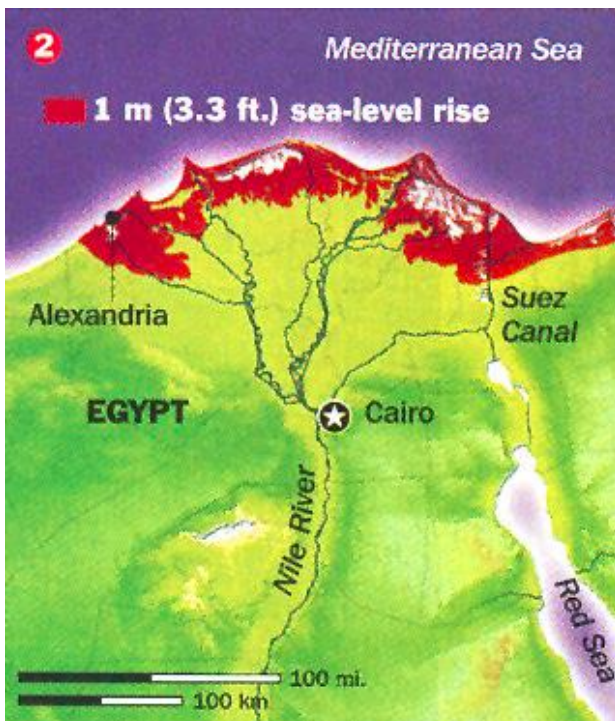


Impact climate change on major world deltas

Vulnerability delta regions:

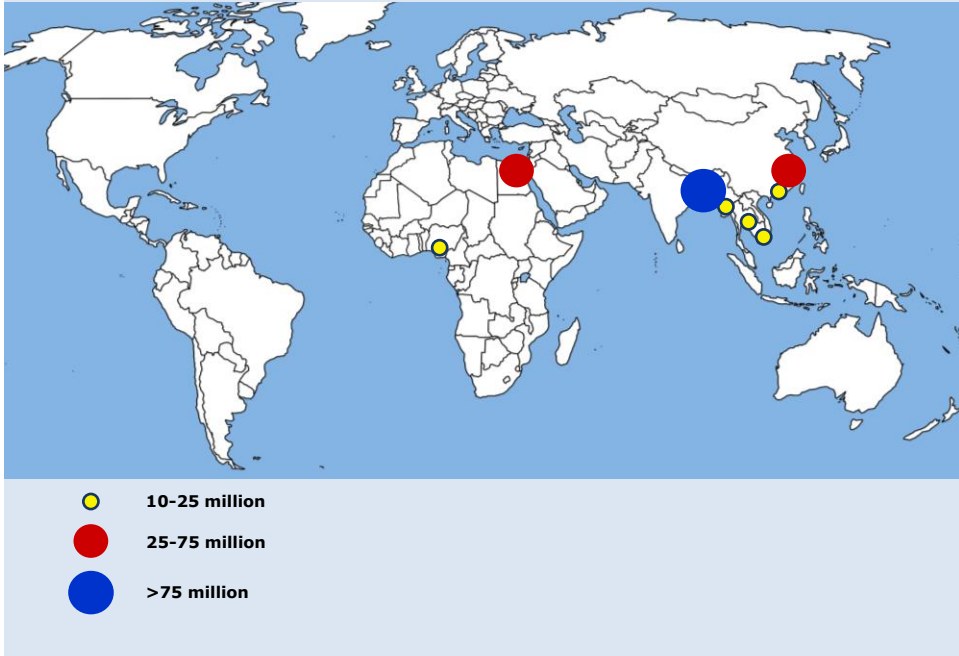
- Low-lying
- High population density
- Groundwater extraction => subsidence
- Reduced river run-off => saline intrusion
- Reduced sediment load => coastal erosion



5th Assessment
Report IPCC
2014

Effects climate
change on Nile
delta: > 10
million people
only 1 m above
sea level

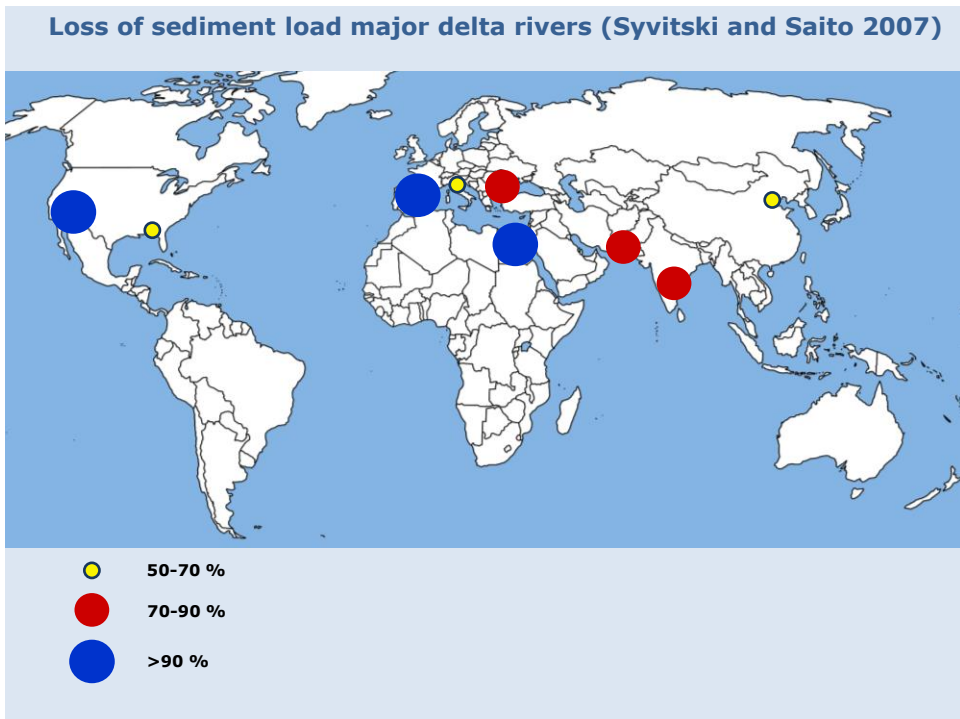
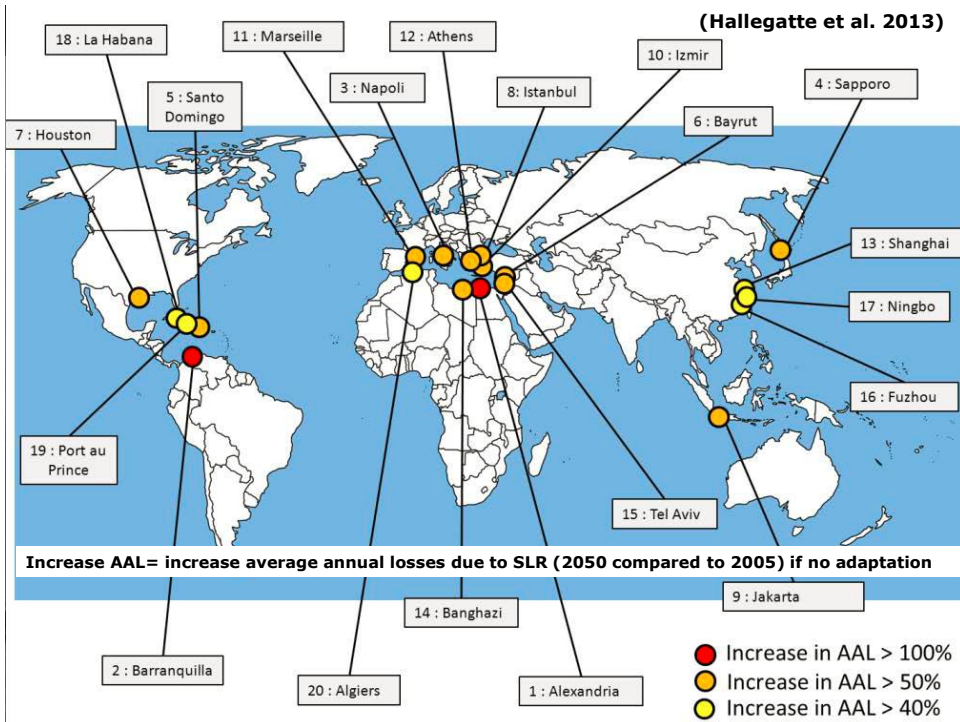
Most populated deltas (de Sherbinin et al. 2007)



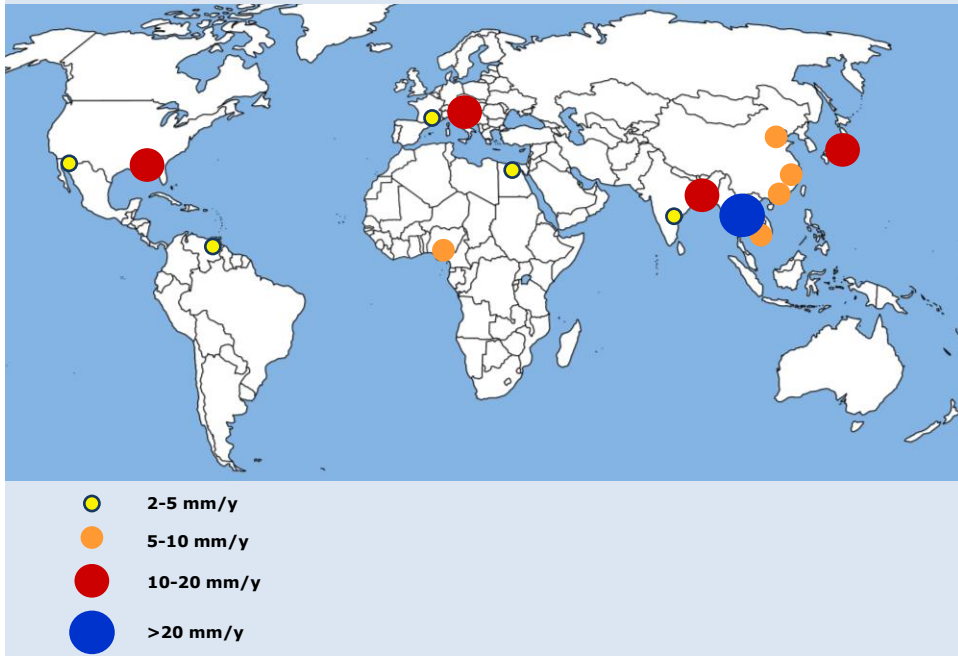
Vulnerability mega-deltas (IPCC AR4)



**Indicative population potentially displaced by current sea-level trends to 2050
(Extreme: > 1 million; High: 50,000 – 1 million; Medium = 5,000 - 50,000)**



Subsidence rates world deltas (Syvitski et al 2009)



Climate change vulnerability

Ranking Nile delta in comparison with major world deltas:

- among the most populated deltas
- highest reduction of sediment discharge
- subsidence enhances effective sea-level rise (uncertainty of estimates)
- among the most vulnerable deltas: flooding risk and economic losses

Major impacts:

- Coastal retreat
- Flooding risk
- Saline intrusion