

SEQUENCE STRATIGRAPHY OF FLUVIAL SYSTEM/ENVIRONMENTS

Introduction

- ⦿ What is Sequence Stratigraphy....
- ⦿ What are Sequence Boundaries....
- ⦿ What are Parasequence Boundaries....

System Tracts

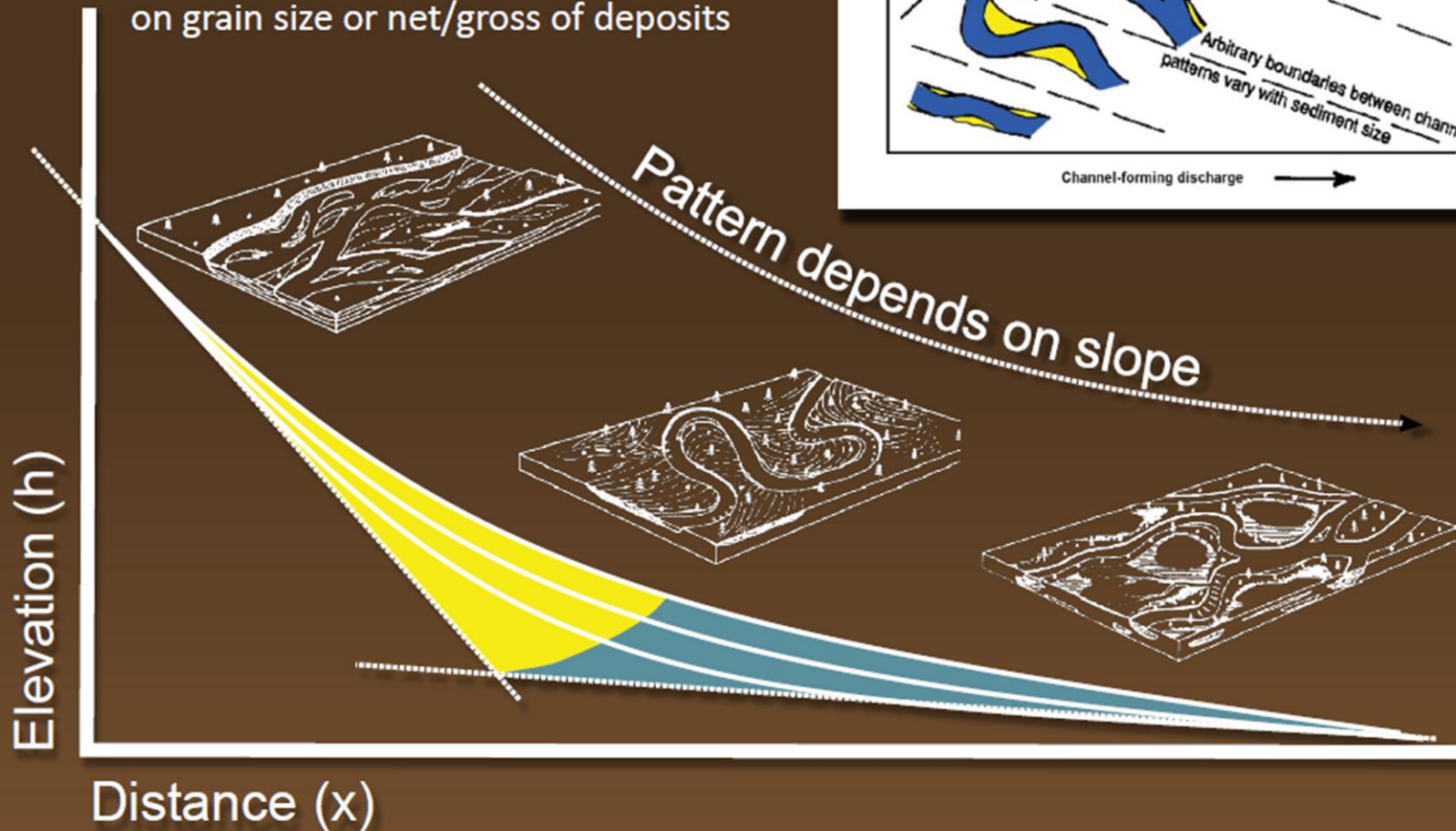
- ⦿ What are System Tracts
- ⦿ Types of System Tracts....
- ⦿ Sea Level through Geologic Time....
- ⦿ Affect of Sea Level....
- ⦿ Affect on Rivers....Fluvial Environments

Fluvial

- ① What is Fluvial....
- ① Processes....
- ① Fluvial Channel Patterns....
- ① Fluvial Landforms....
- ① Fluvial Environments....

Channel Pattern

Channel pattern depends on slope (relative to discharge) and only indirectly on grain size or net/gross of deposits





Paraguay

Argentina

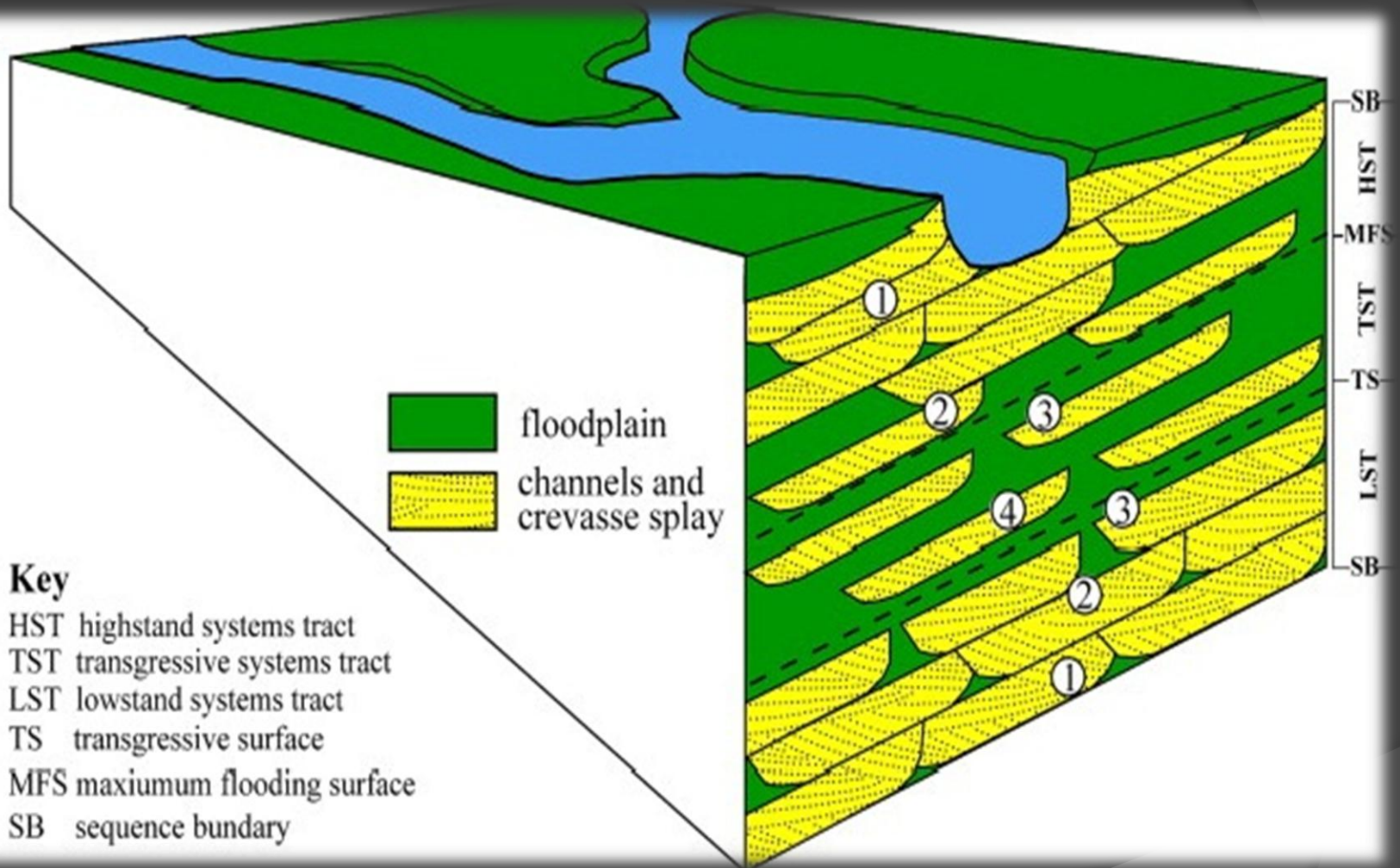
Brazil

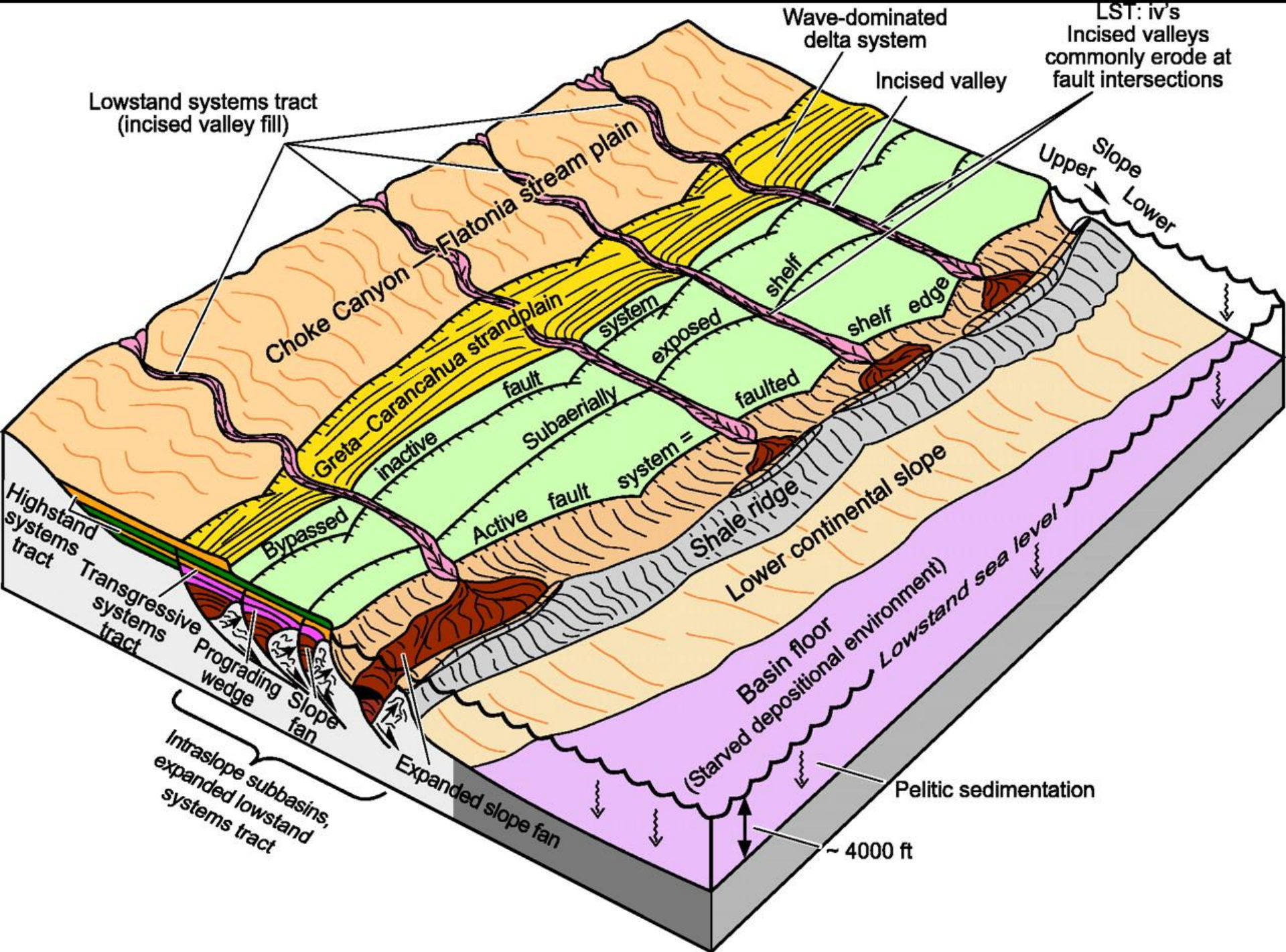




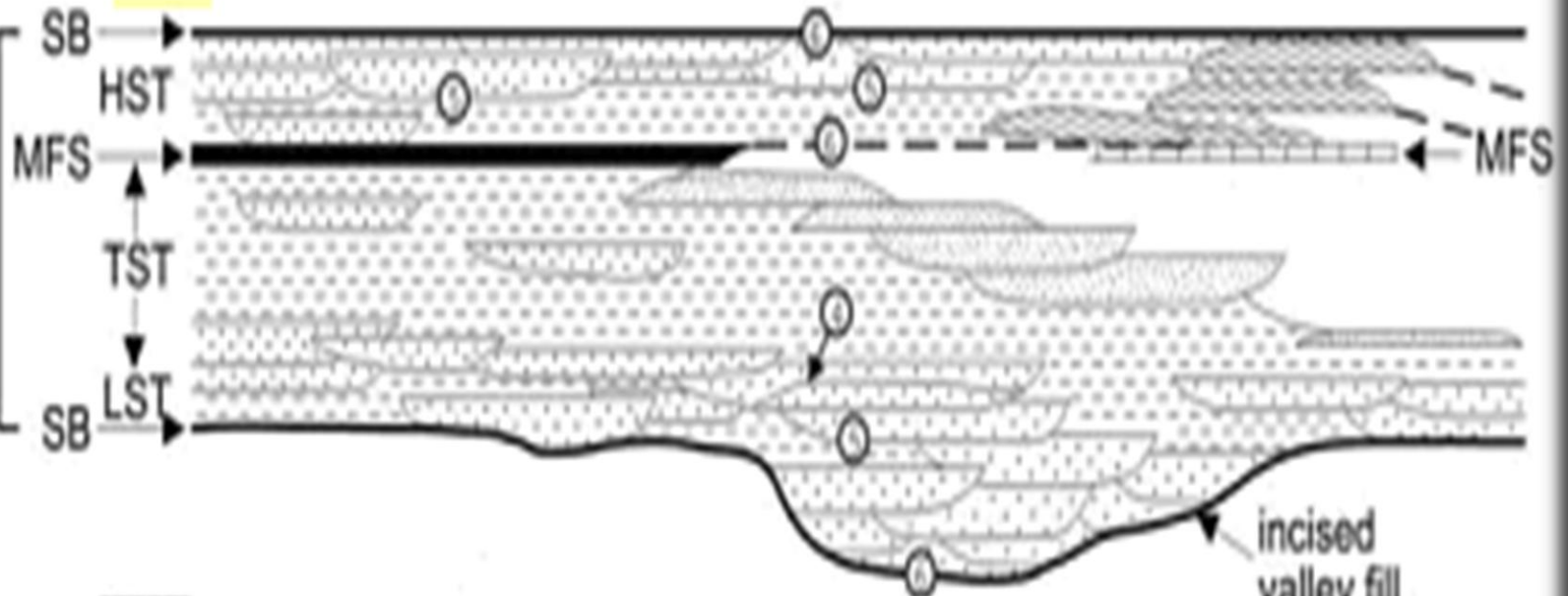


Sequence Stratigraphy of Fluvial System/Environments

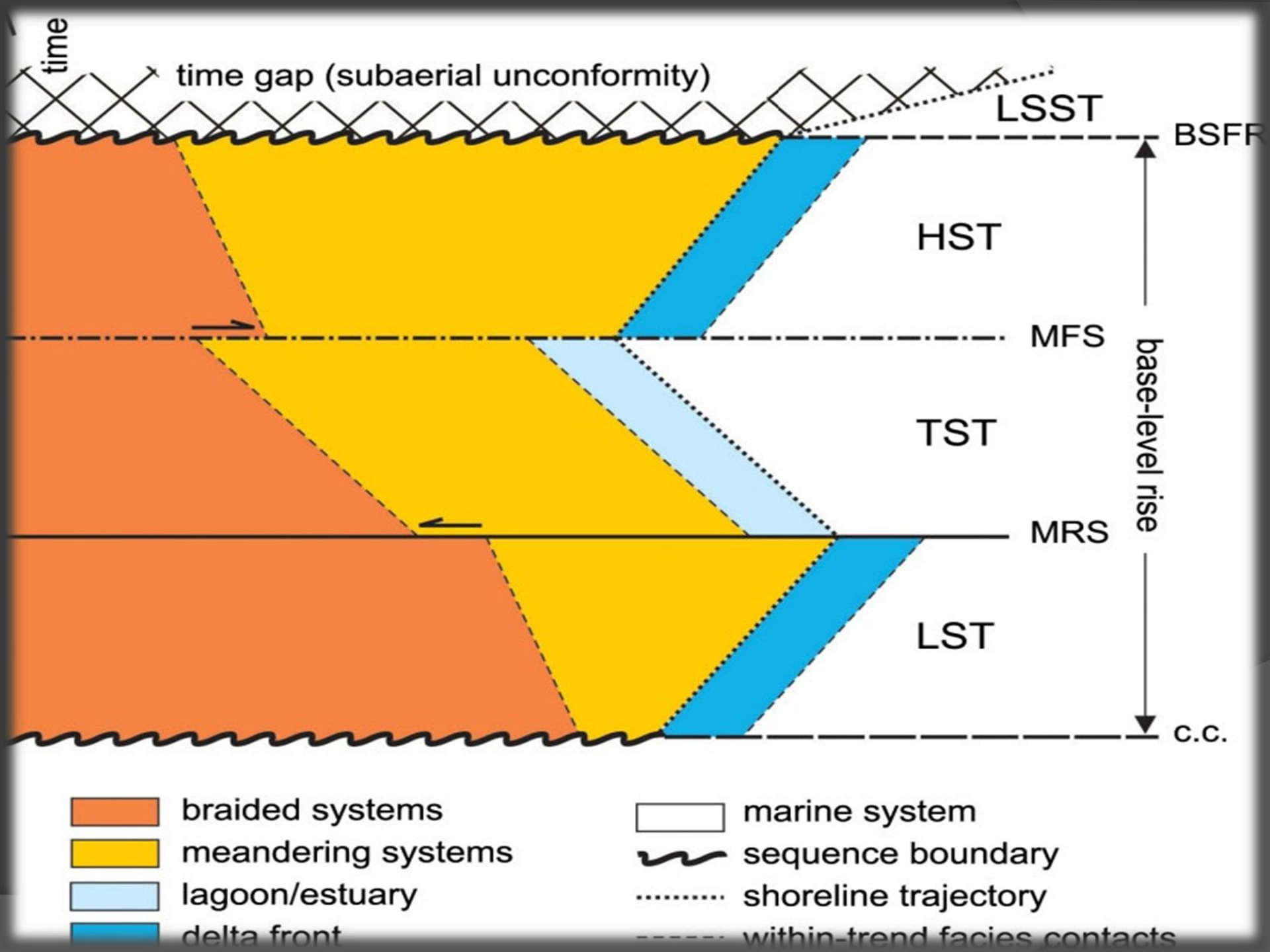




SEQUENCE
(ALLOFORMATION
OR ALLOMEMBER)

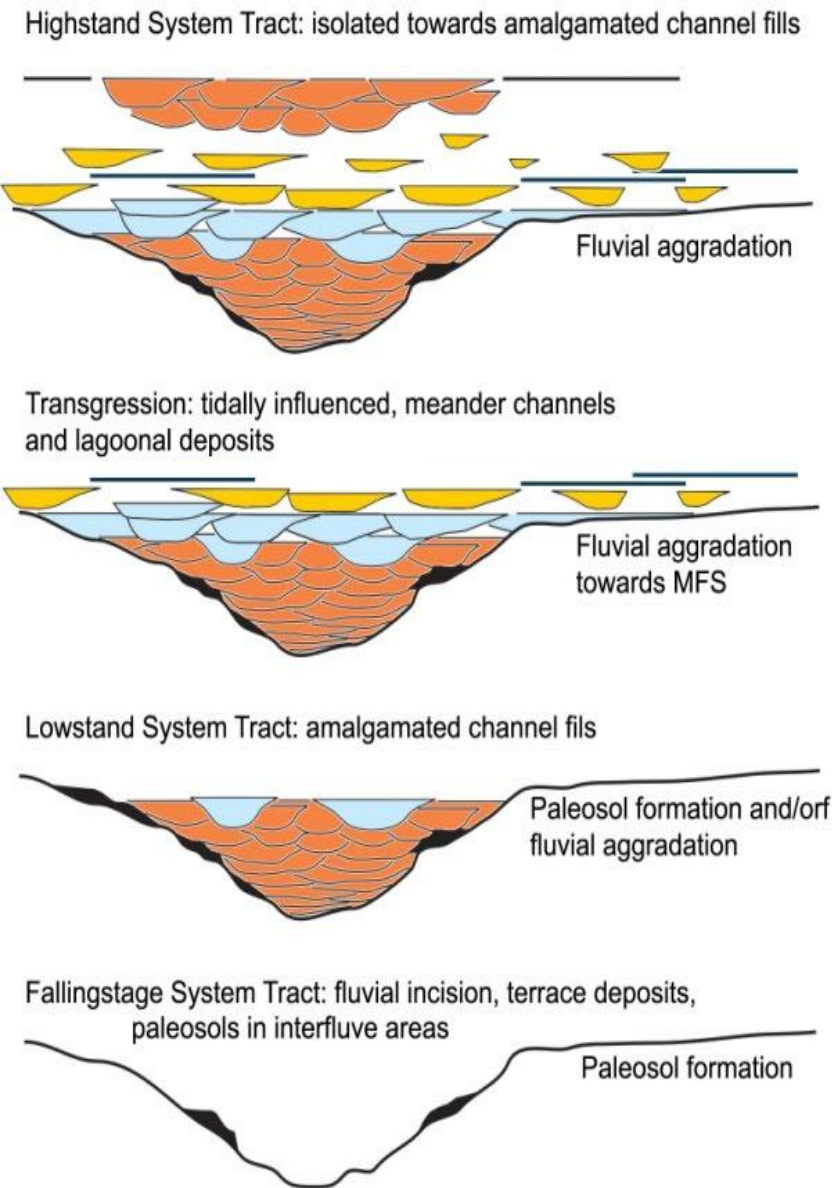


- | | | | |
|---|---------------------------------------|---|------------------|
|  | fluvial channel-fills |  | marine shale |
|  | tidal channels and bars |  | marine limestone |
|  | deltaic distributaries and mouth bars |  | coal |
|  | nonmarine floodplain deposits | | |

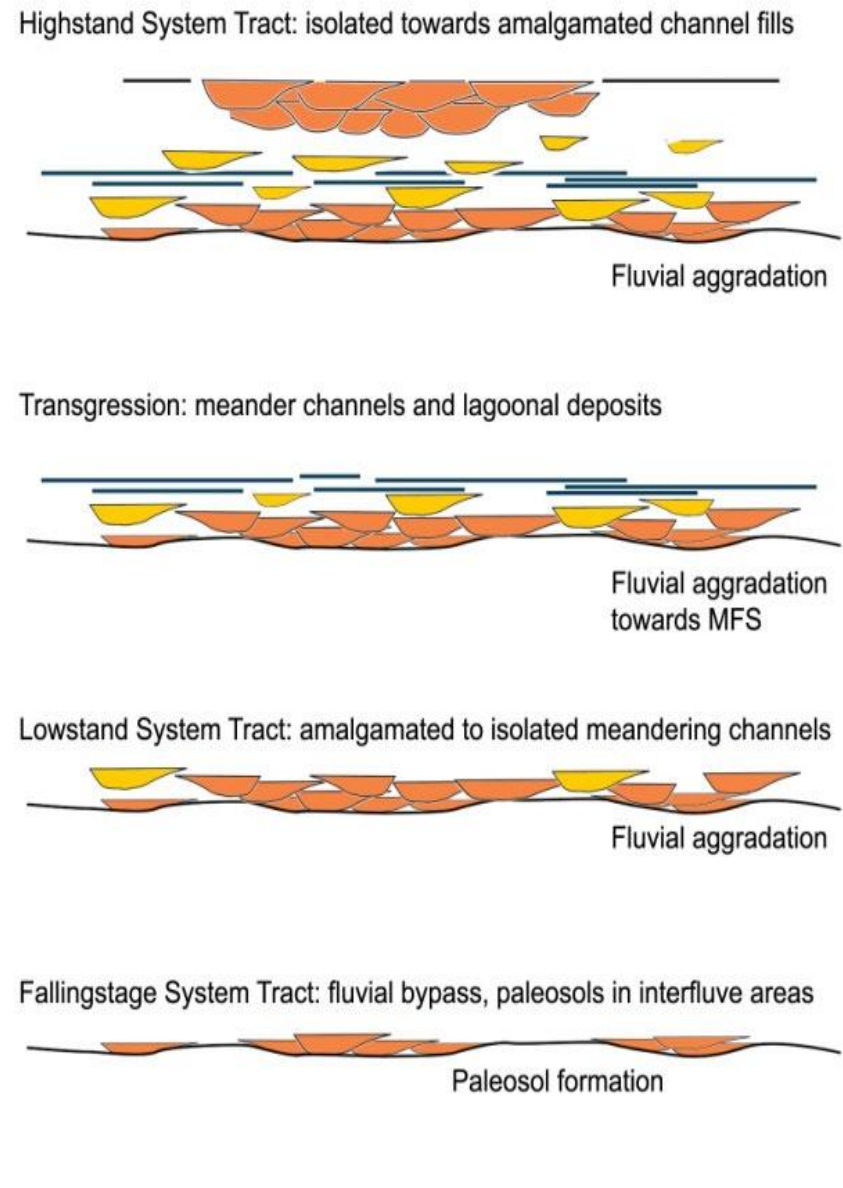




Incised valleys form during Fallingstage



Bypass channels form during Fallingstage

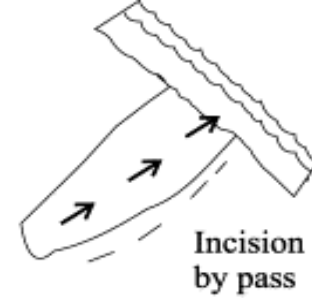


Braided, amalgamated channels
 Estuarine deposits

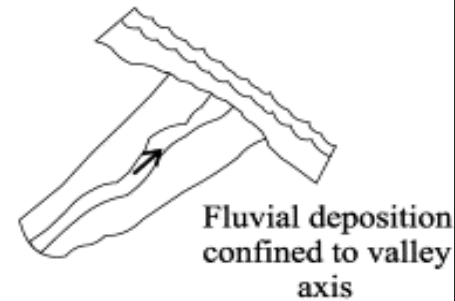
Meandering channels
 Lagoonal deposits

Terrace deposits
 Sequence boundary

A. VALLEY INCISION



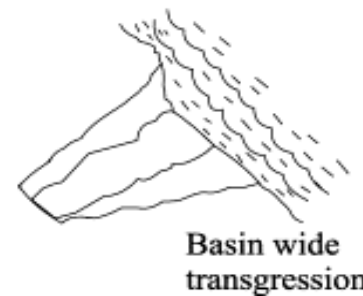
B. VALLEY FILL (FLUVIAL)



C. VALLEY FILL (ESTUARINE)



D. VALLEY DROWNING (OPEN MARINE)

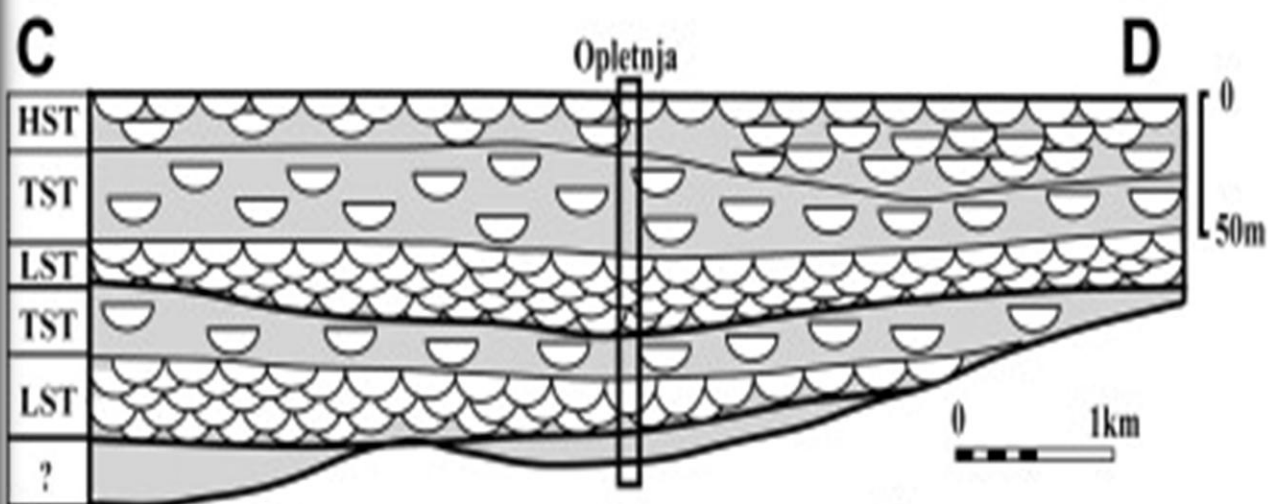
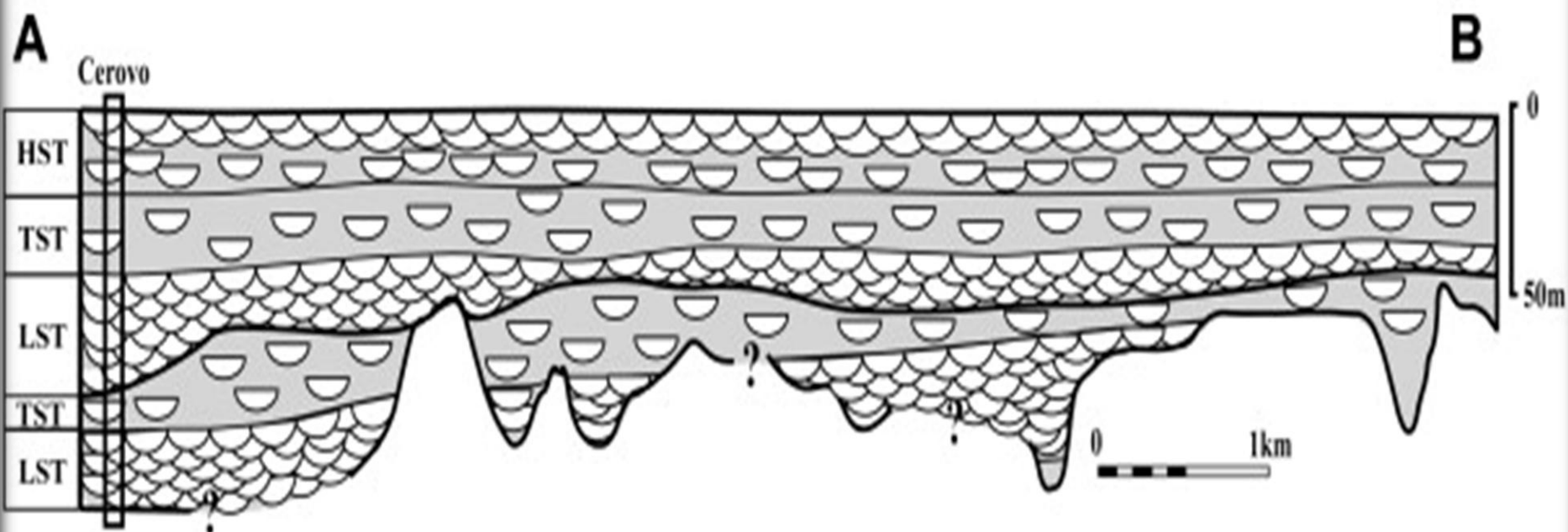












channel and crevasse splay sandstones
 floodplain mudstones
 selected interval

LST = lowstand systems tracts TST = transgressive systems tracts HST = highstand systems tracts





....THANKS

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