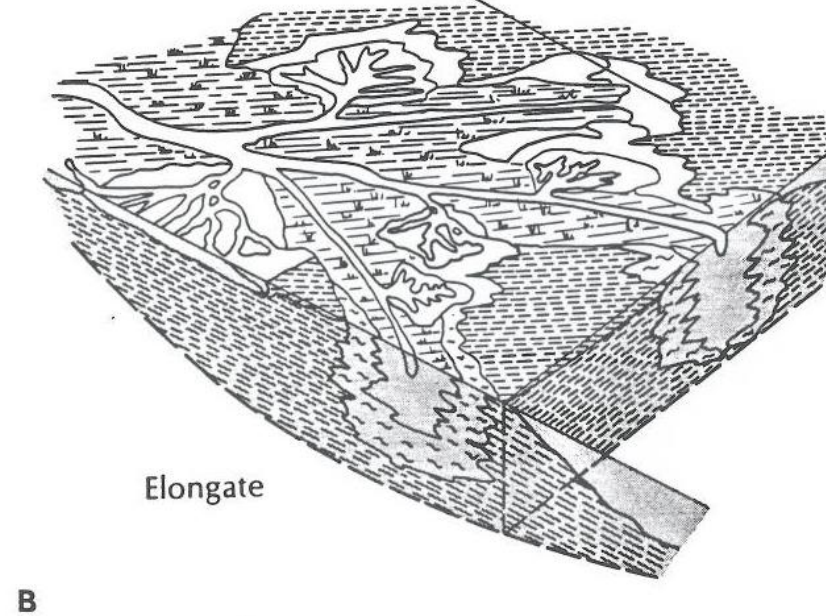
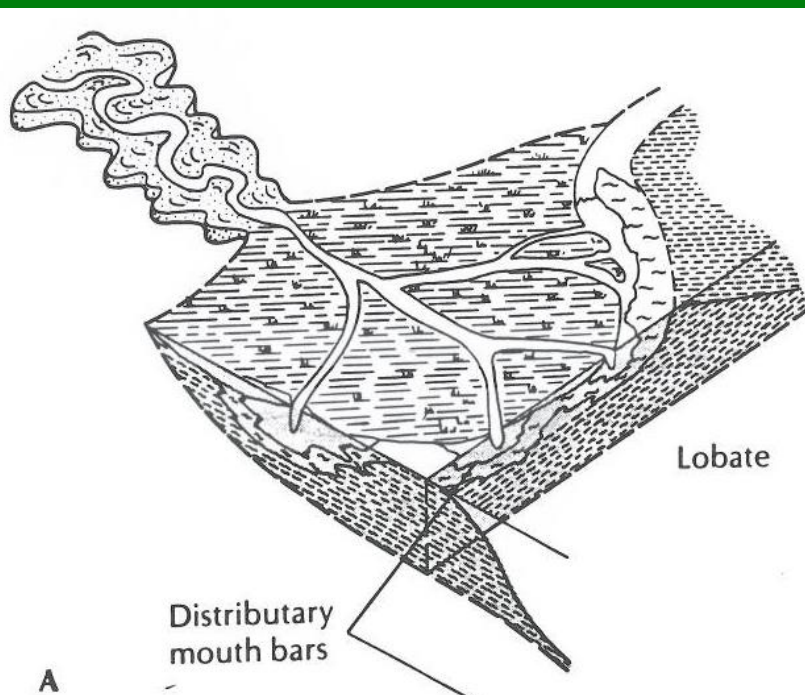
Deposition

Deltas



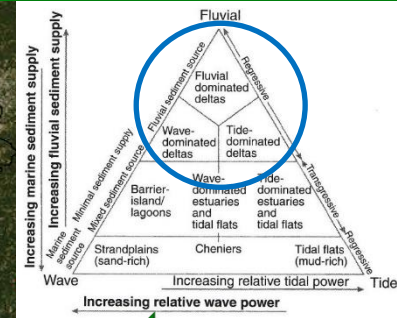
Deposition

Deltas



Deposition

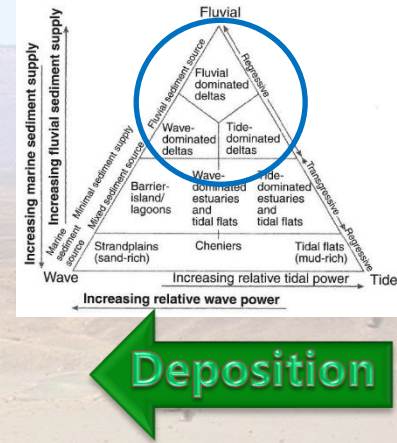
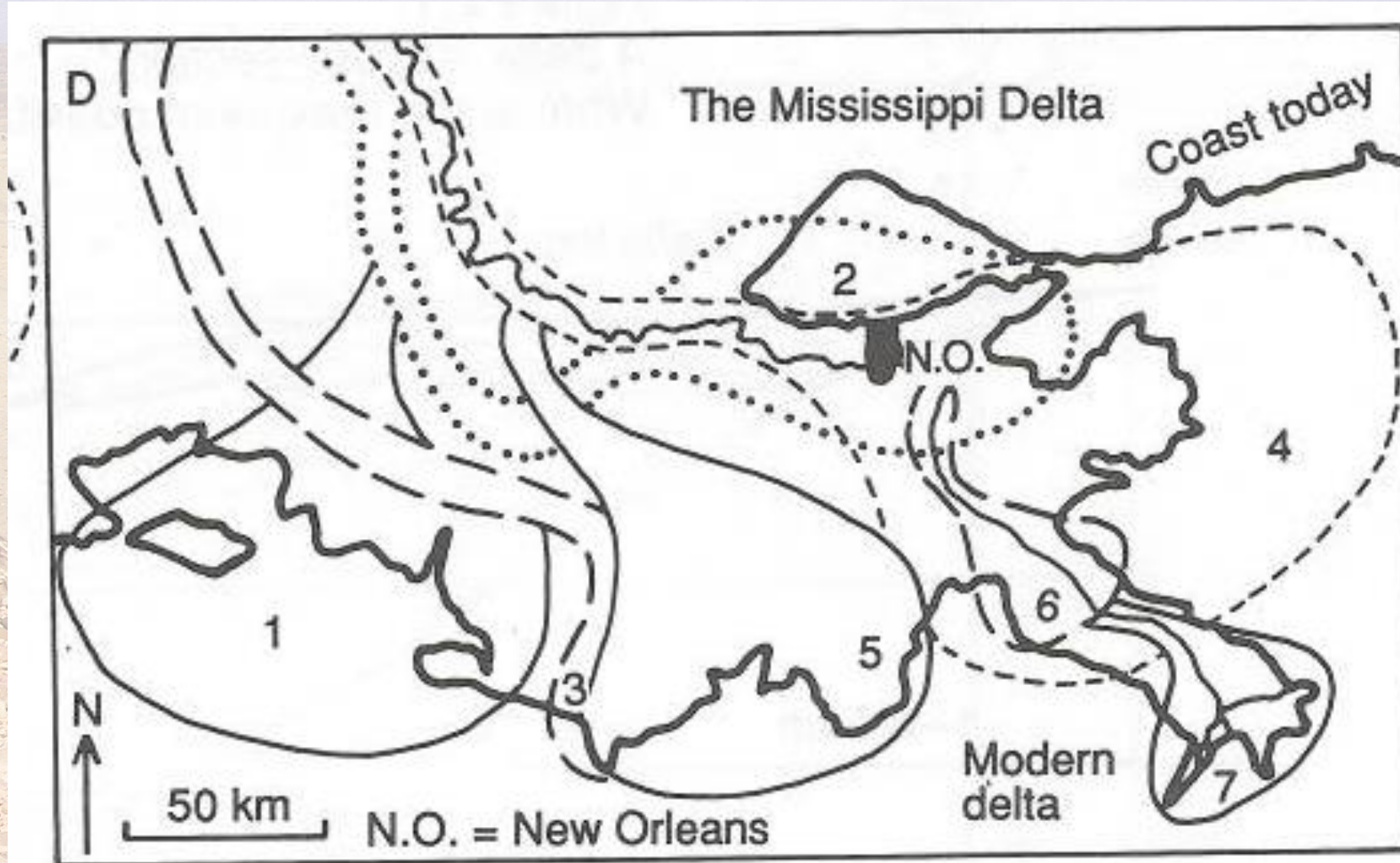
Deltas | Mississippi, USA



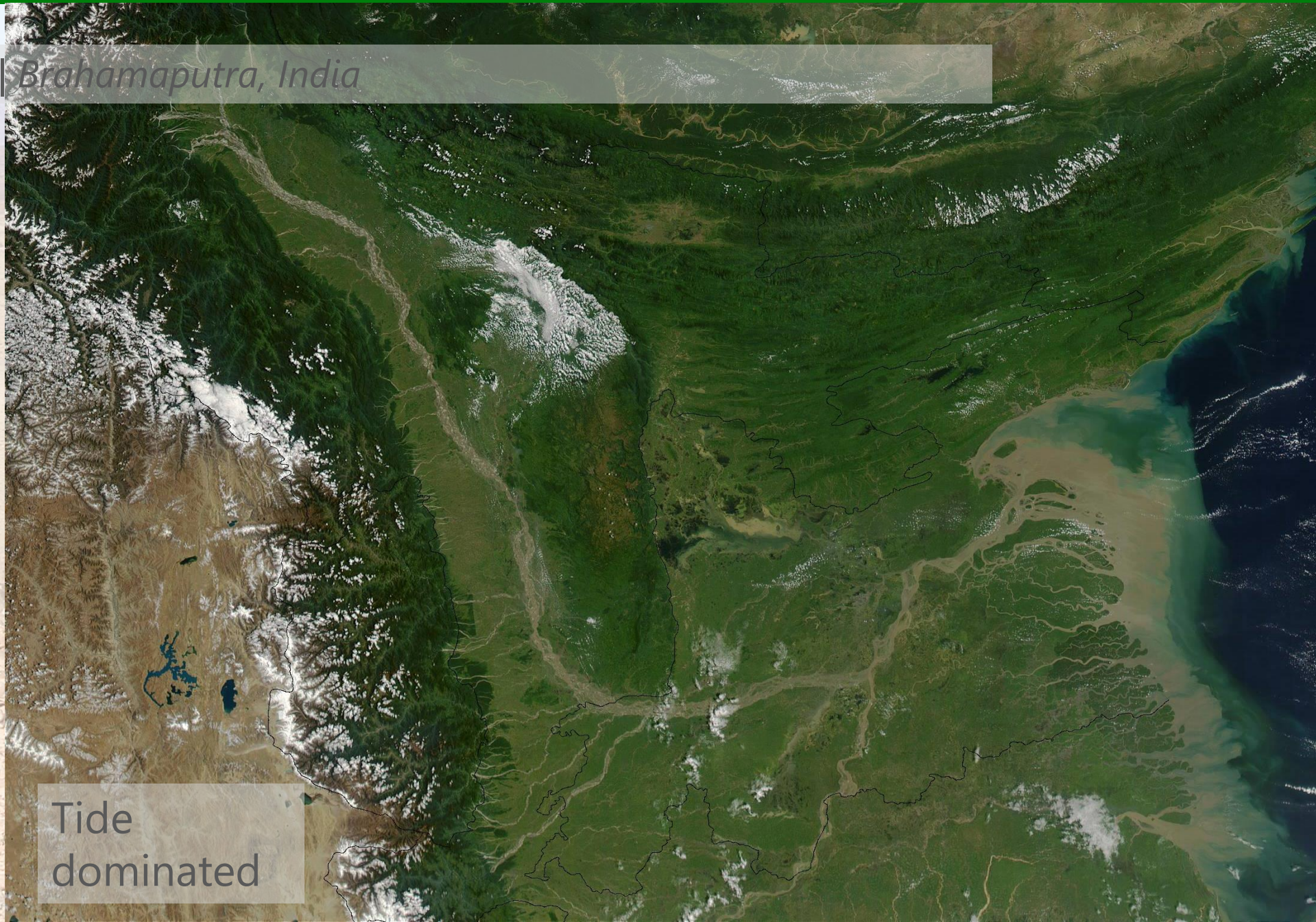
Deposition

Elongate
Multiphase

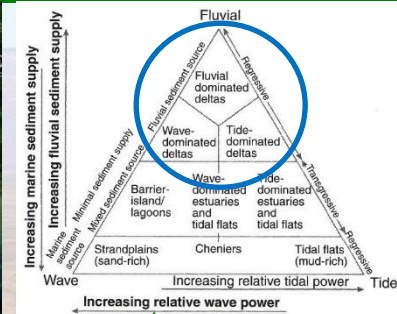
Deltas | Mississippi, USA



Deltas | Brahmaputra, India



Tide
dominated



Deposition

Deltas | Yangtze, China



Lobate

