



Health Risks for Ageing Populations in a Changing Global Environment

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“Global Change”

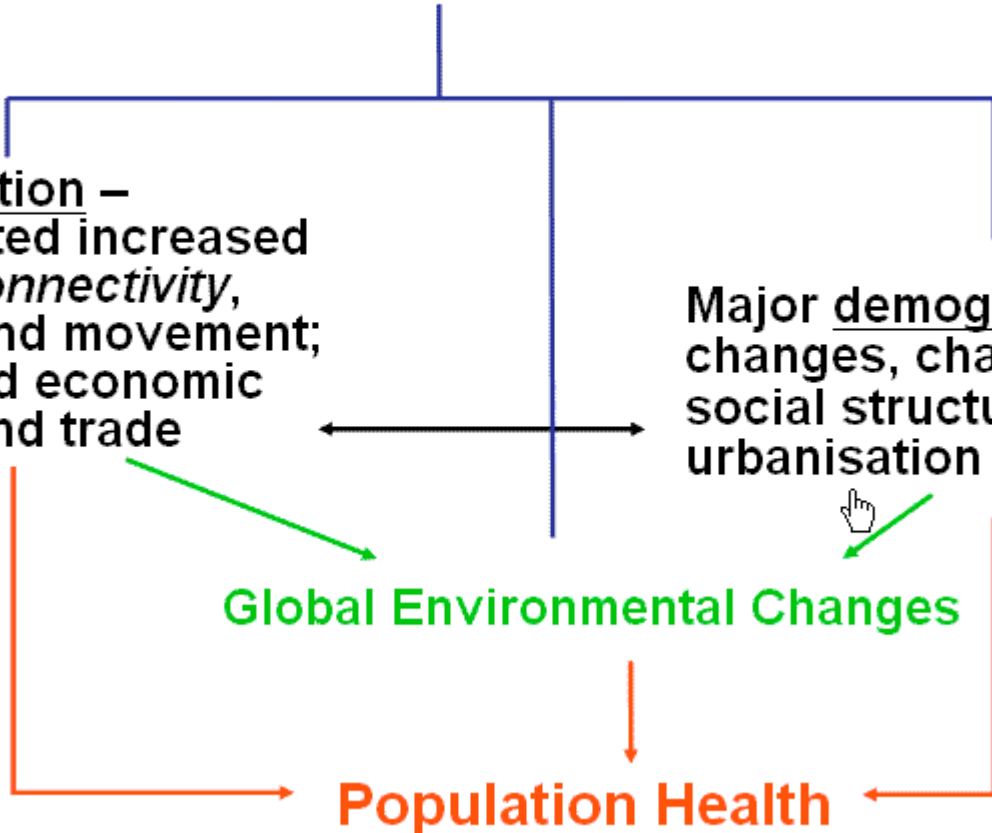
Globalisation – multifaceted increased human *connectivity*, change and movement; intensified economic activity and trade

Major demographic changes, changes in social structures, urbanisation



Global Environmental Changes

Population Health



The 'Changing Global Environment'

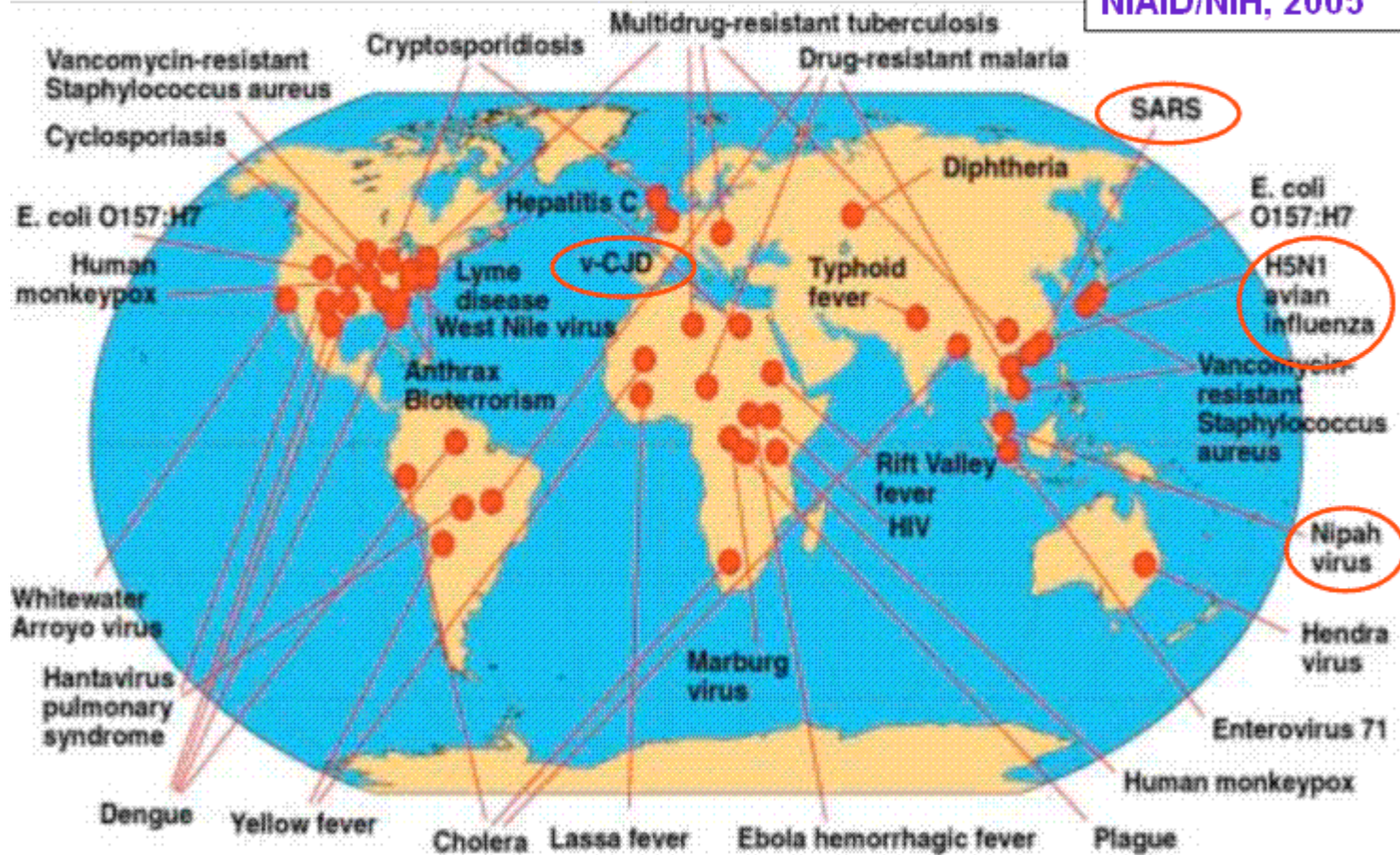
- o Economic globalisation, free trade and ageing → ? increasing privatisation of health-care, compounded by a rising dependency ratio?
- o Mobility, modernisation and changes in family structures and relationships: mental health; care
- o 'Emerging' infectious diseases – esp. respiratory viruses
- o Thermal stress – esp. under conditions of global climate change (e.g. heat-waves)
- o Future of over-exploited wild fisheries: loss of nourishment for the ageing brain

Infectious Disease Resurgence?

- Animal-borne (zoonotic) viruses are always ready to cross the species barrier
 - especially if new opportunities arise; and even more probably if serendipitous mutations occur
- Intensified food production (especially livestock and poultry) and trade in wild animals (e.g. civet cats → SARS) increase the probabilities
- The elderly are, typically, relatively highly susceptible to viral infections
- Risks compounded by increase in antimicrobial resistance

Examples of Emerging and Re-Emerging Infectious Disease: past 10 years

A Fauci,
NIAID/NIH, 2005



Avian 'flu

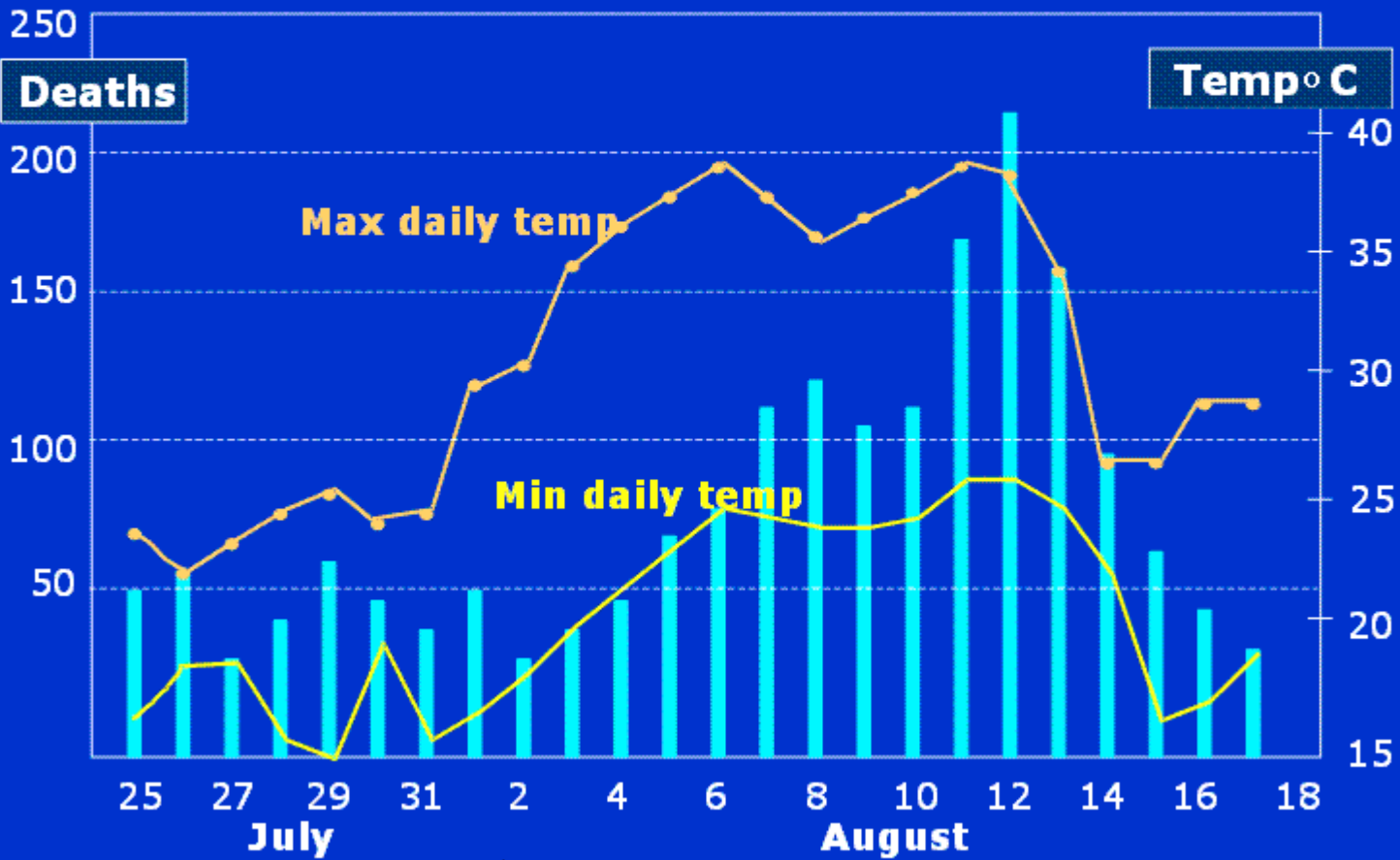


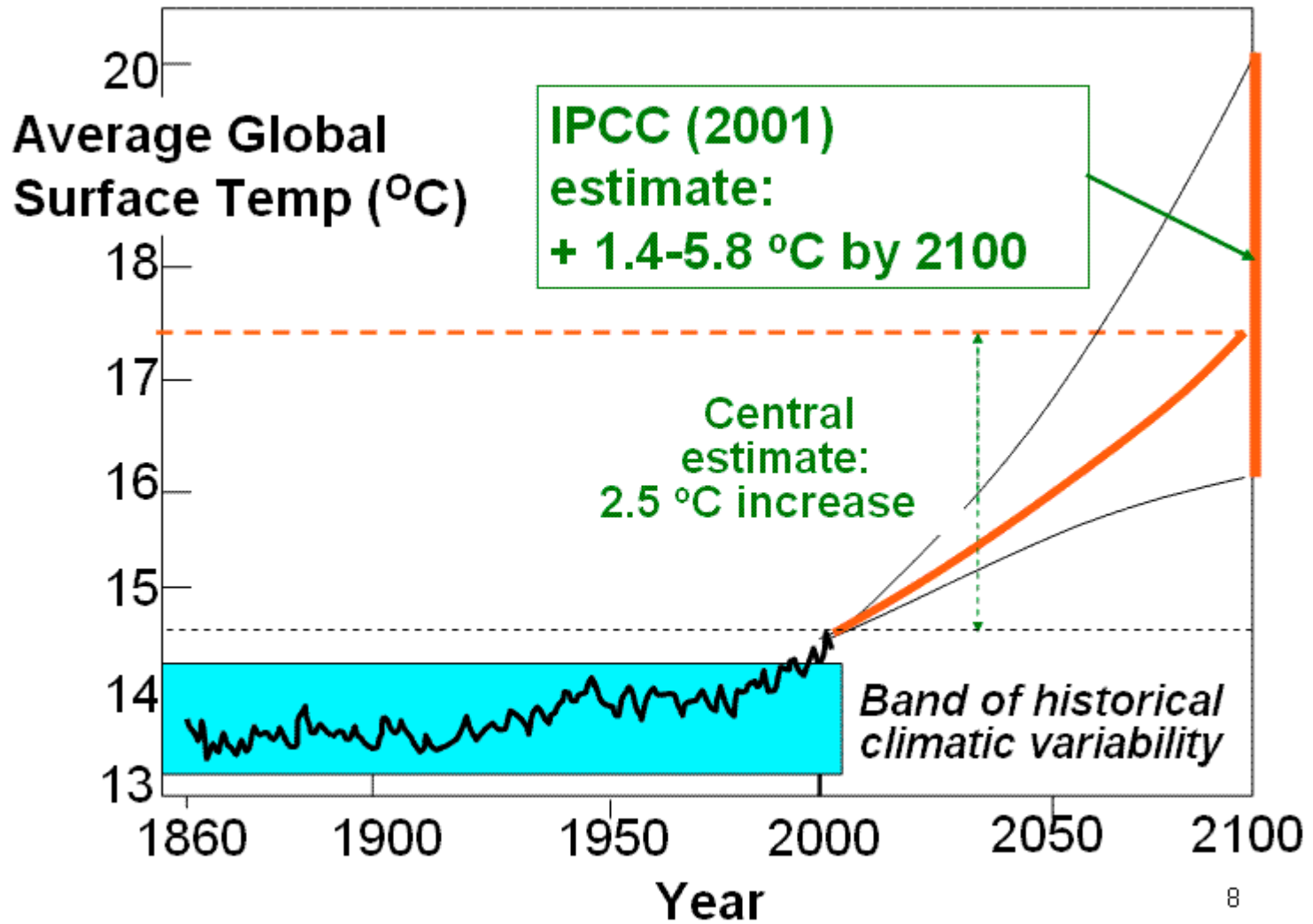
South Korean health workers disinfect a chicken farm in April, 2005. Several hundred million birds have died or been killed as a preventive measure in Asia. However, the risks of a human epidemic remain unknown.

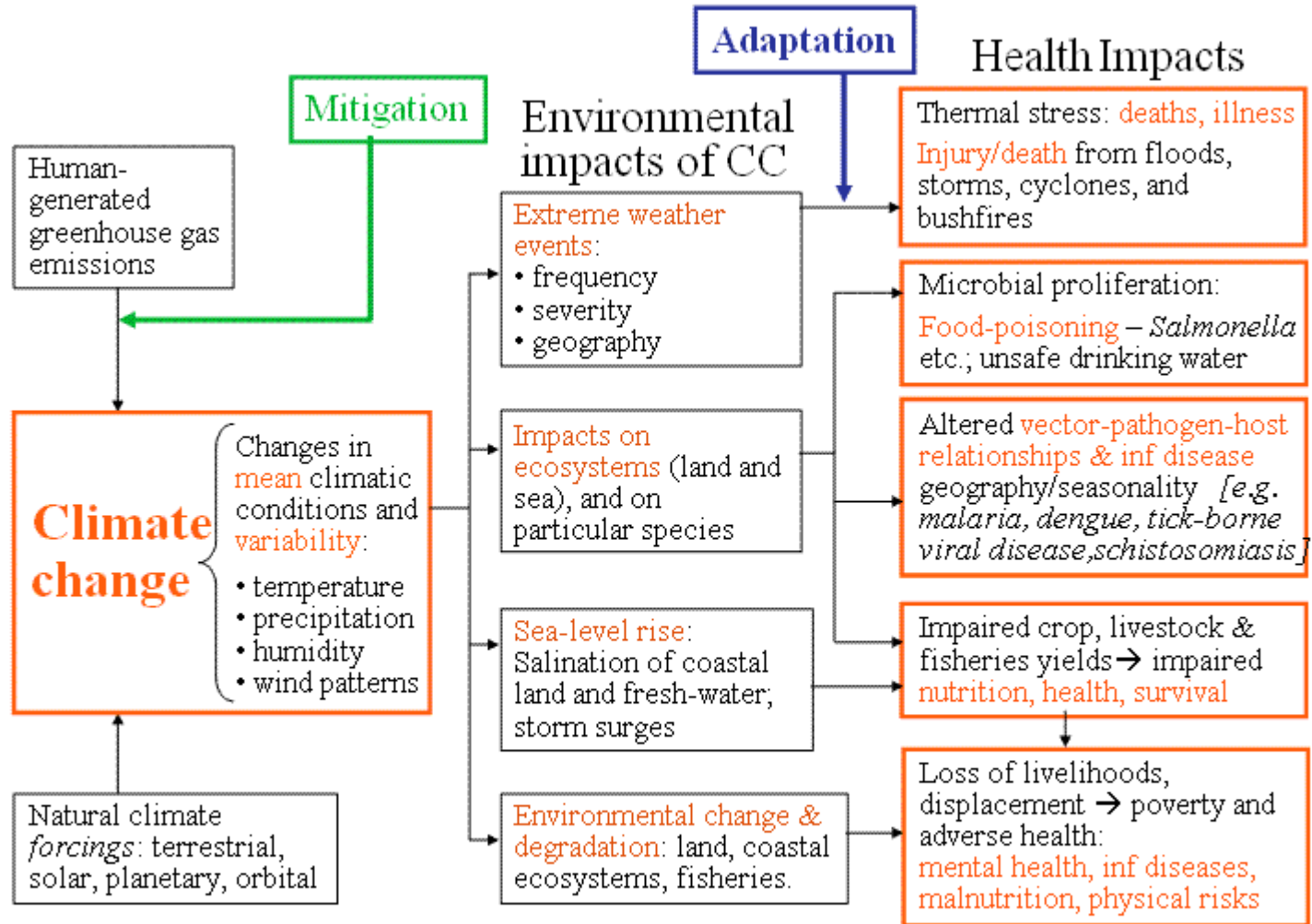
The H5N1 virus is surprisingly virulent to wild birds, has infected over 100 humans and killed around 65% of them. It has not (yet) mutated to become human-human transmissible.

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Daily temperatures and deaths in major Parisian hospitals, July-August 2003

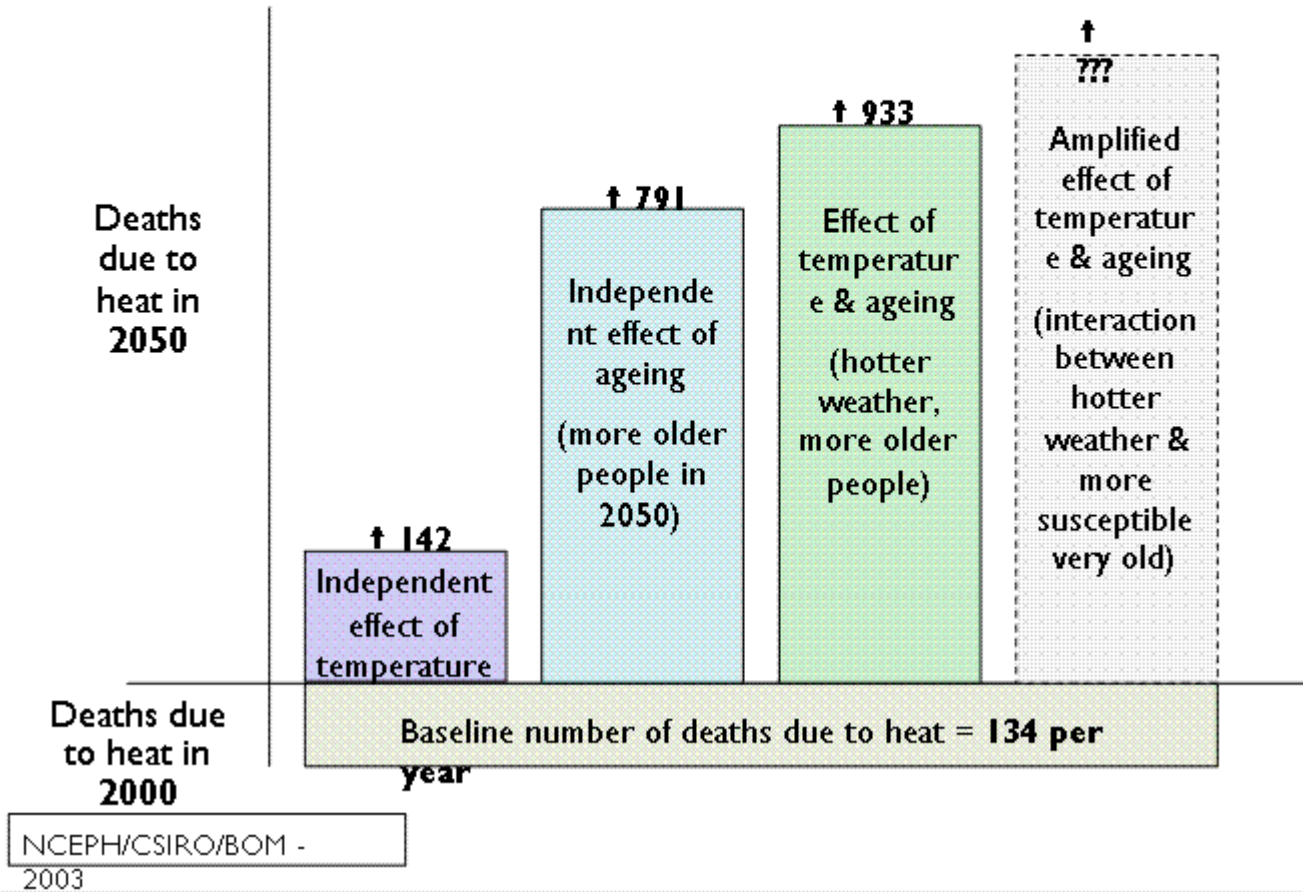






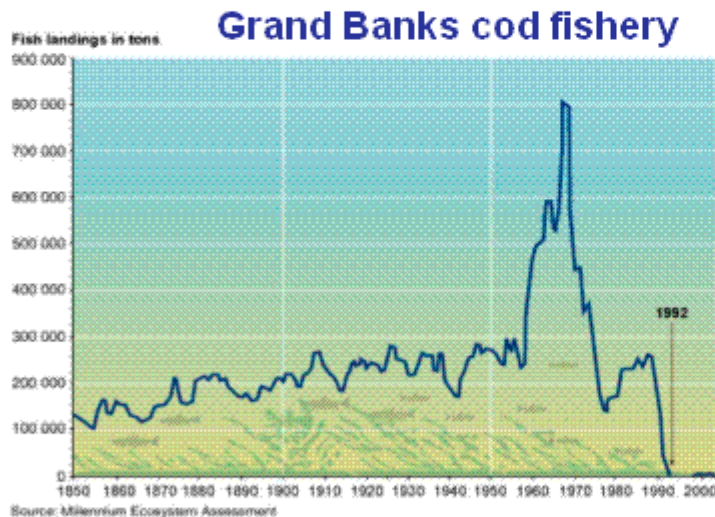
Brisbane 2050: Deaths in people over 65 due to higher mean annual temperatures [and no change in variability]

"Medium emissions" climate change scenario, CSIRO Mk2 model

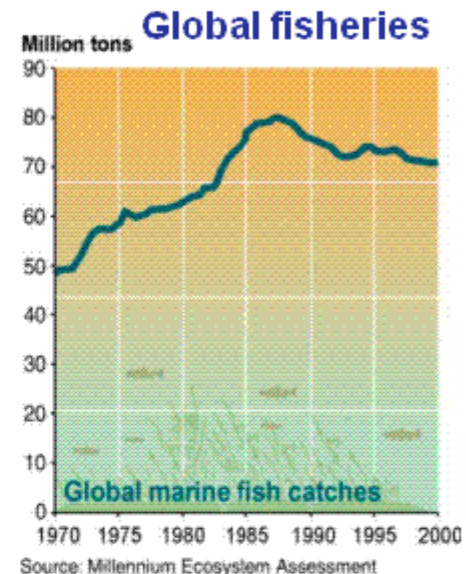


Global Capture Fisheries

1950-2000: 25% of commercially exploited marine fish stocks are over-harvested
(MA conclusion, 2005)



Fish capture is declining in marine and freshwater systems



Global marine fish harvest has declined since late '80s

Conclusion

- Population ageing is accompanied by other major changes in human ecology (urbanisation, looser community and family structures, genomics revolution, etc.)
- ... and with major (unprecedented) changes in the conditions and function of the global environment
- Healthy ageing, if achieved, will be a plus. However, some risks to elderly populations are increasing in this changing global environment

**That's all,
folks**

