



Social Dimensions of Climate change

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Implications of Climate Change for Armed Conflict

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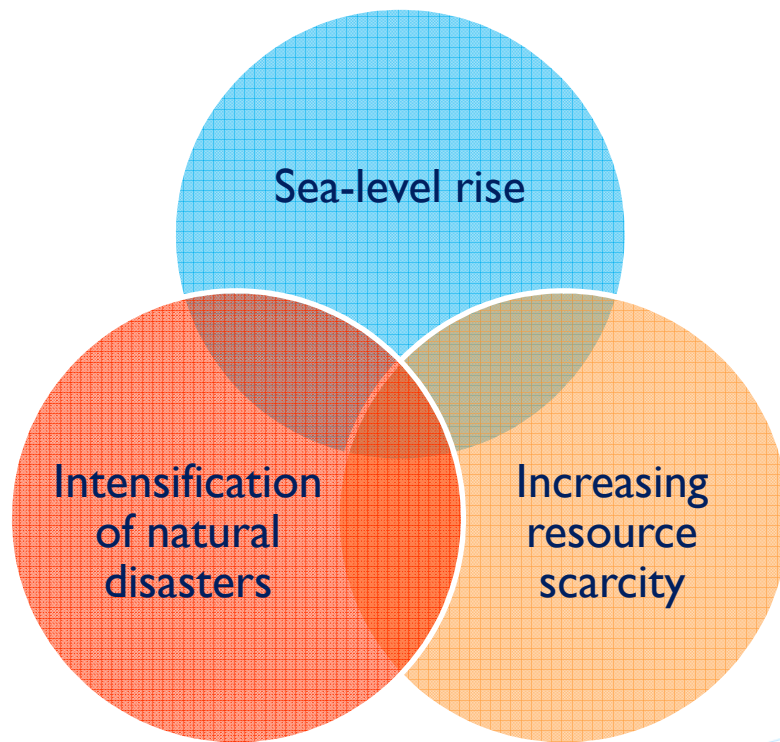
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Motivation

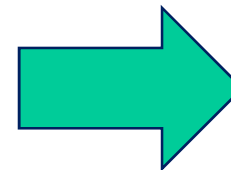
- Climate change is an “all-encompassing threat” to human health, to global food supply, and to peace and security (Annan, 2006)
- “Climate change will help produce [...] insurgencies, genocide, guerrilla attacks, gang warfare, and global terrorism” (Homer-Dixon, 2007)
- Climate change “may induce large-scale migration and lead to greater competition for the earth’s resources”, which may result in “increased danger of violent conflicts and wars, within and between states” (Mjøs, 2007)
- But what do we *really* know about environmental factors and armed conflict?

From climate change to conflict: Step 1

Physical effects:

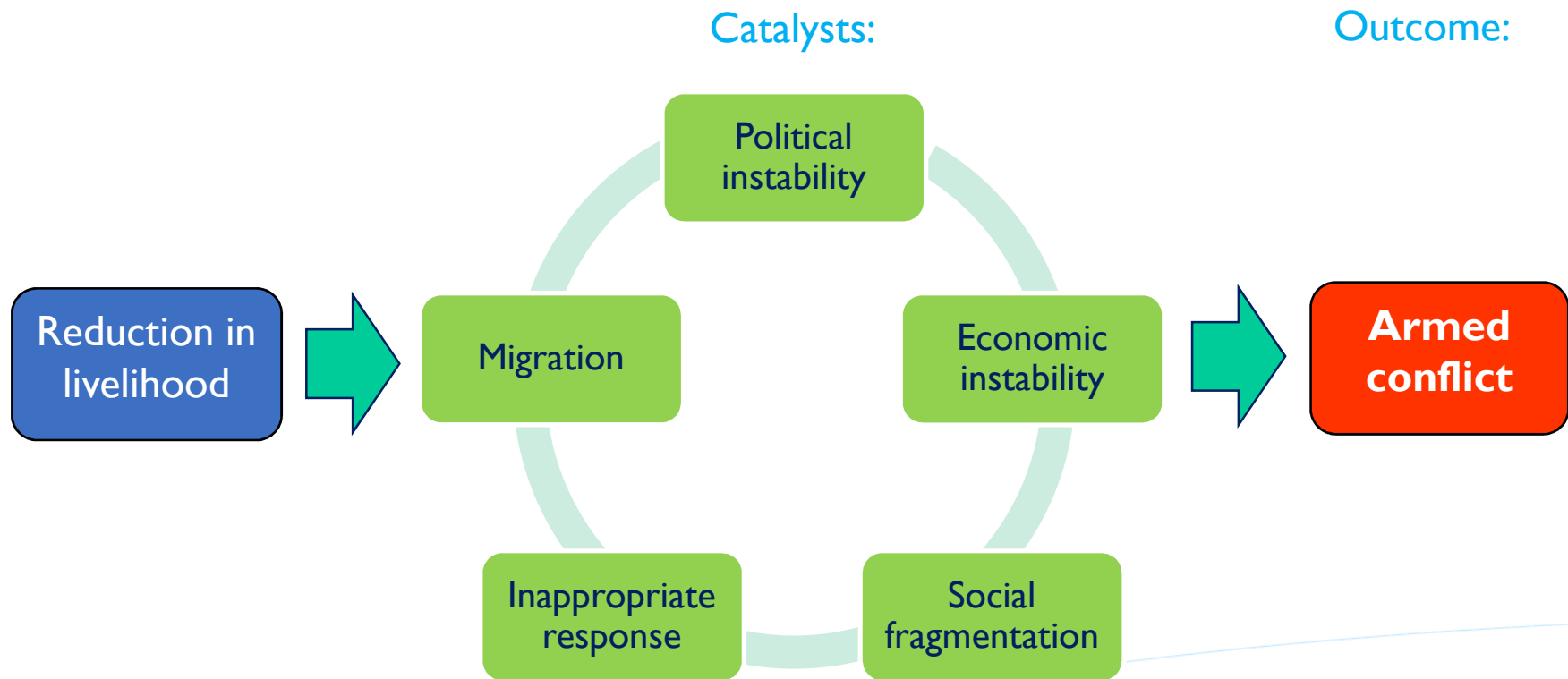


Social effect:



Reduction in livelihood

From climate change to conflict: Step 2





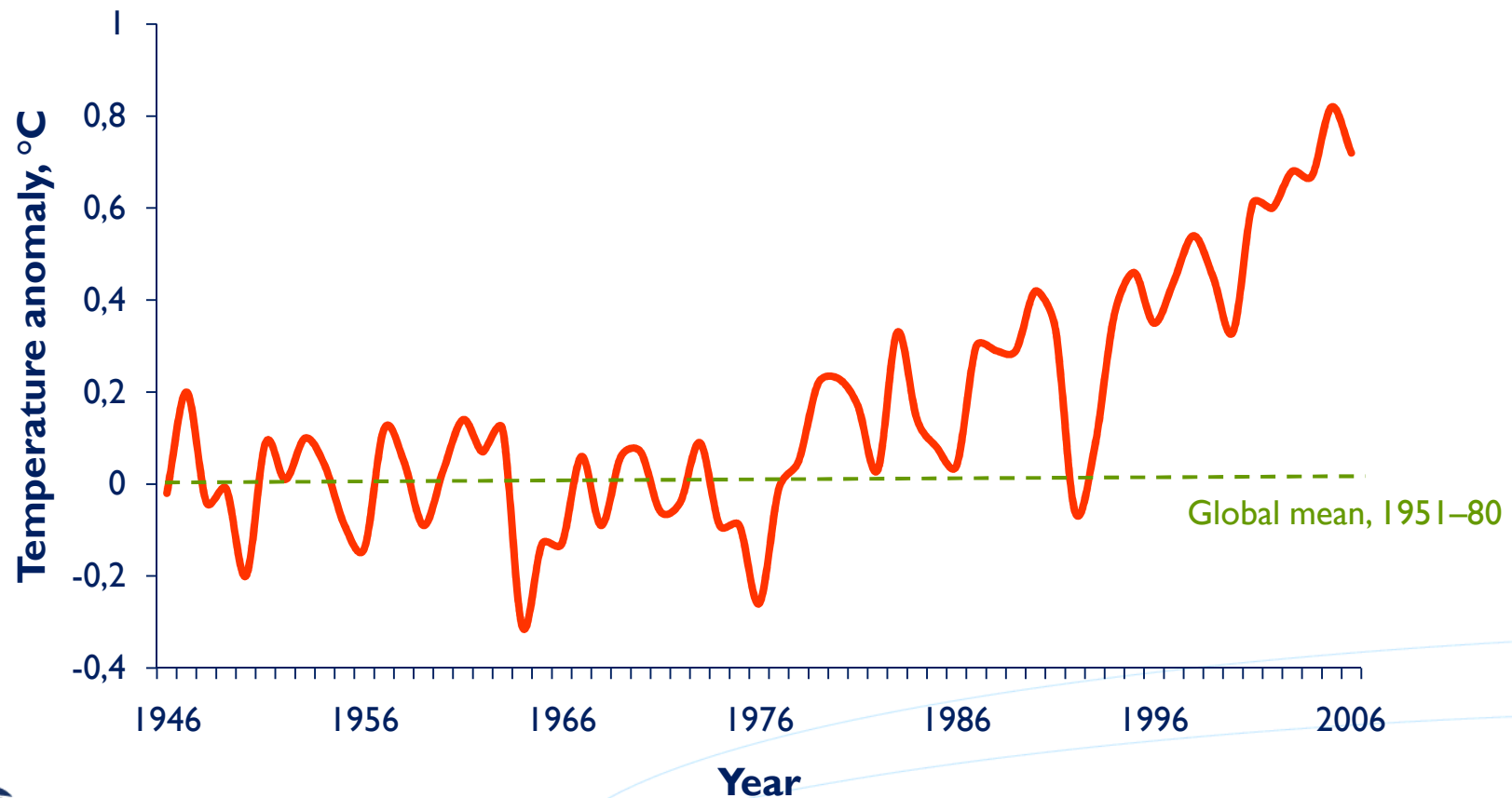
How well do macro-level climatic changes correspond to contemporary trends in armed conflict?



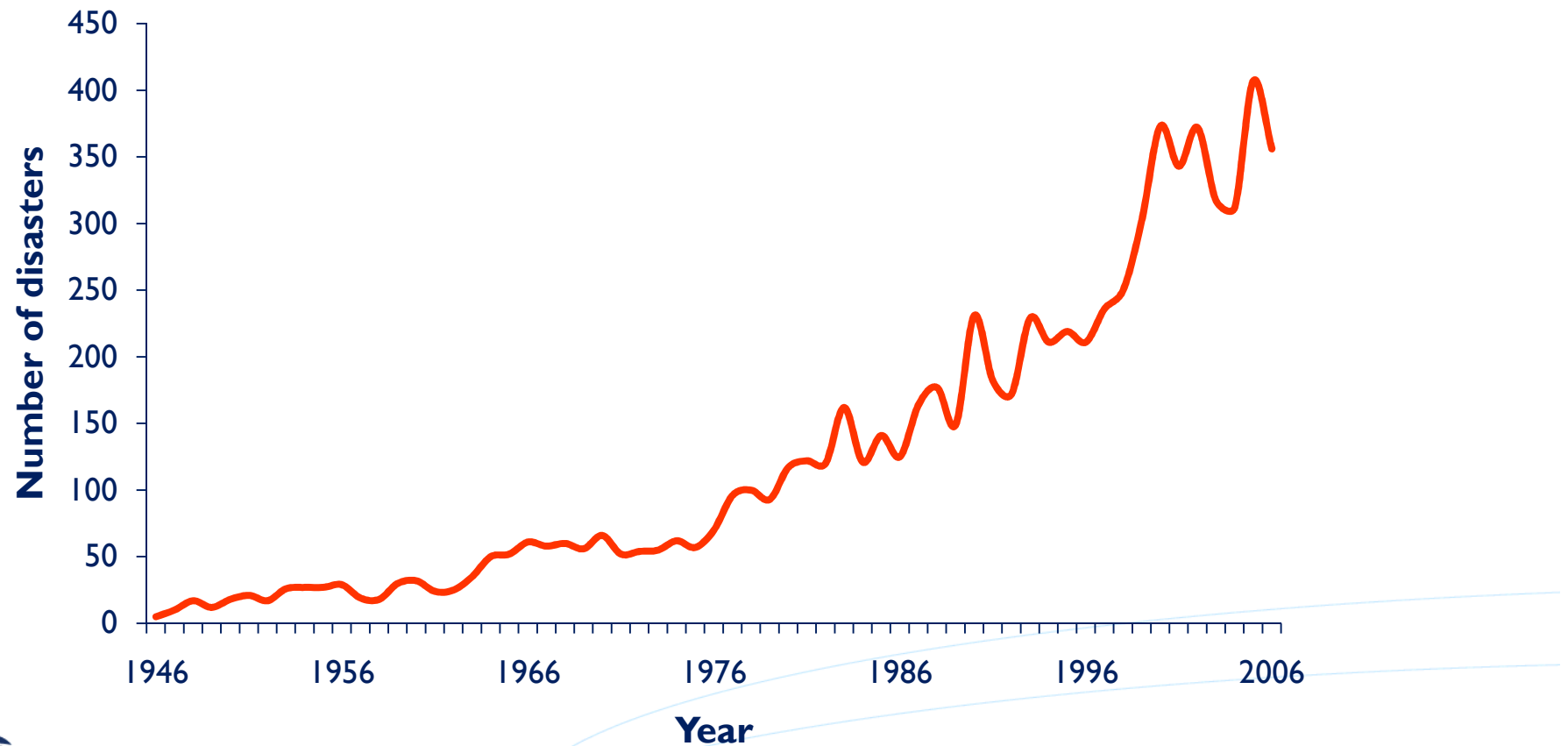
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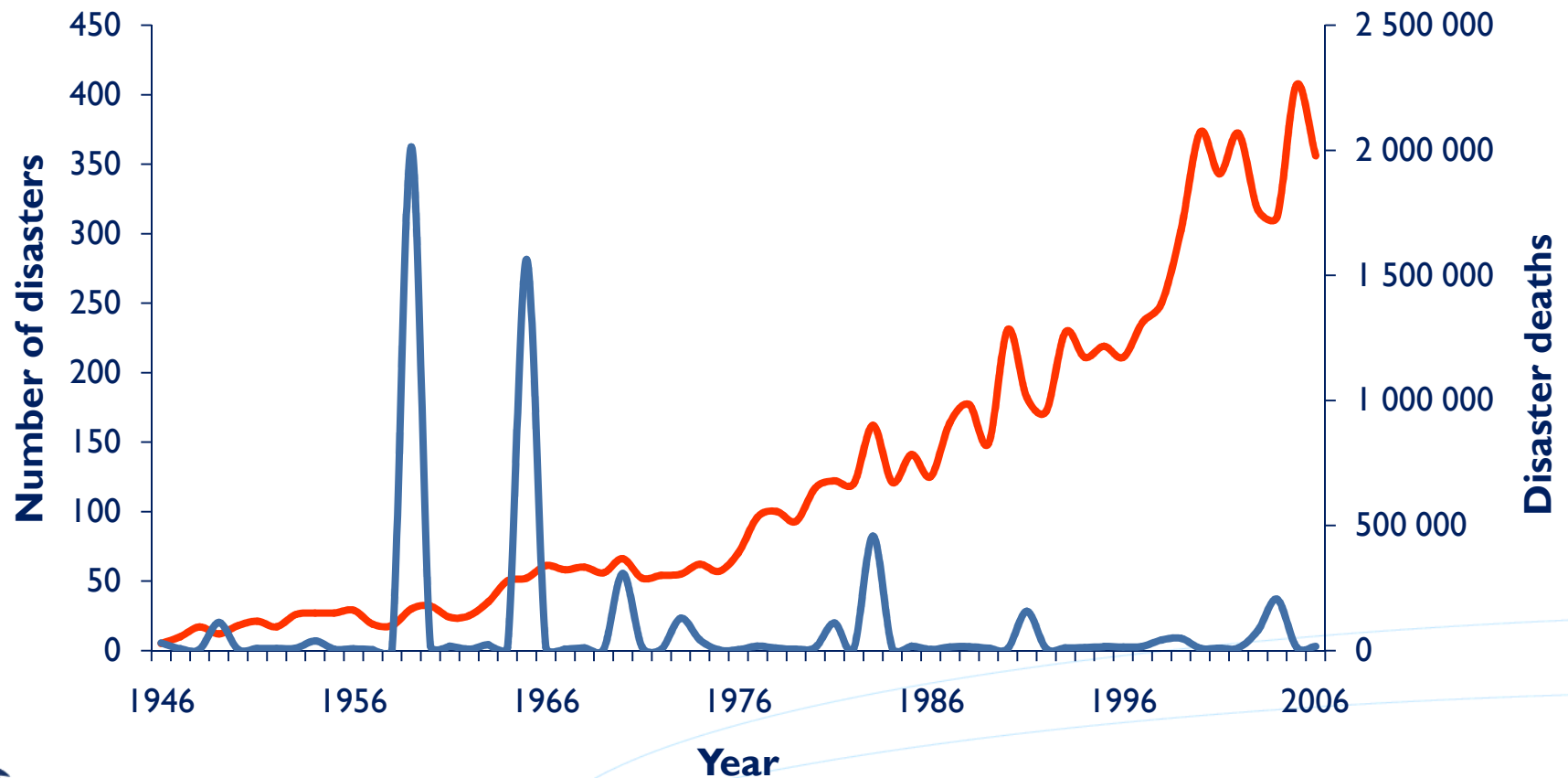
Trends in global mean temperature since 1946



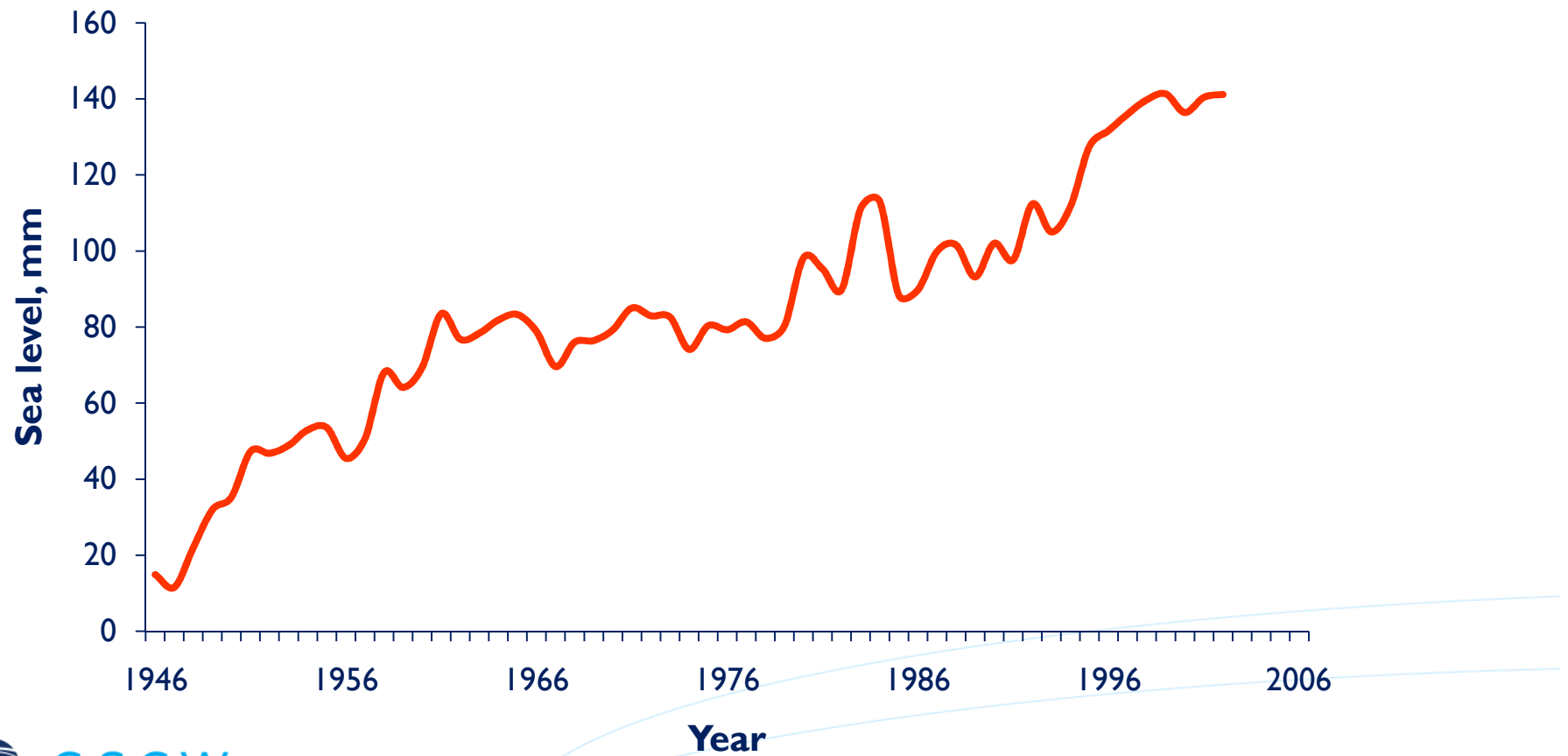
Trends in climatic disasters since 1946



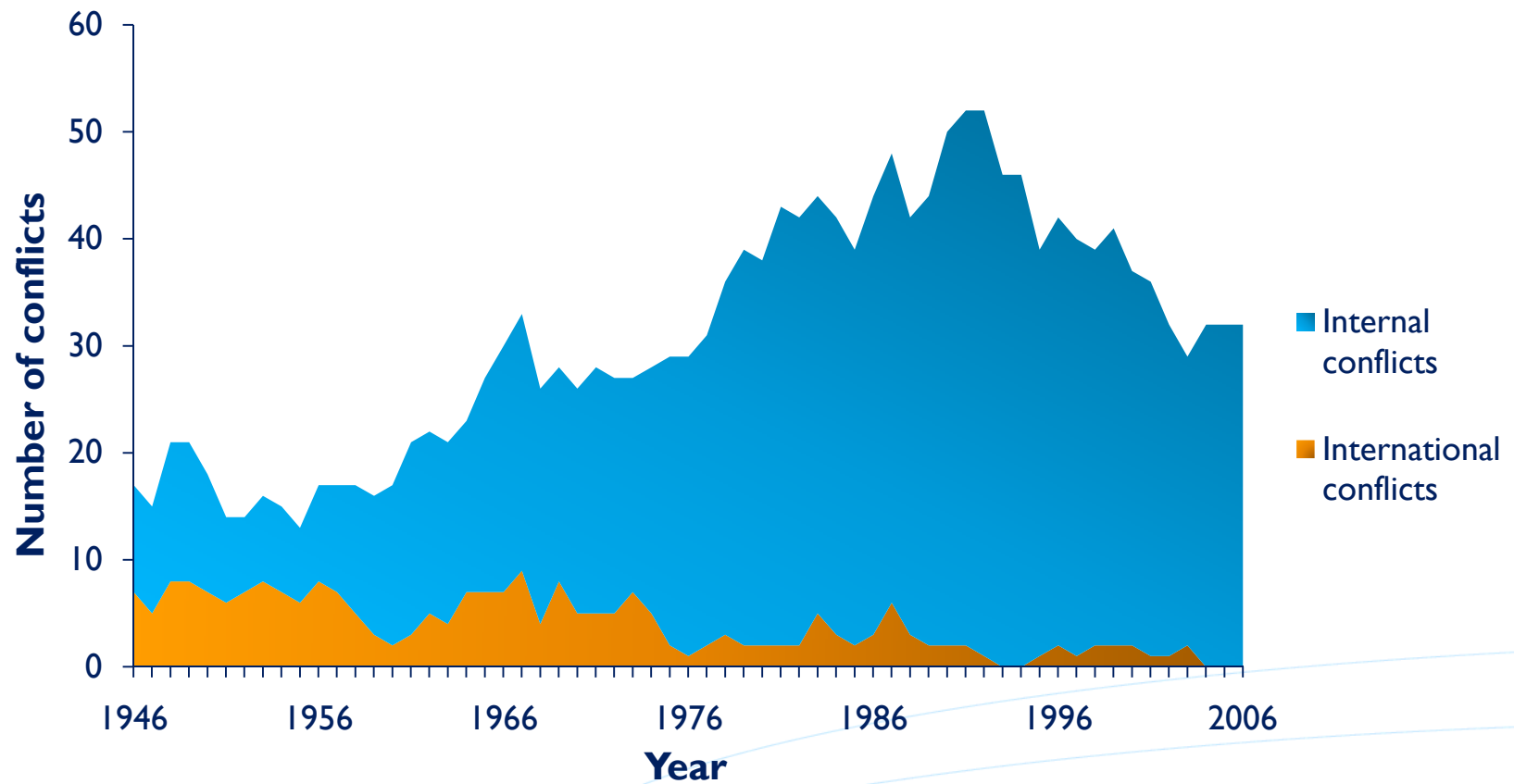
Trends in climatic disasters since 1946



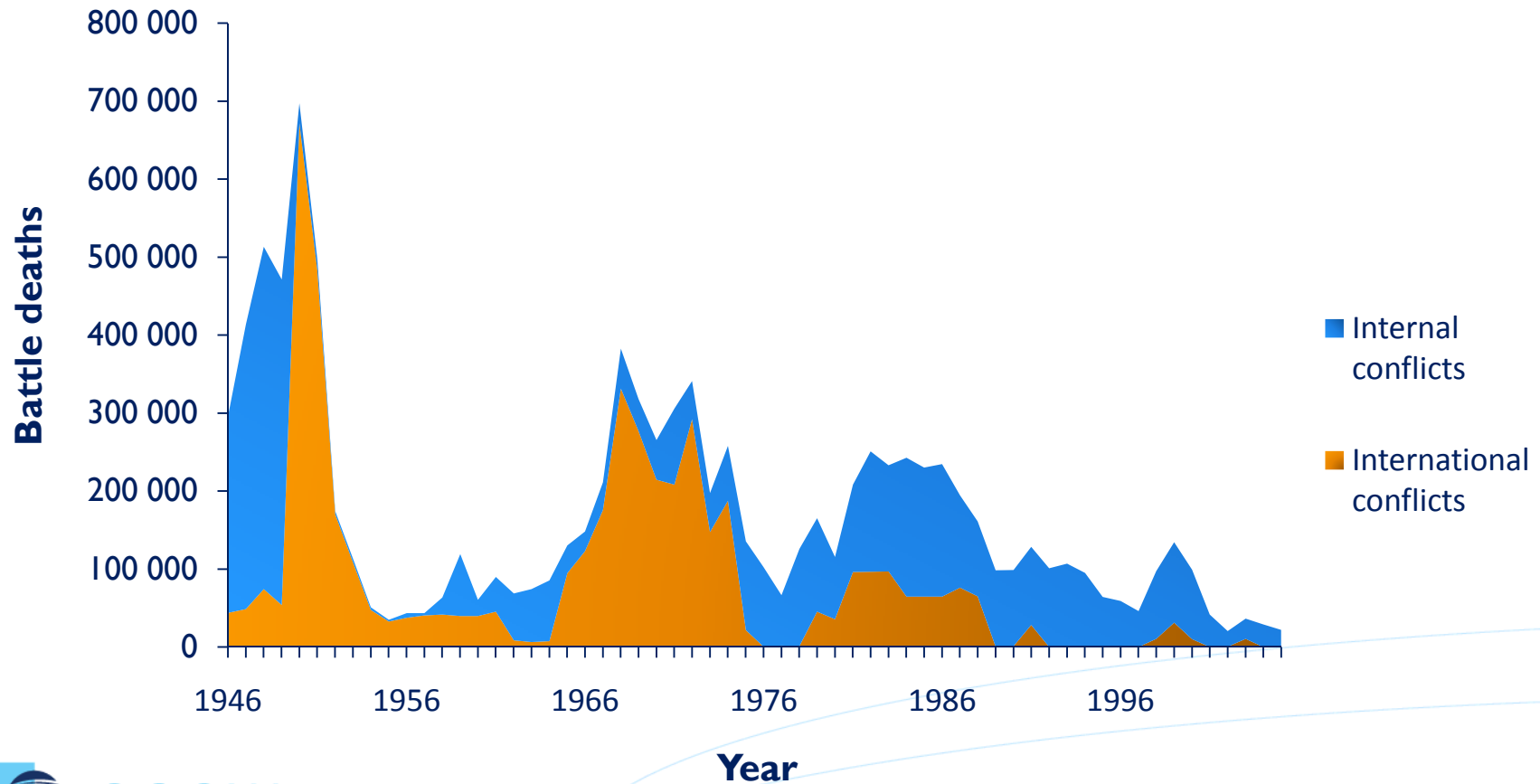
Trends in sea-level rise since 1946



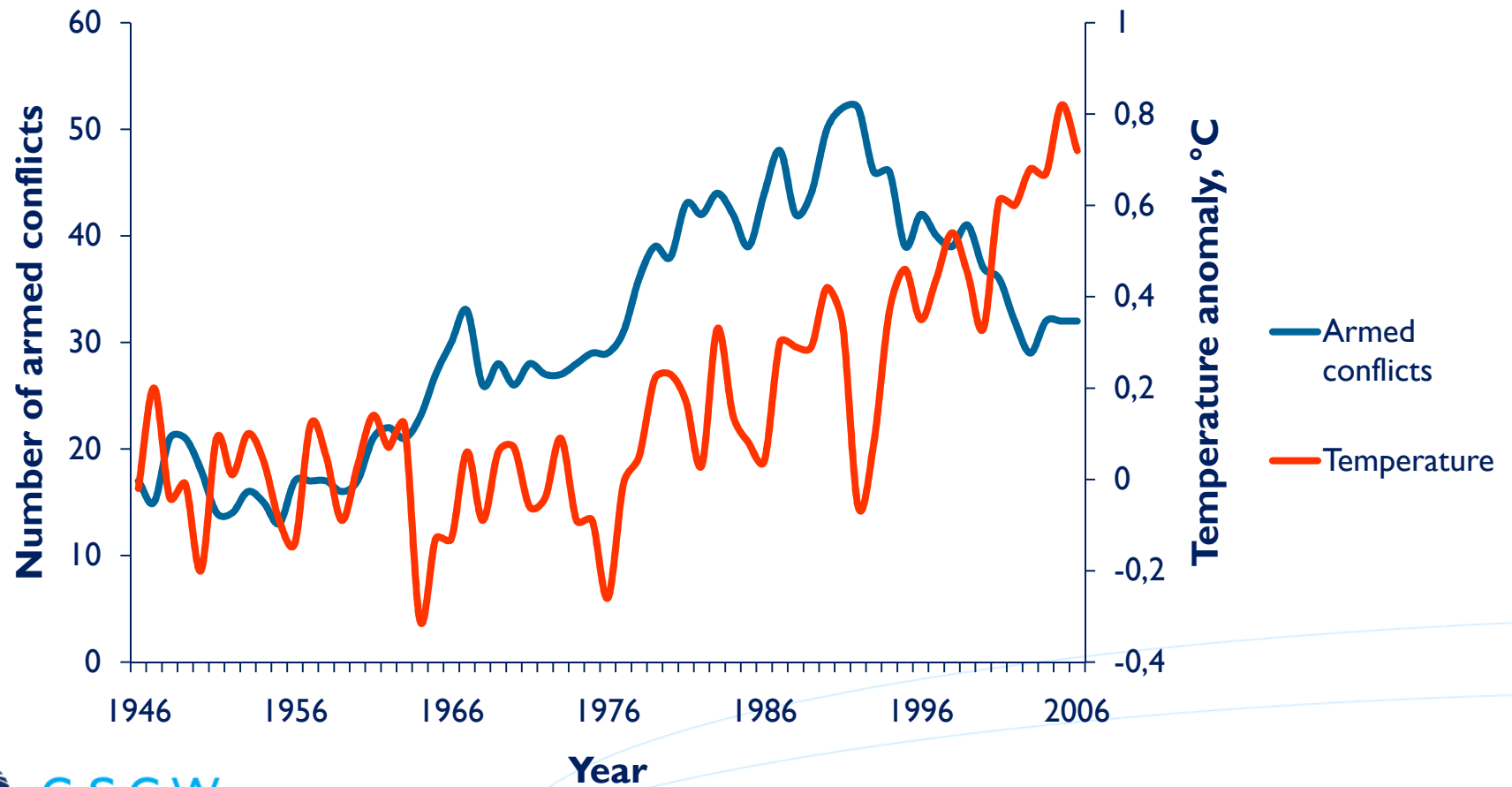
Trends in armed conflict since 1946



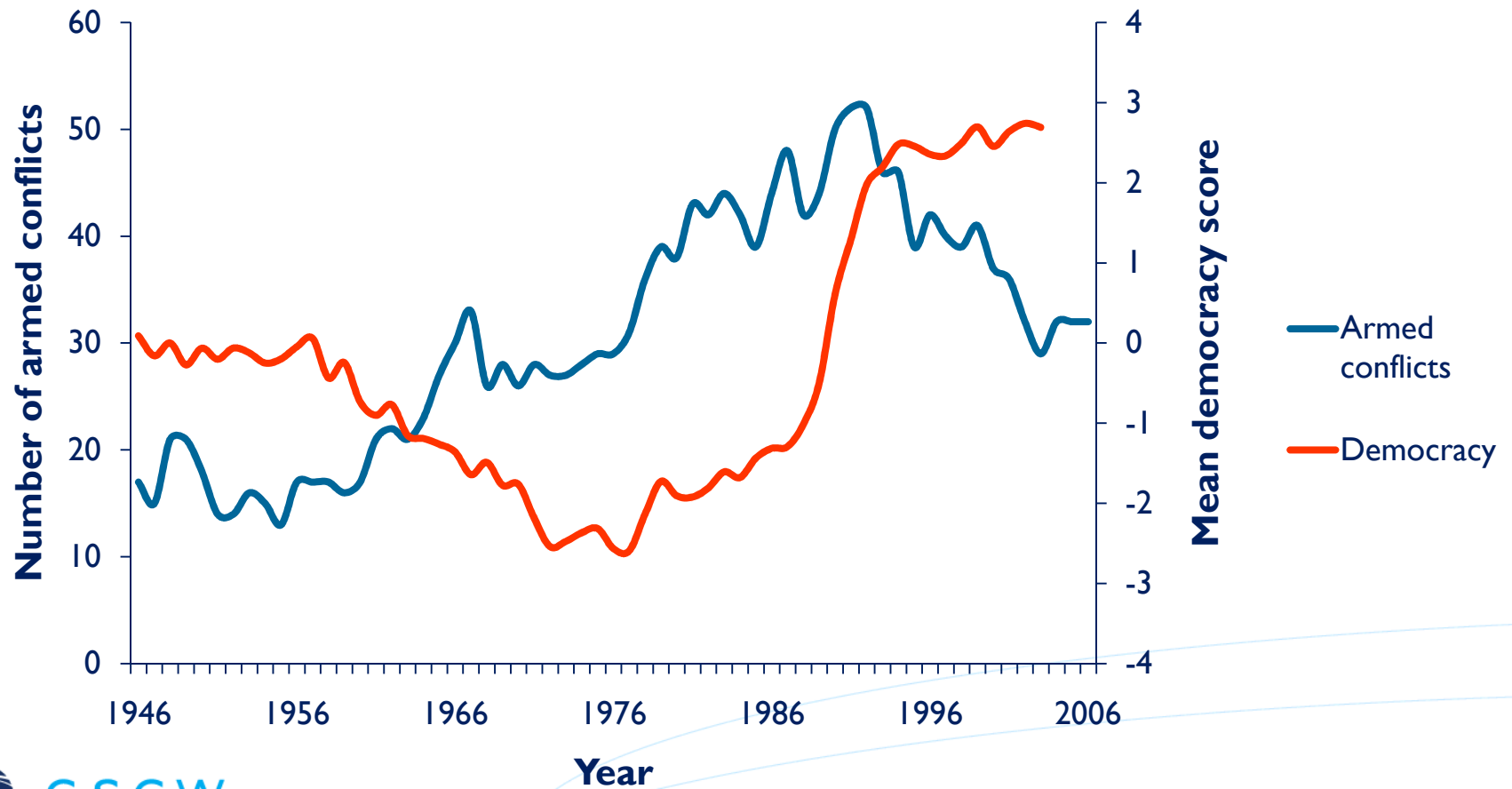
Trends in conflict severity since 1946



Comparing the trends



Tracing armed conflict and democracy





*To what extent is the proposed link between the environment
and armed conflict supported by empirical evidence?*

Evaluating the evidence

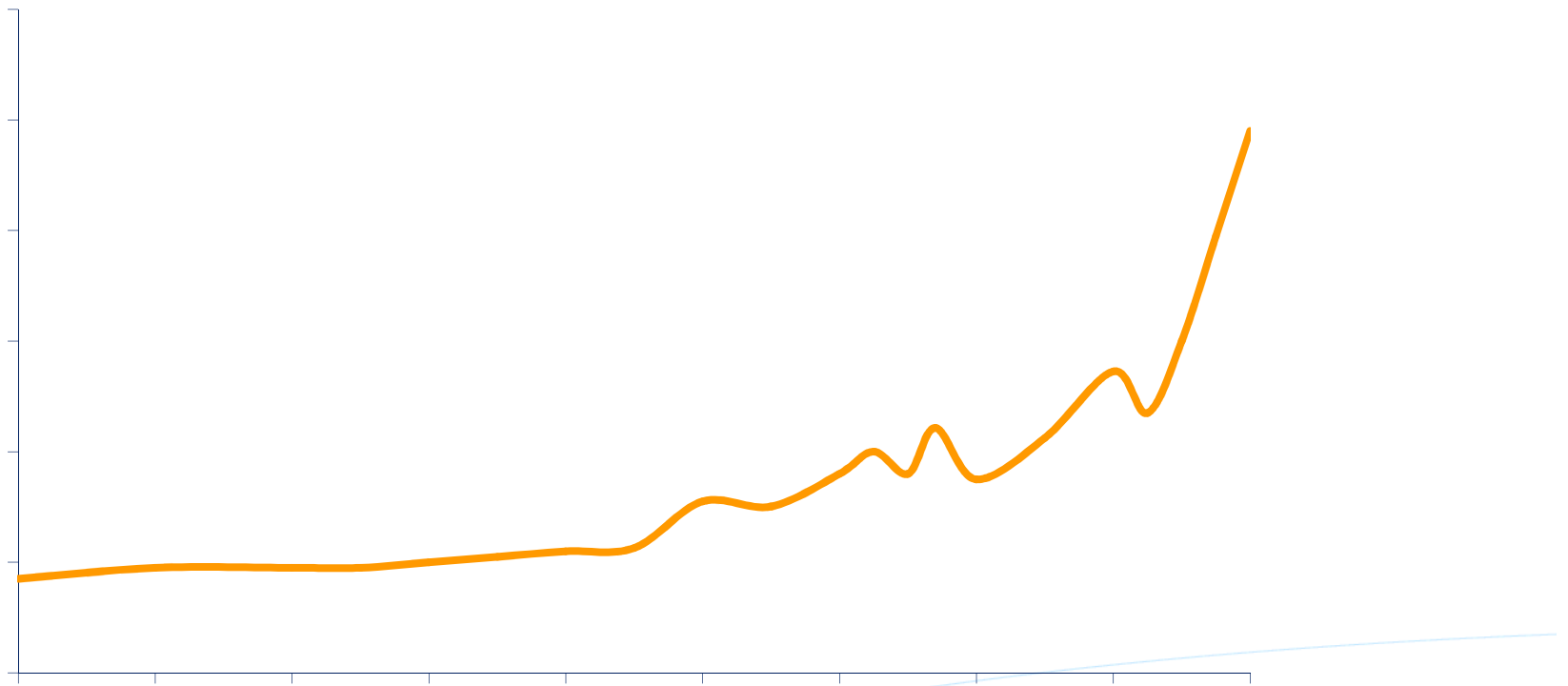
- Several case studies appear to substantiate a scarcity-conflict link
 - Most point to scarcity of land and/or poorly developed property rights
 - Scarcity and conflict usually widely defined
- Statistical, comparative analyses have not converged on a robust association between renewable resource scarcity and armed conflict
- Analyses of disasters and conflict suggest a connection, but mostly for geological disasters, and mechanisms unclear
- Country-level population size is a powerful correlate of civil war – indicators of population pressure are not
- Other robust risk factors include national poverty and poor ec. growth, political instability, ethnopolitical exclusion, and a recent history of conflict ¹

¹ See e.g. Hegre & Sambanis (2006).

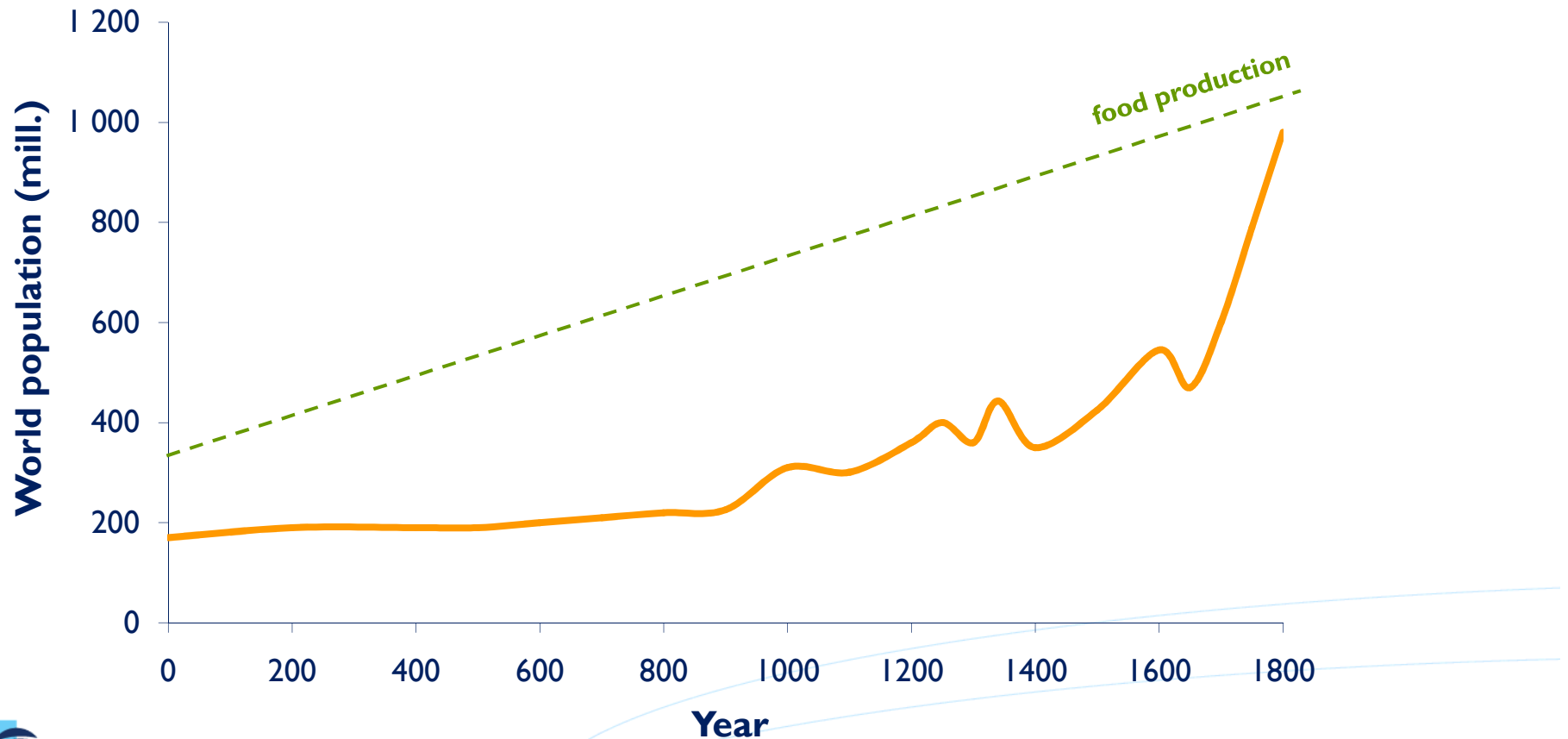
Explaining the paradox

- Why has quantitative research been so unsuccessful in establishing a clear link between scarcity and conflict?
- ✓ Poor theoretical understanding of central causal mechanisms
- ✓ Incompatibility between theory and empirical analysis
- ✓ Poor quantitative measures of central factors
- ✓ There is no general relationship between scarcity and conflict

A disturbing trend?



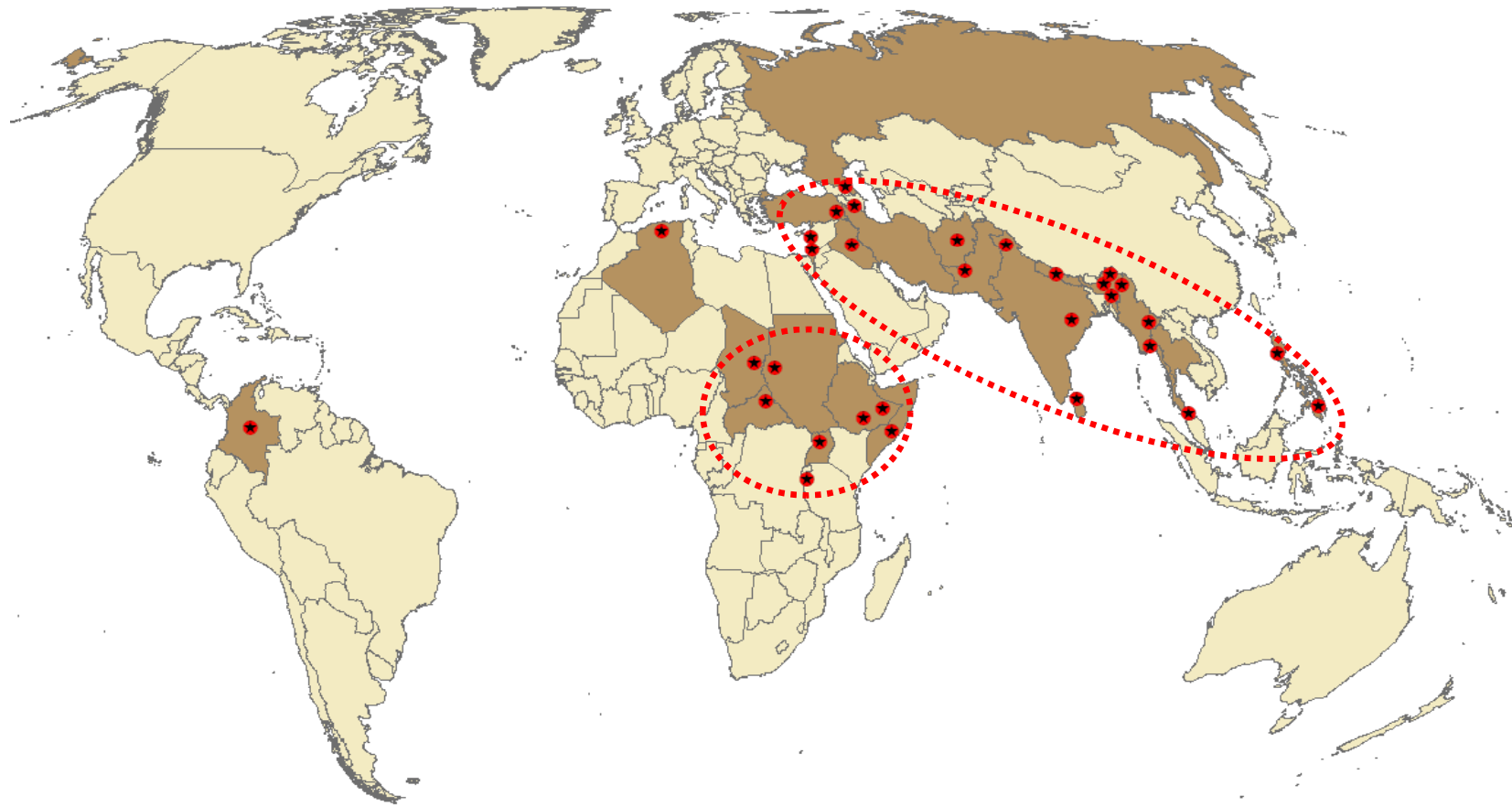
Malthus' overpopulation thesis (1798)



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Source population data: U.S. Census Bureau.

A cautionary observation



For more on conflict clustering, see Buhaug & Gleditsch (2008).

Conclusions

- Prevailing research shows no robust link between the environmental and conflict
- Rapid climate change is still largely a feature of the future: no systematic link today need not imply that no link materializes tomorrow
- Several flaws in current research limit inference of findings (and lack thereof)
- Any negative security implication likely to work through socio-economic channels
- Substantial overlap between today's conflict-ridden countries and regions with dramatic projected climatic changes

Recommendations

- Invest in rigorous, systematic research
- Promote more comprehensive accounting of social consequences
- Assess the security implications of counter-measures to climate change
- Use development policies for peacebuilding
- Prioritize the most vulnerable societies
- Include security issues in the next IPCC Assessment Reports

References

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Hegre, Håvard & Nicholas Sambanis, 2006. 'Sensitivity Analysis of Empirical Results on Civil War Onset', *Journal of Conflict Resolution* 50(4): 508–535.

Homer-Dixon, Thomas, 2007. 'Terror in the Weather Forecast', *The New York Times* 24 April, see www.nytimes.com/2007/04/24/opinion/24homer-dixon.html?_r=1&oref=slogin.

Malthus, Thomas Robert, 1798. *An Essay on the Principle of Population*. London: J. Johnson.

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