Disaster risk reduction as an opportunity to advance climate change adaptation

Reducing water related risks: a global perspective

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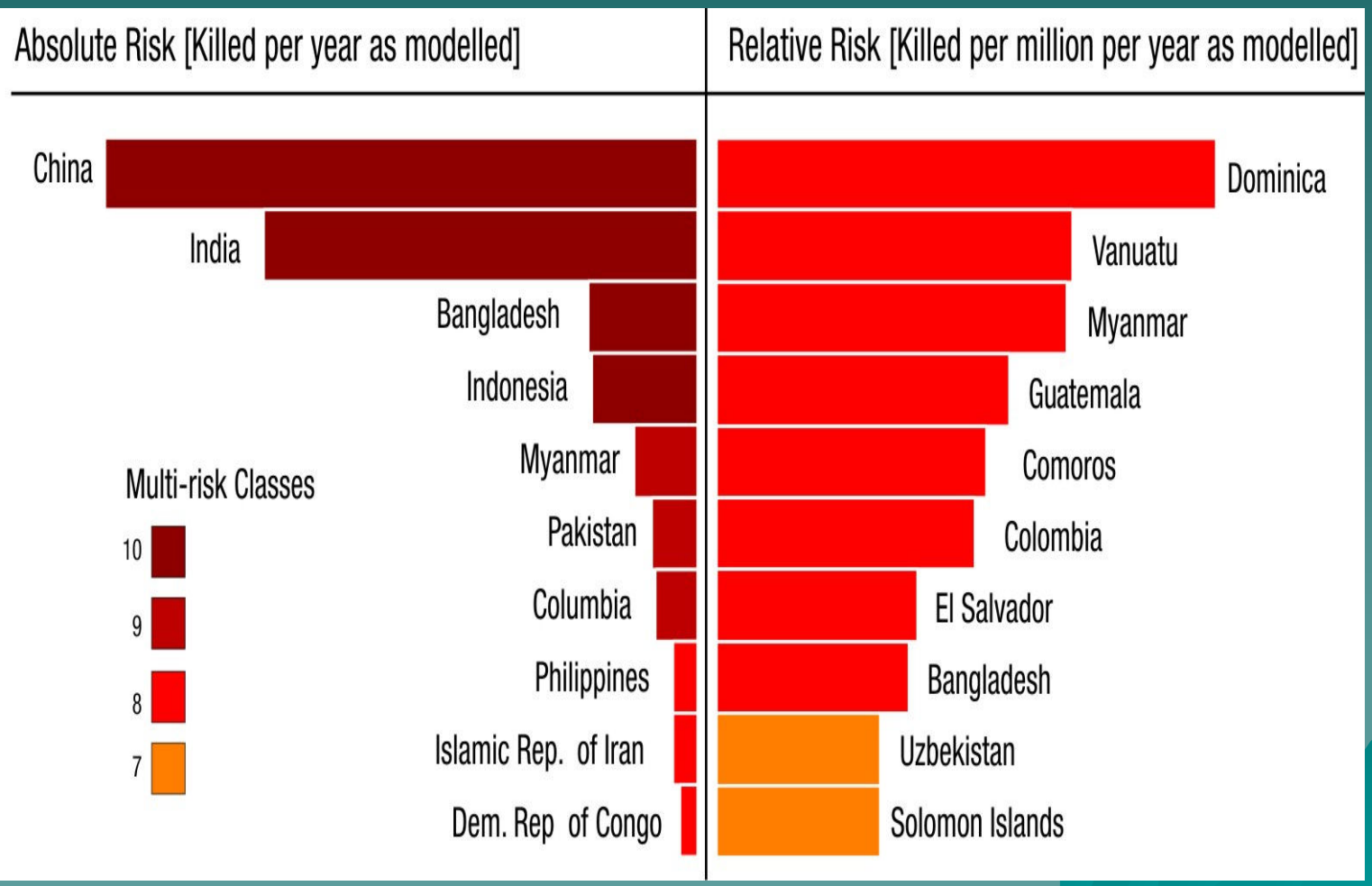
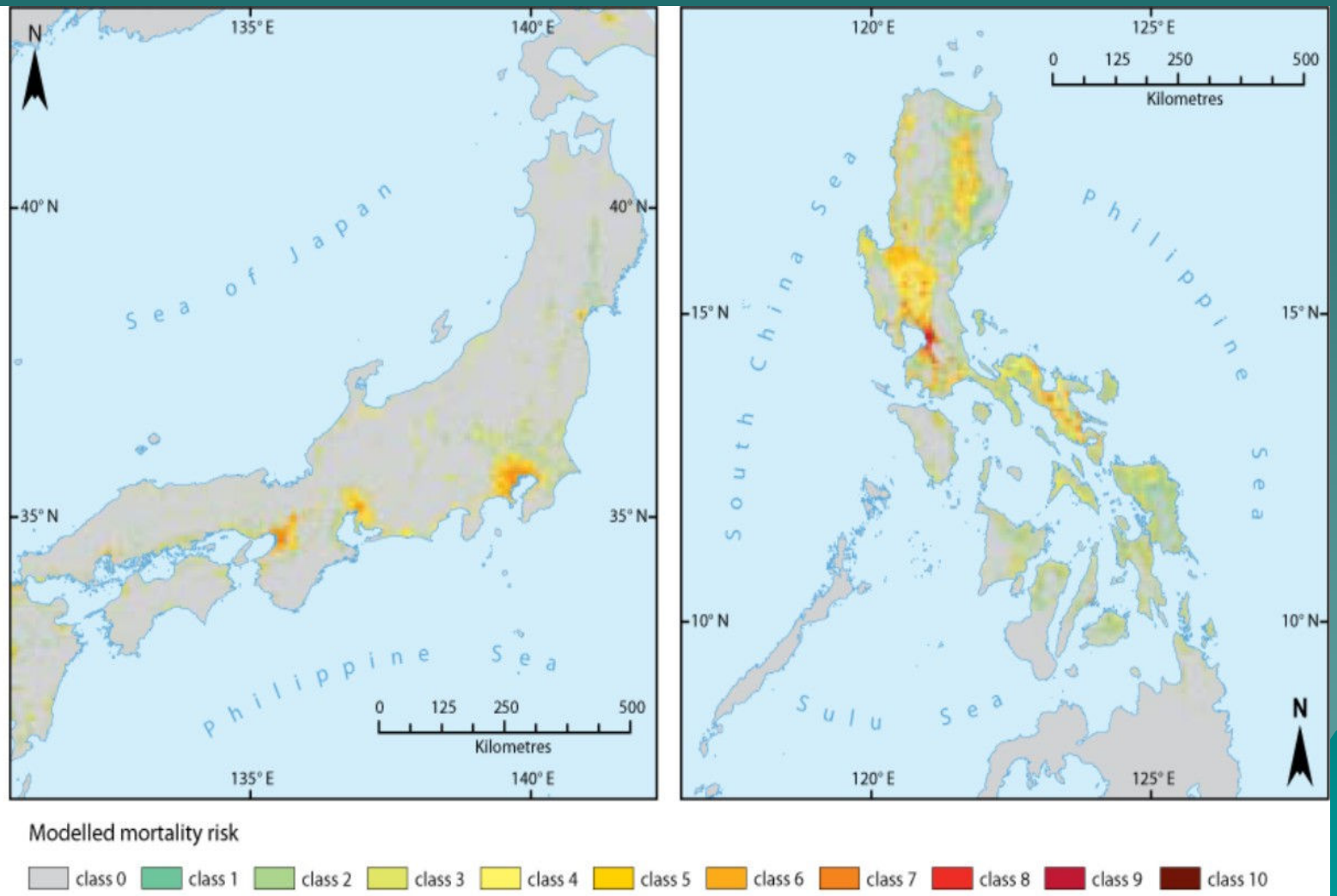
Disaster risk is intensively concentrated

Absolute and relative multi-hazard mortality risk



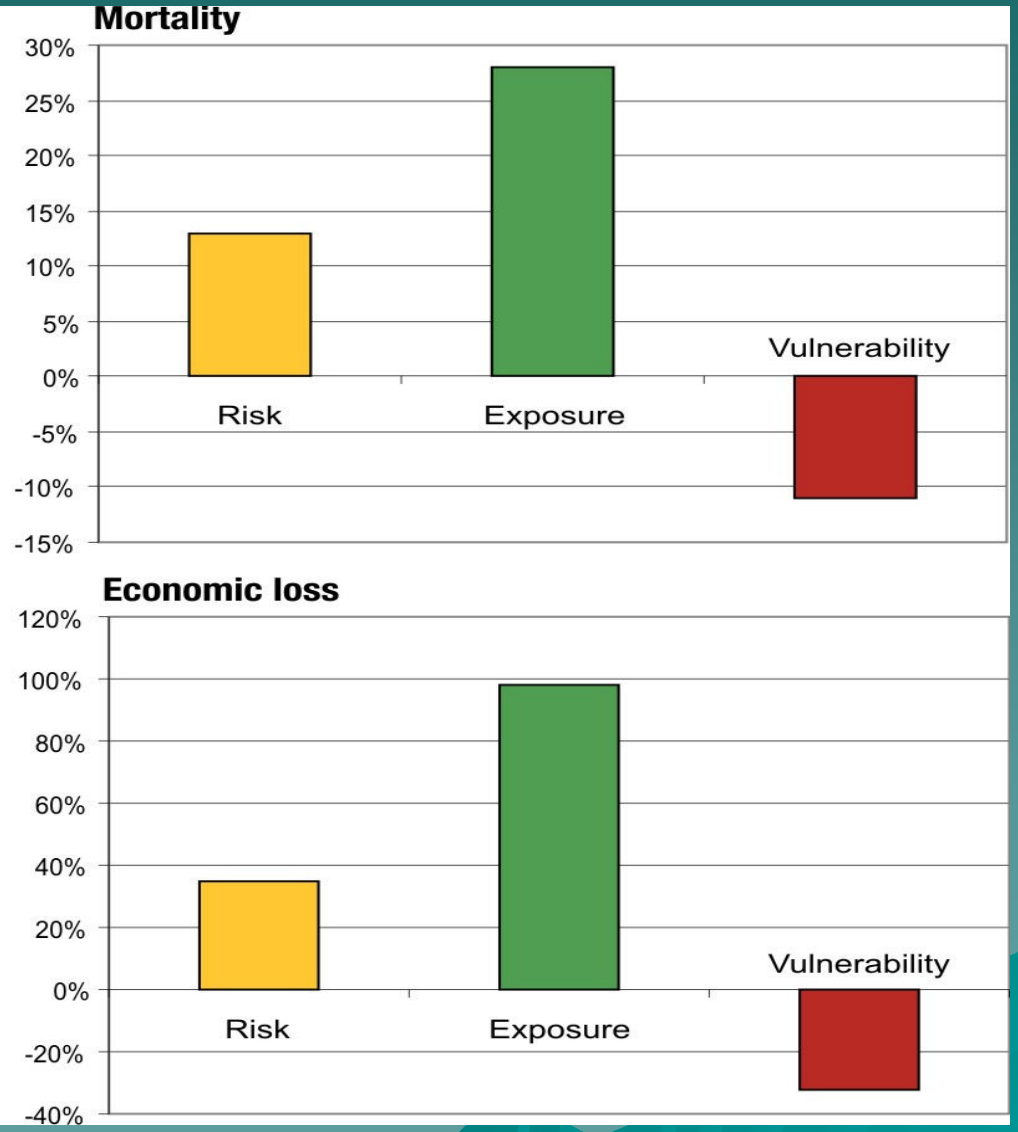
it's unevenly distributed…..

Mortality risk for tropical cyclones in two countries with similar exposure: Japan and the Philippines



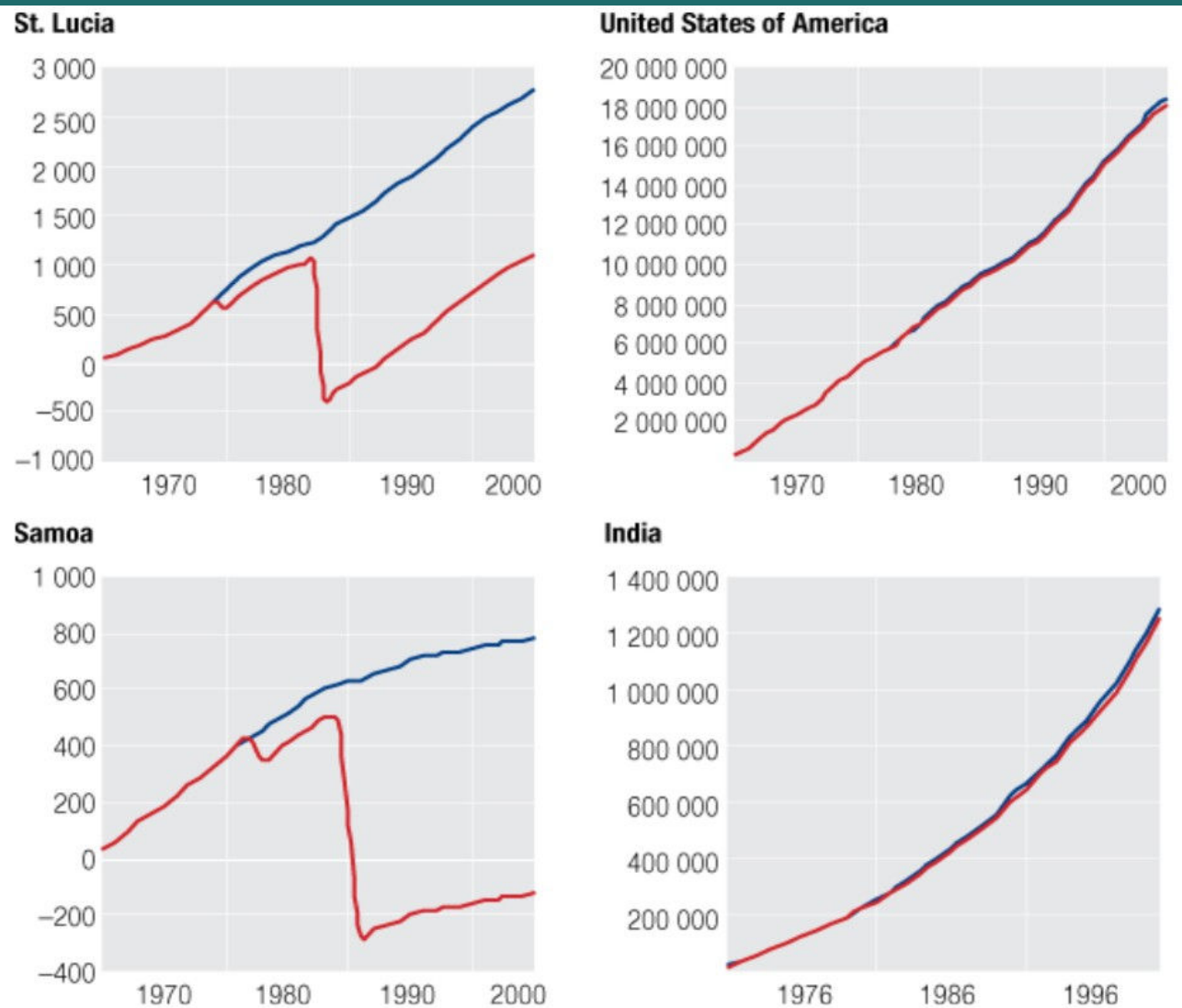
…..is increasing globally

Increase in global flood risk 1990-2007



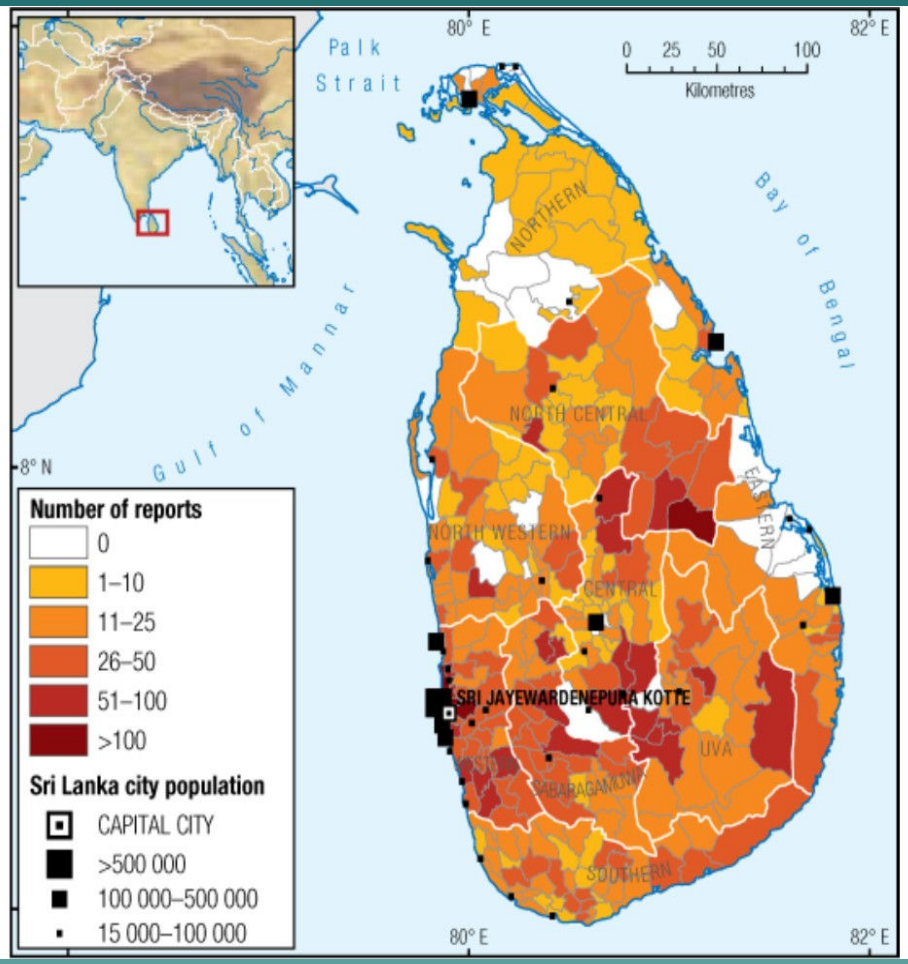
and … hits small countries hardest

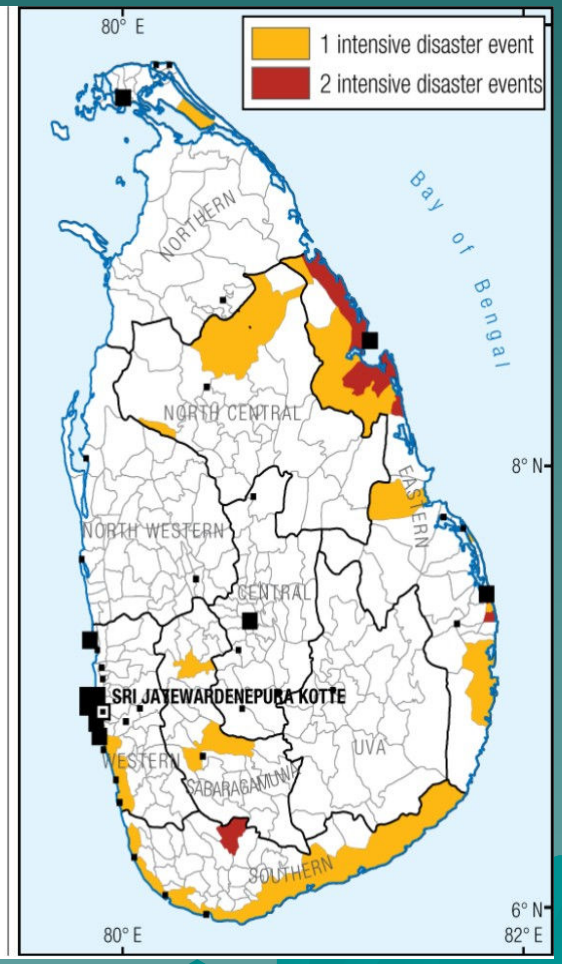
Cumulative net capital formation (NKF) from 1970 to 2006, in Millions of Constant 2000 USD, with and without the effect of economic disaster loss



Risk is also extensively spread

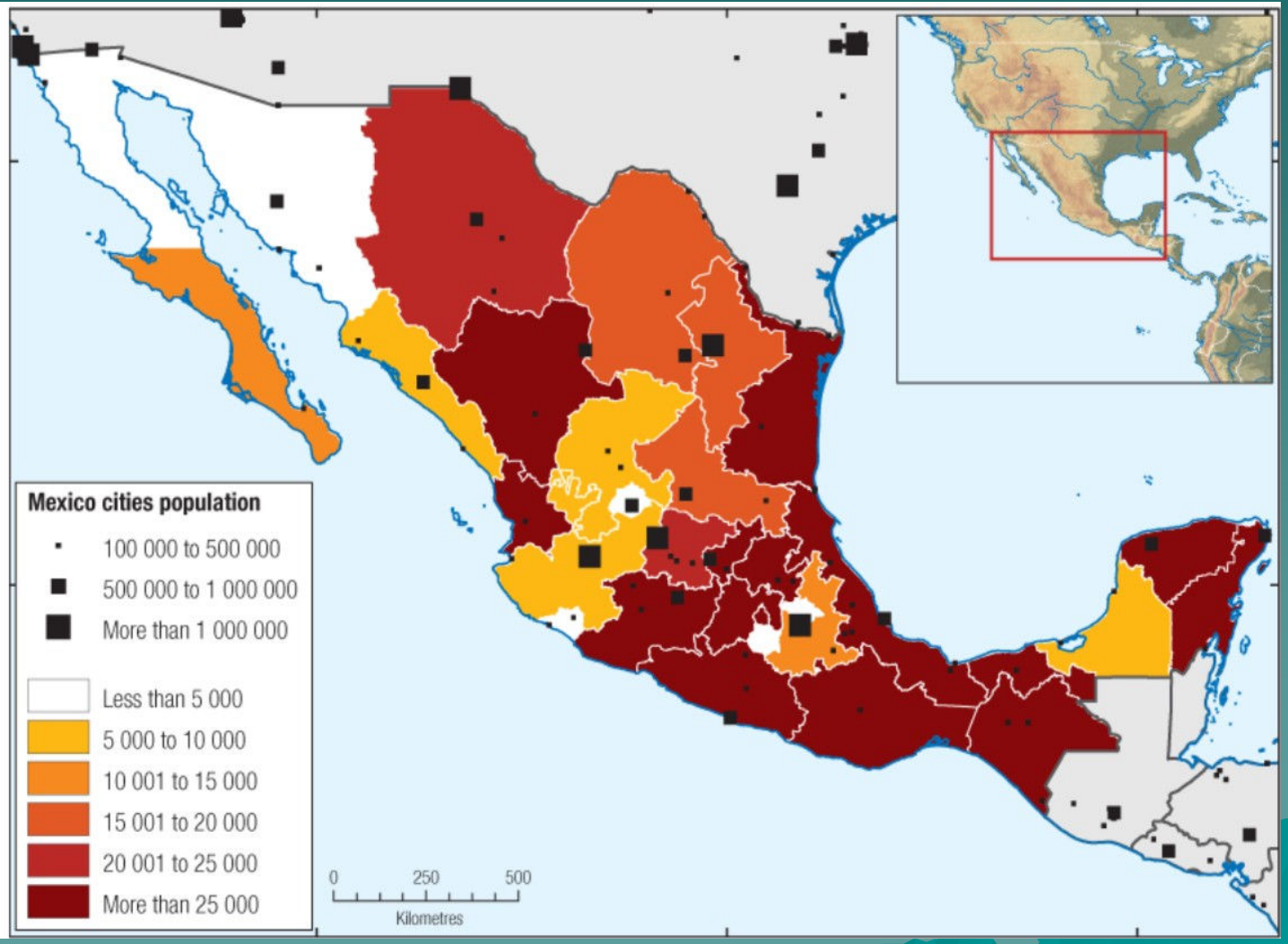
Number of local loss reports with more (right) and less (left) than 50 deaths or 500 destroyed houses 1970 – 2007 in Sri Lanka





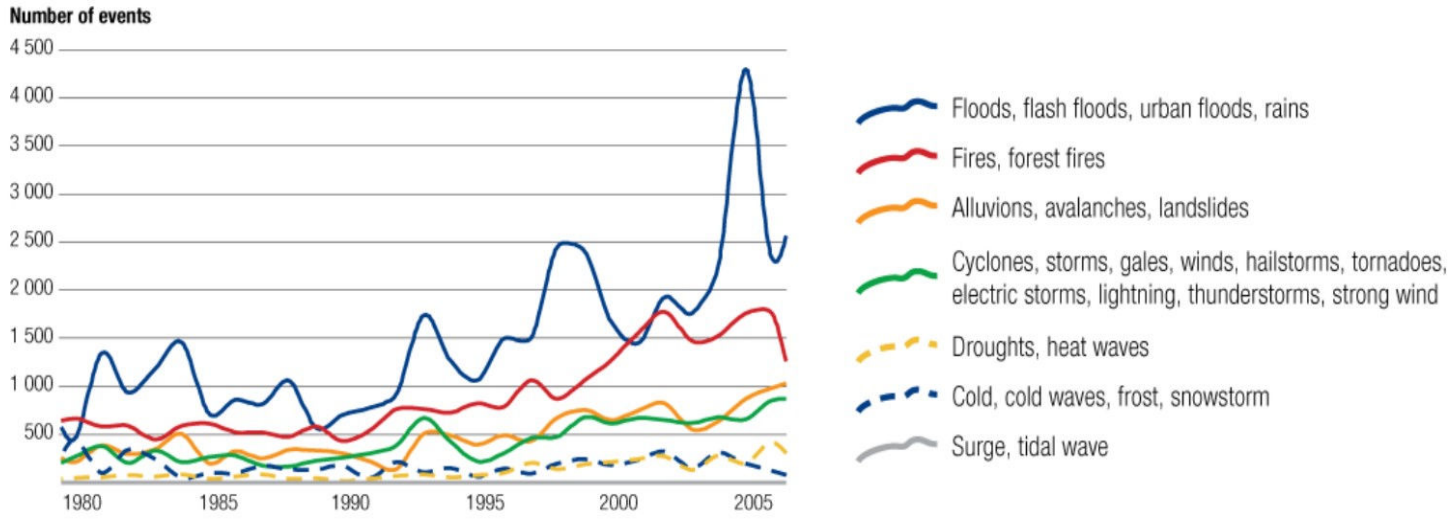
….. feeds back into poverty

Number of houses damaged in Mexico since 1980

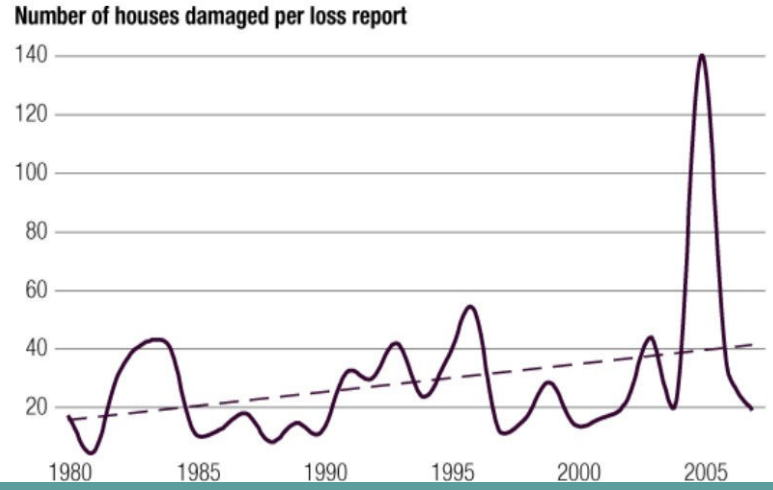


…. and is increasing rapidly

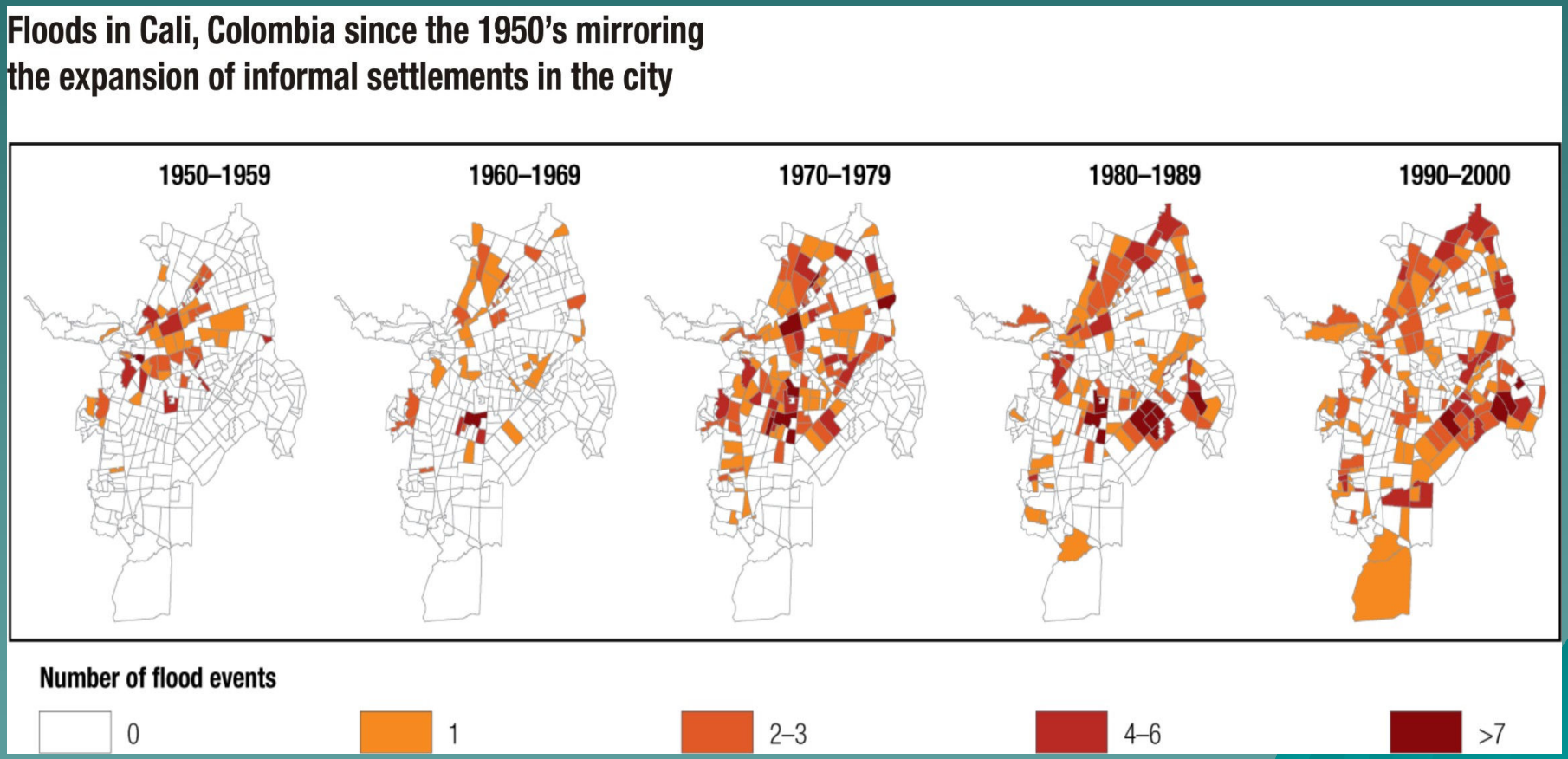
Number of flood and rain extensive risk loss reports (1980–2006)



Extensive weather-related housing damage (1980–2006)

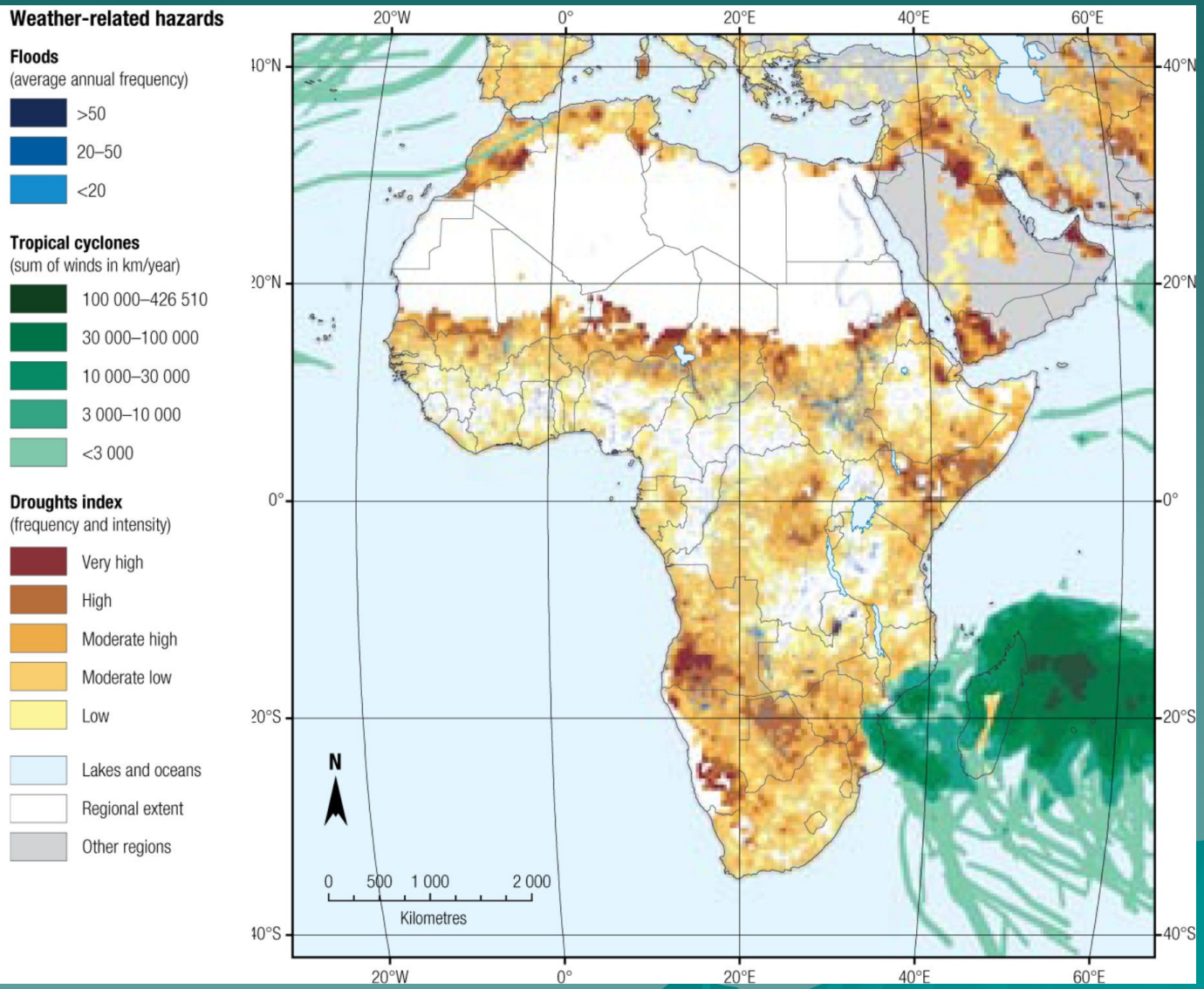


driven by …. deficient urban and local governance

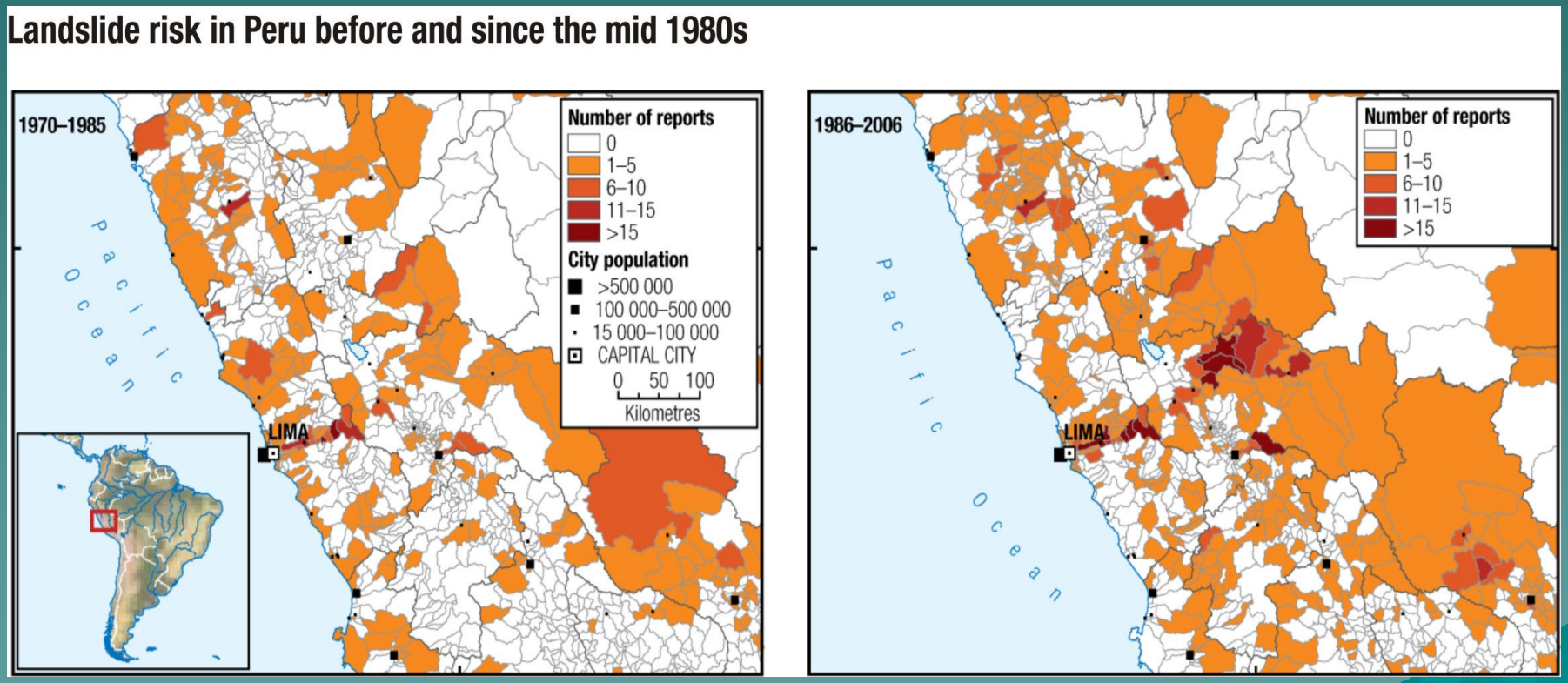


….. vulnerable rural livelihoods

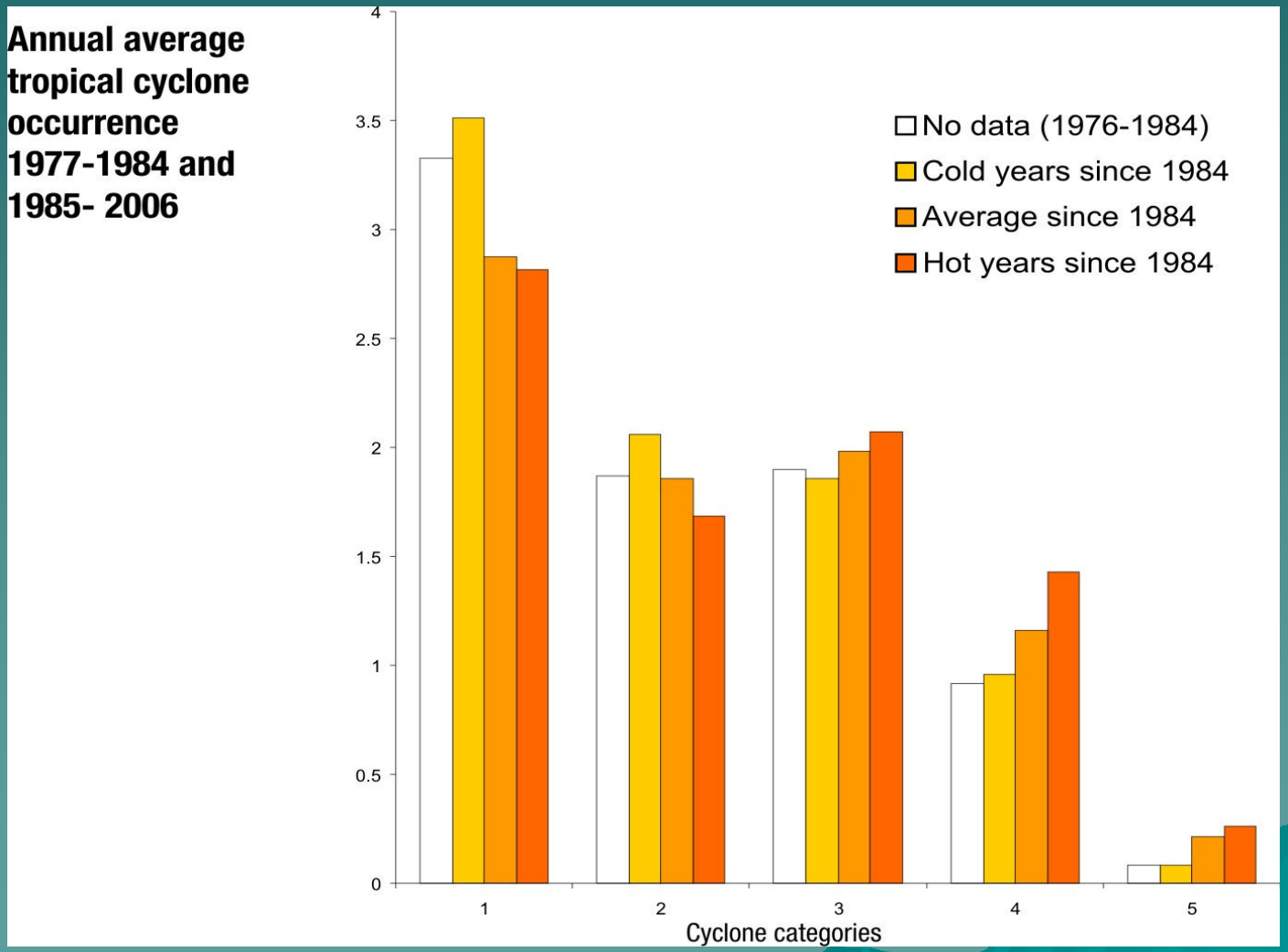
Weather related hazards in Africa



and …. declining ecosystem services



…. magnified by climate change



Key messages

- Address the underlying risk factors to reduce disaster risk and poverty and adapt to climate change
- Evidence: seek more robust measurement of contribution of the different risk factors
- Scale up and institutionalise national level applications (national disaster loss data; probabalistic risk quantification; regression analysis to identify drivers)

Thank you