

# 2 WS Water Systems

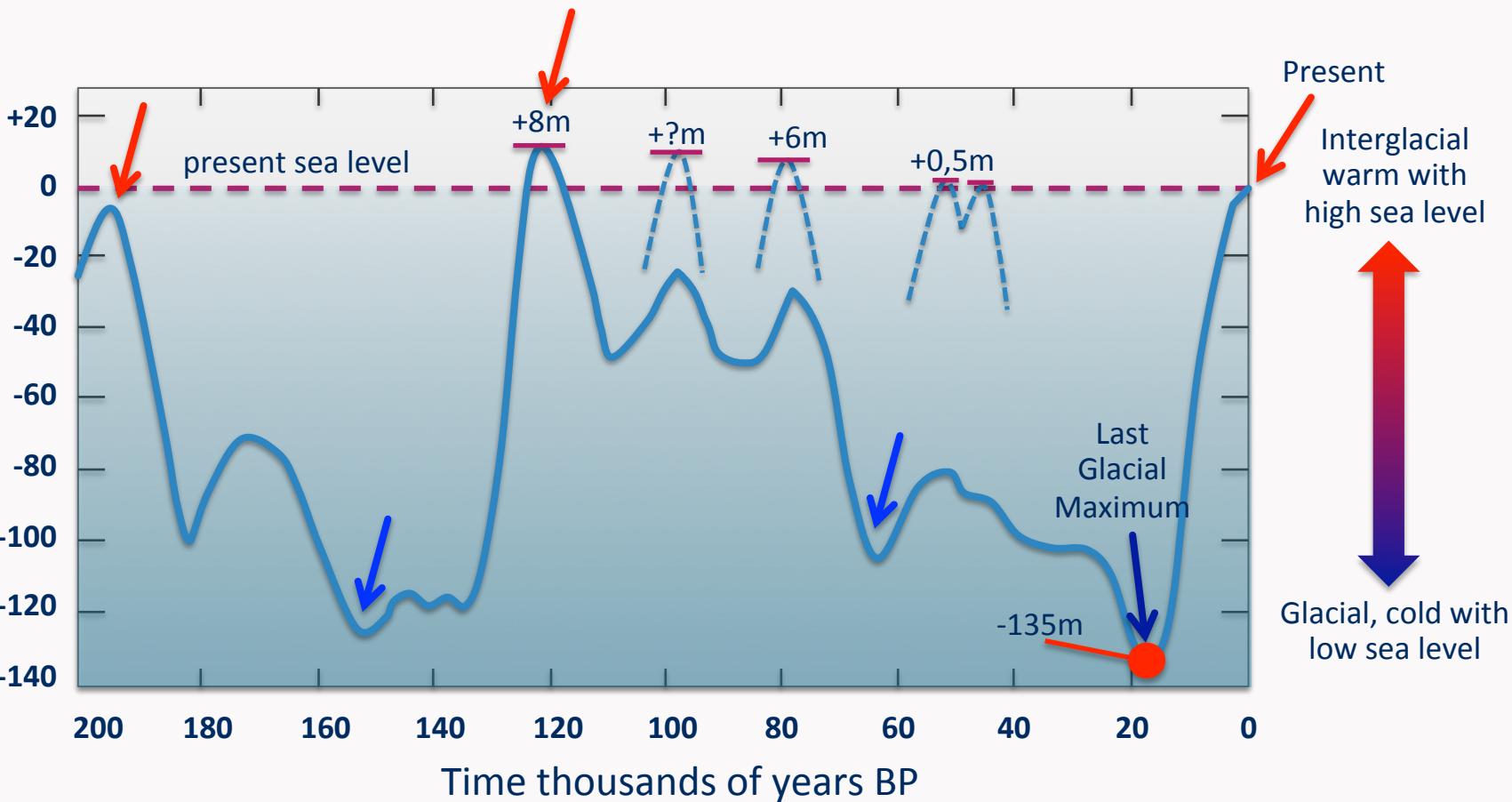
## Submodule Coasts

Marcel J.F. Stive & Judith Bosboom

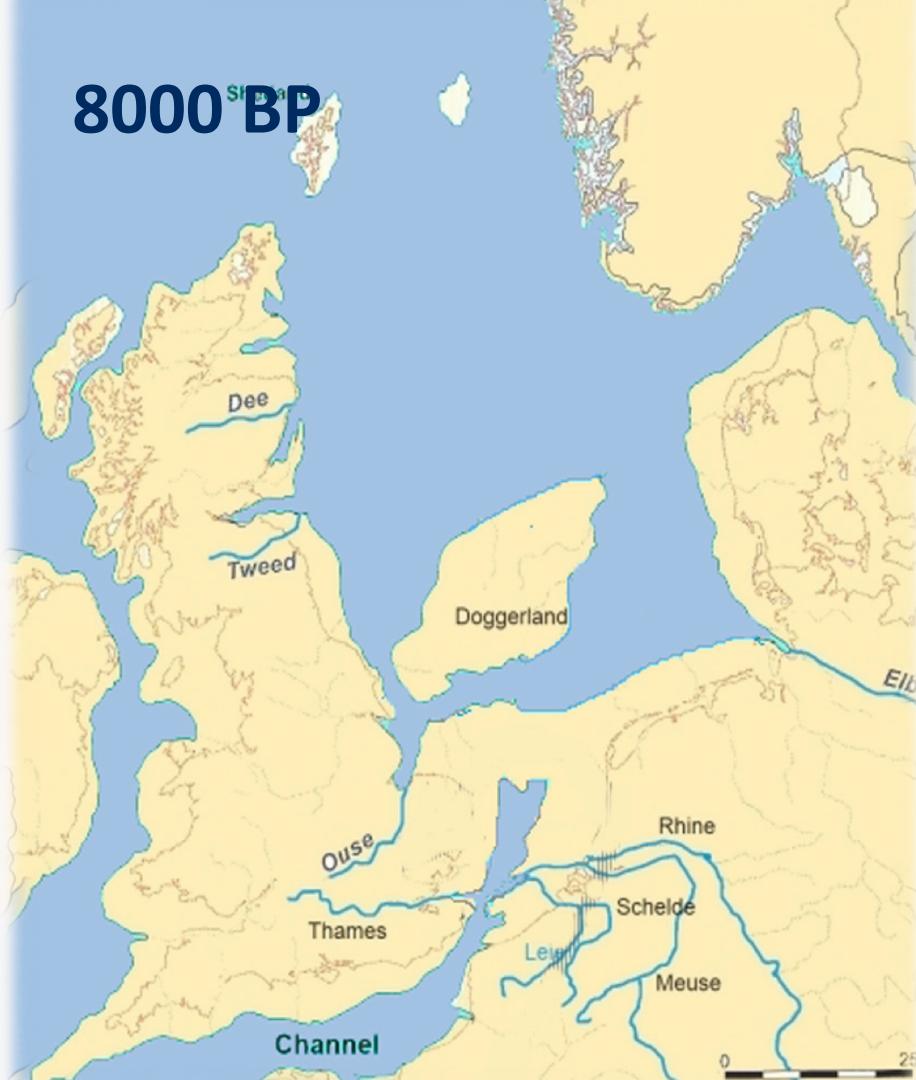


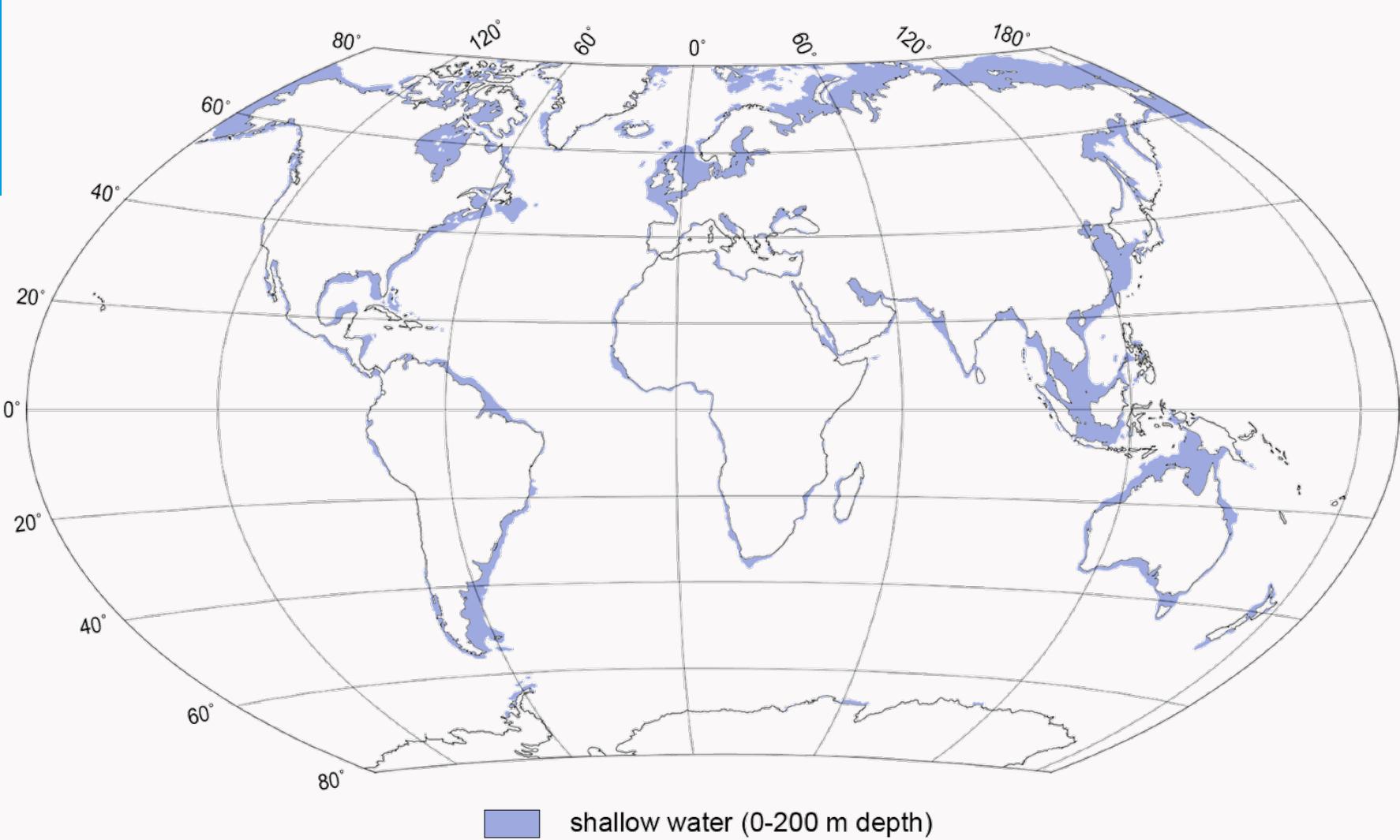
Challenge the future

Sea level (m) relative to present

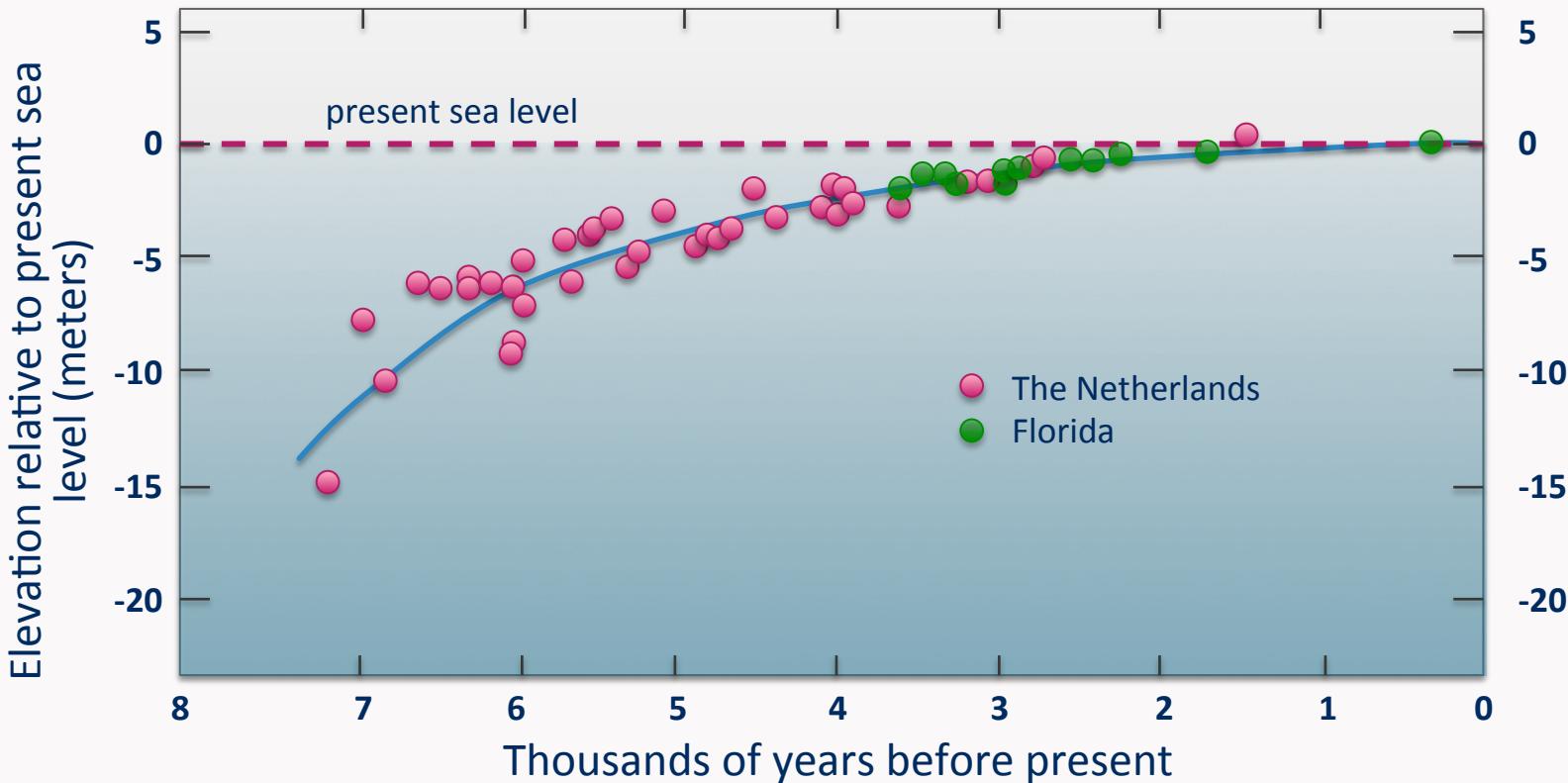


**8000 BP**





# Rate in sea level rise in non tectonic regions



0,3

# Intergovernmental panel on climatic change (IPCC 2013)

3 mm/year  
2 mm/year

Sea level rise (m)

0,2

0,1

0

1900

1920

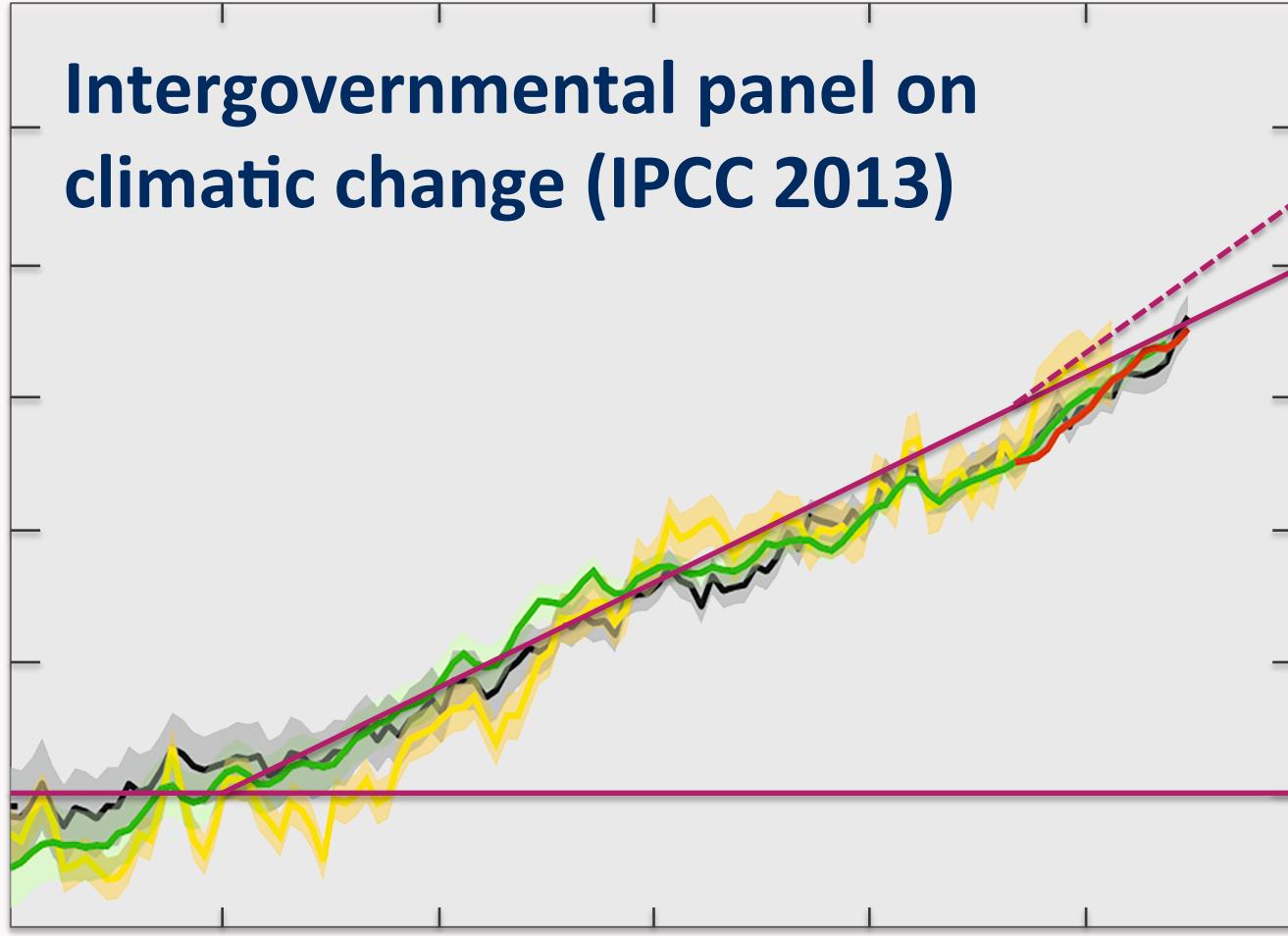
1940

1960

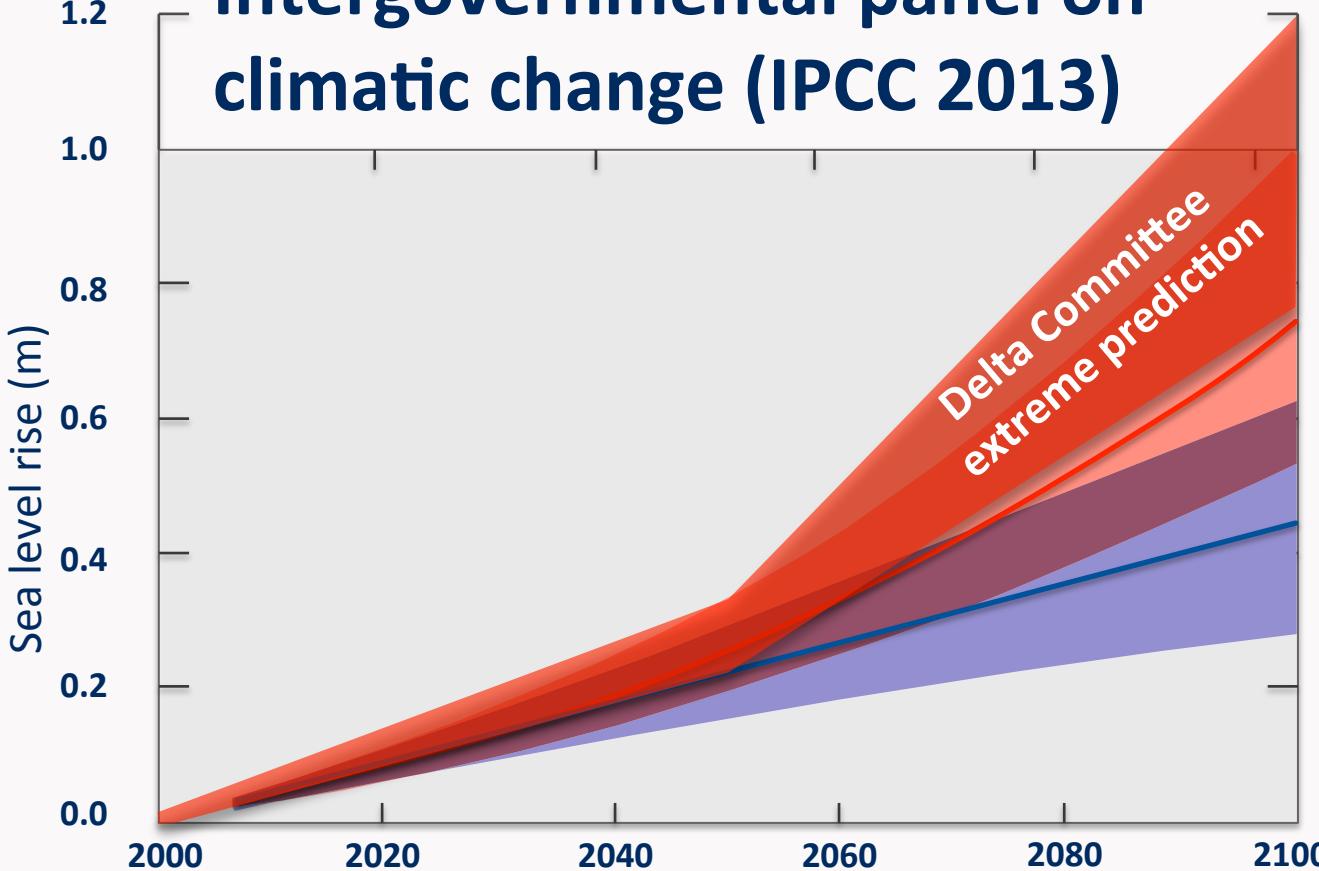
1980

2000

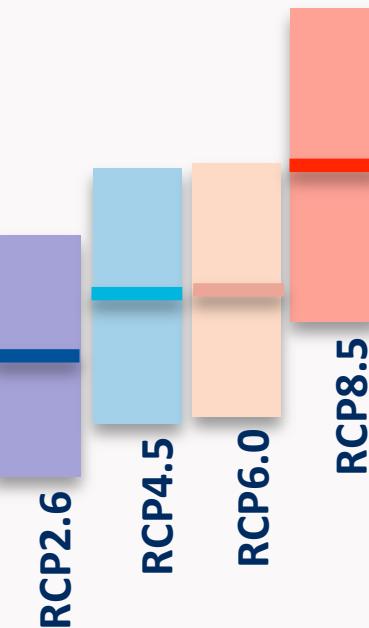
2020

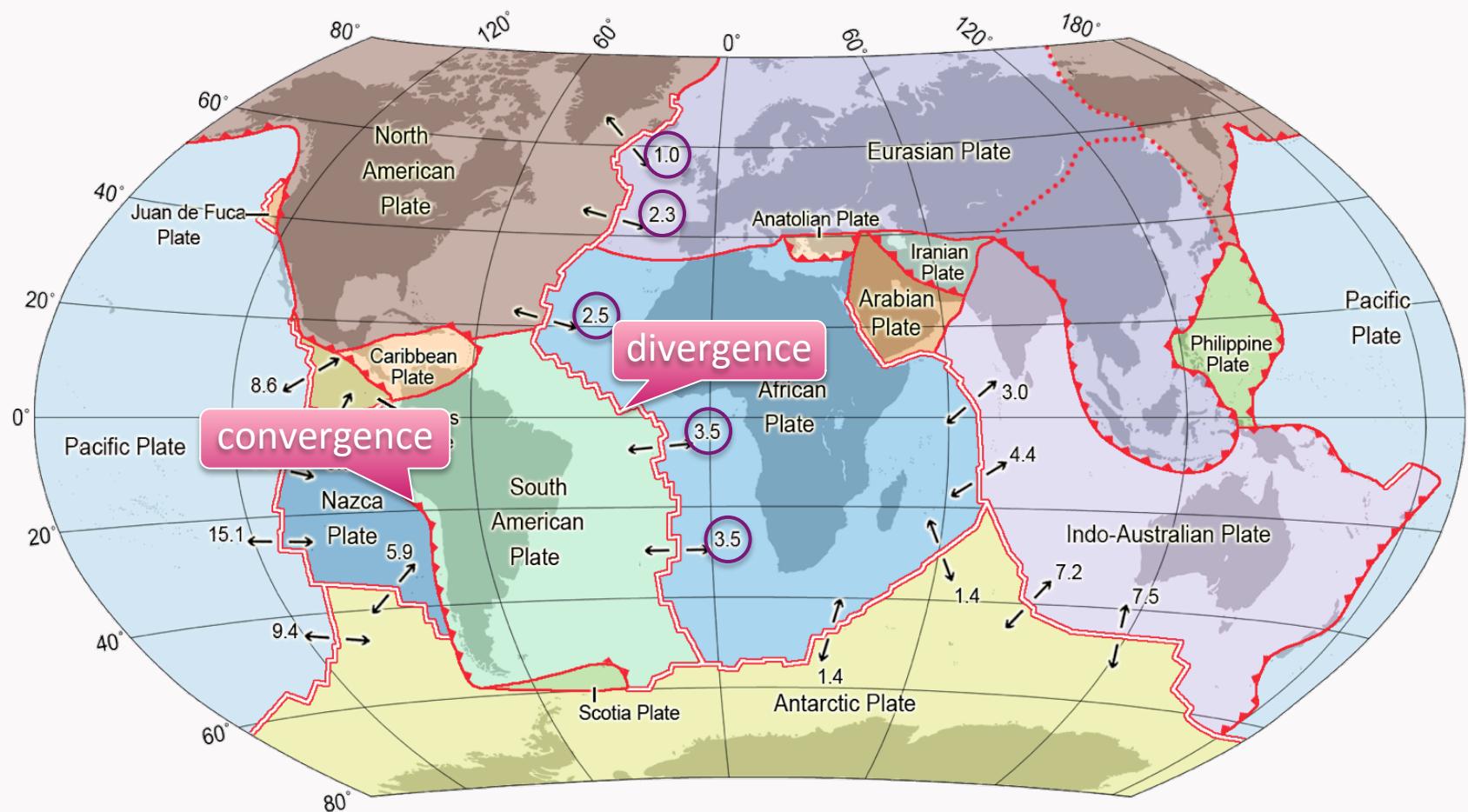


# Intergovernmental panel on climatic change (IPCC 2013)



Mean over 2081 – 2100  
For different scenarios:





divergent boundary

convergent boundary

conservative boundary

suspected boundary

→ 8.6 rate of movement (cm per year)



leading edge



trailing edge



neo



afro



amero



marginal sea



convergent boundary



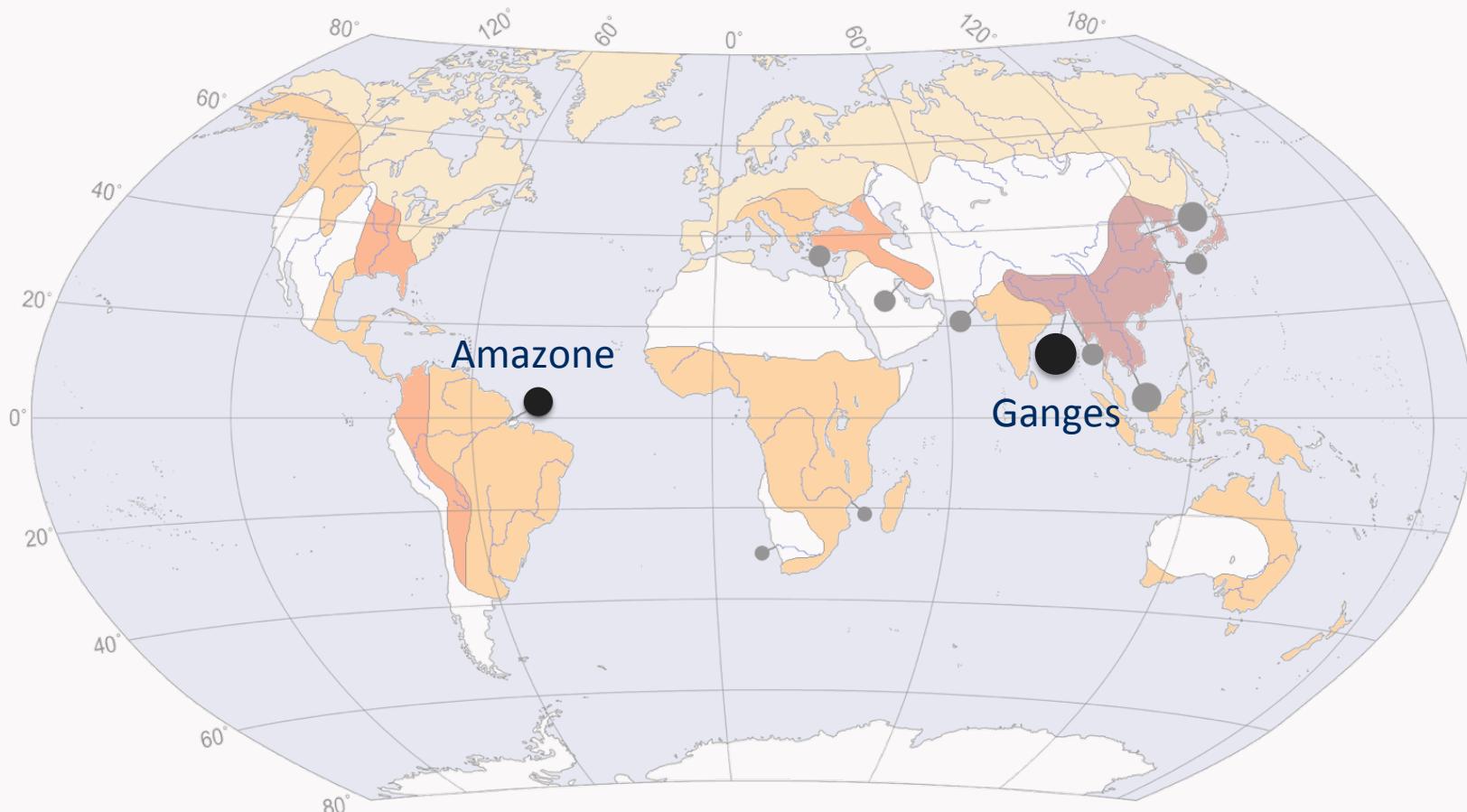
divergent boundary



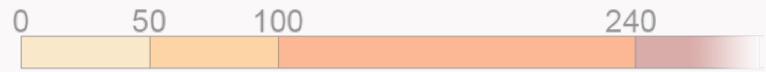
conservative boundary



suspected boundary



water related mechanical erosion (tons/km<sup>2</sup>/year)

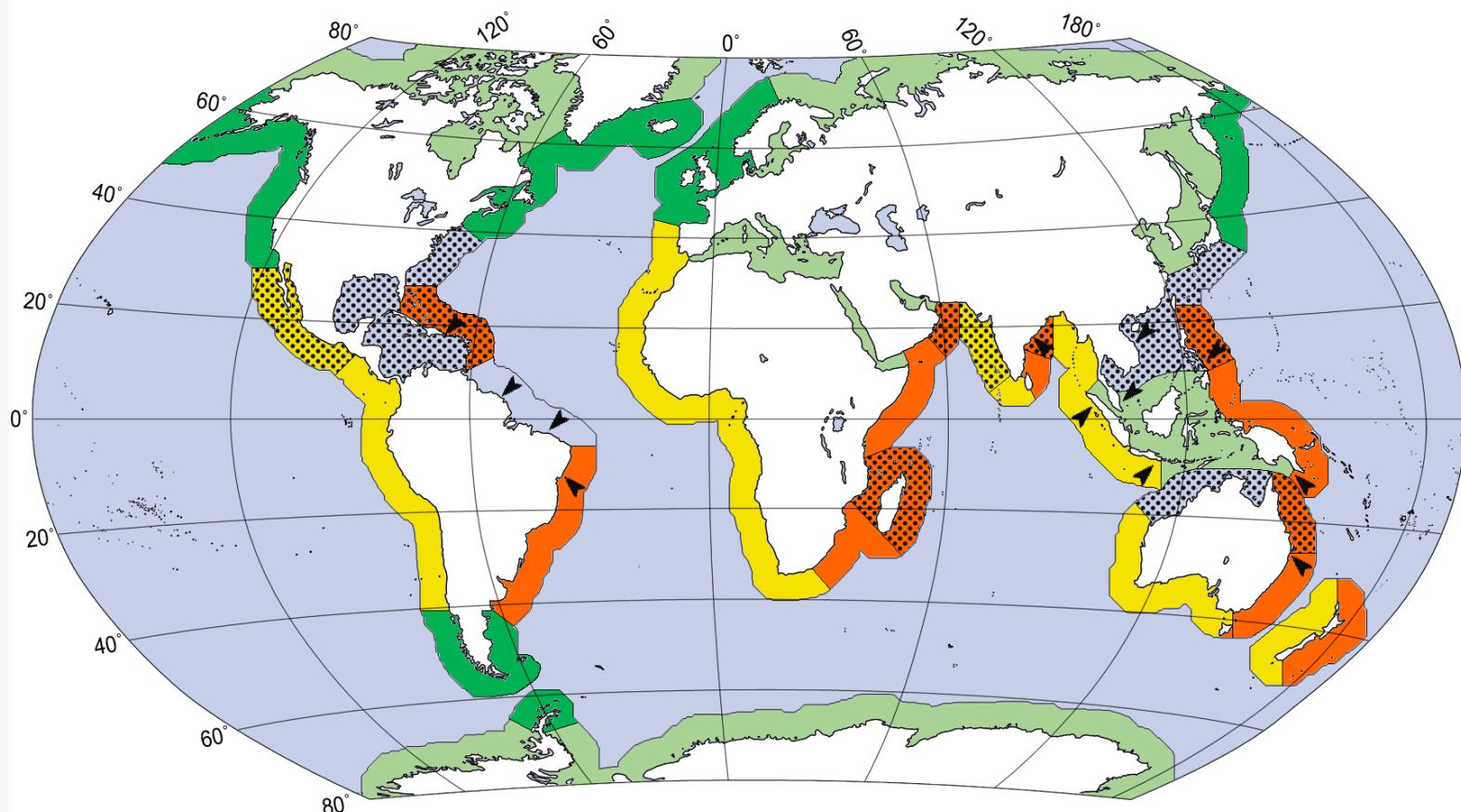


solid discharge ( $10^6$  tons/year)



# What are these factors?

- availability or shortage of sediment
- subsidence leading to relative or local sea level rise



[Yellow square] west coast swell environment  
[Orange square] east coast swell environment  
[Green square] storm wave environment

[Light Green square] protected sea environment  
[Dotted square] tropical cyclone influences  
[Black triangle] trade and monsoon influences

