

Welcome to the Anthropocene

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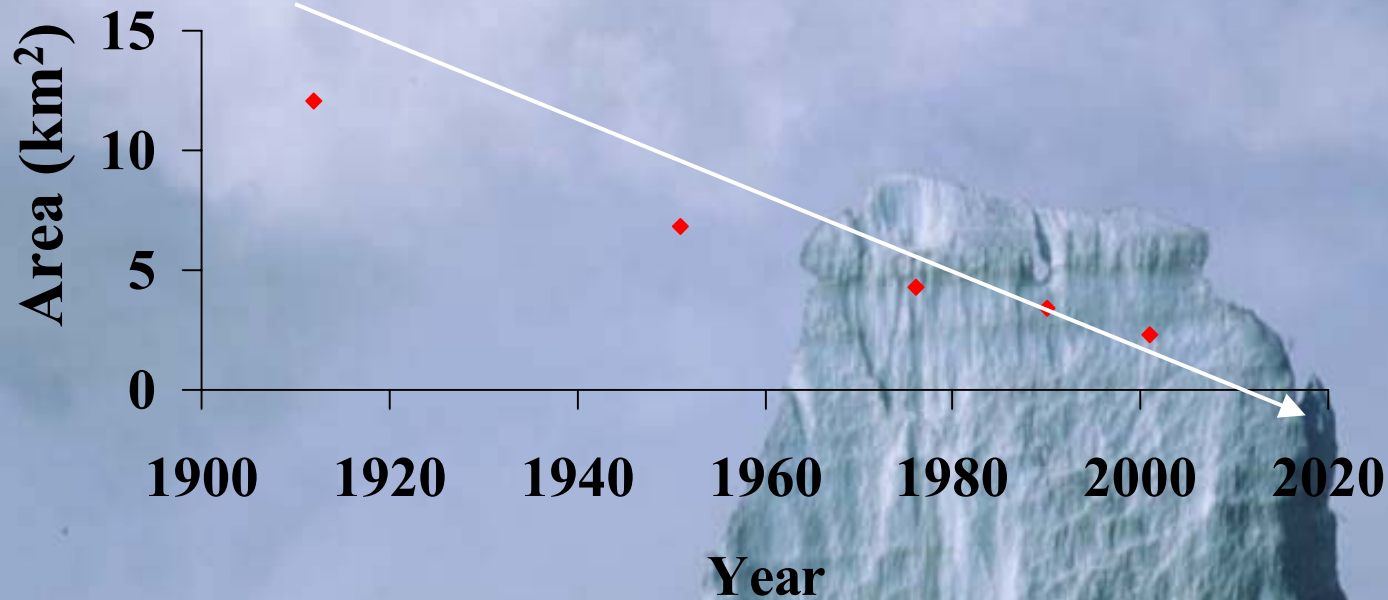
Kilimanjaro 1970



Kilimanjaro 2000

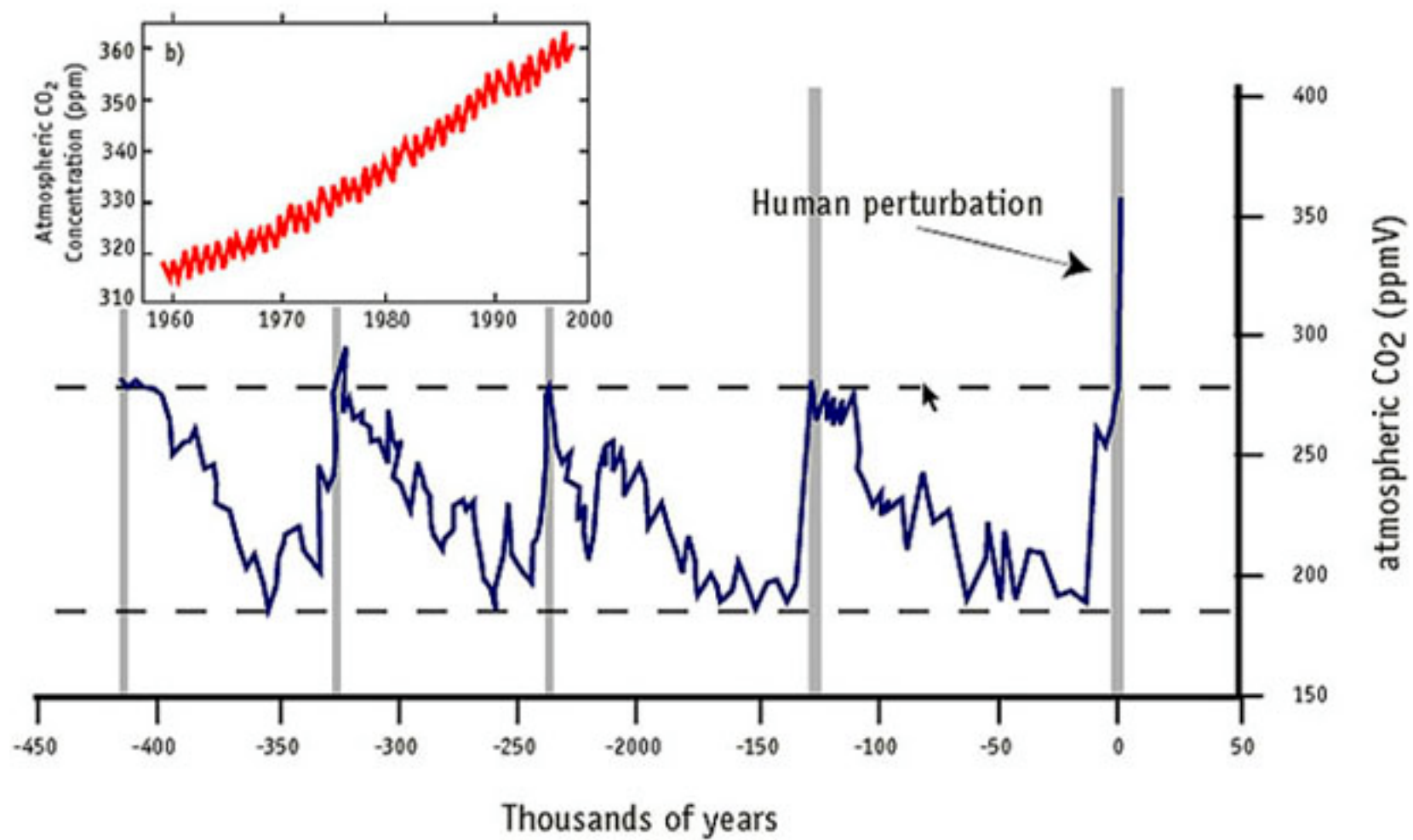
PAGES

Ice on Kilimanjaro

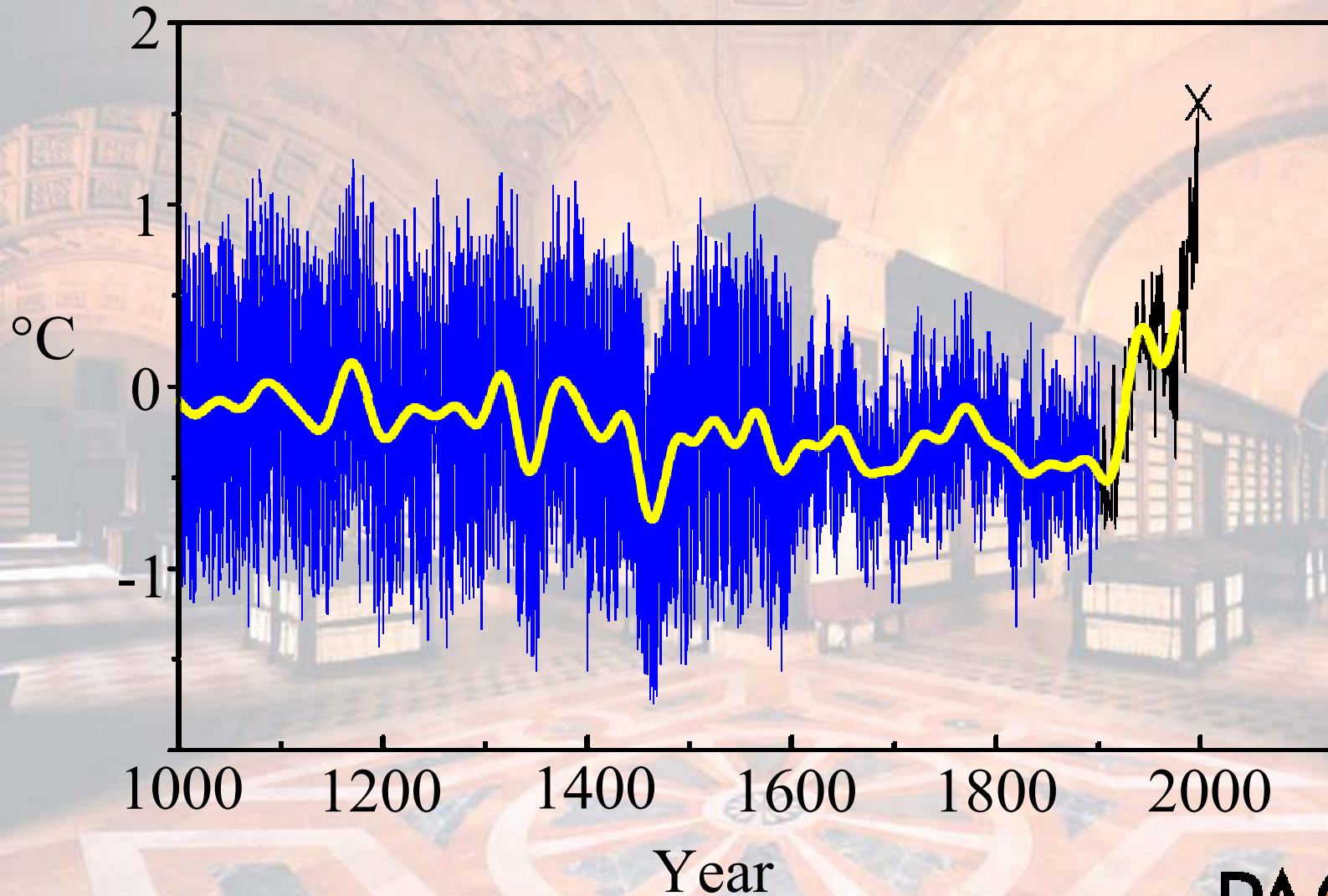


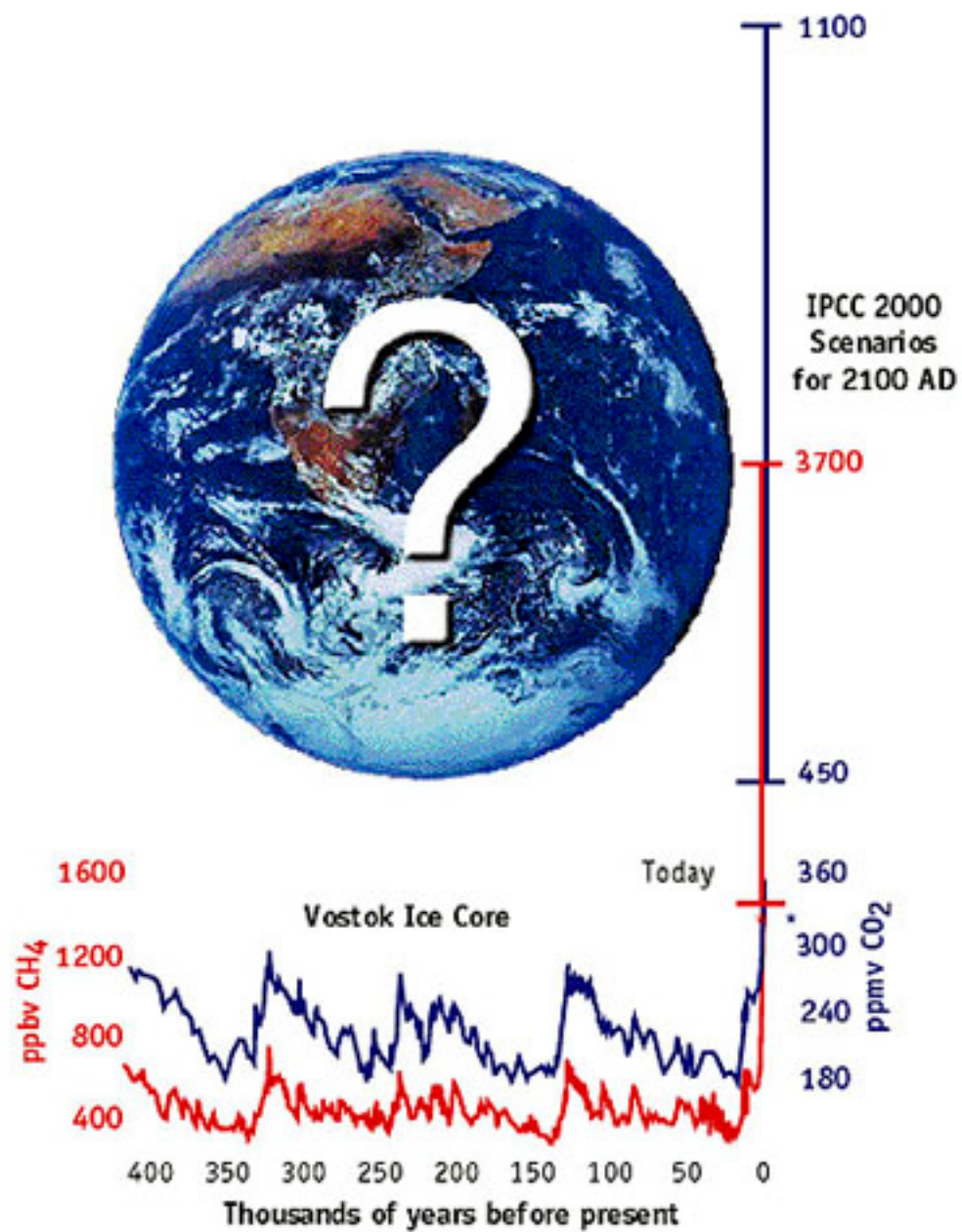
L.Thompson, in prep.

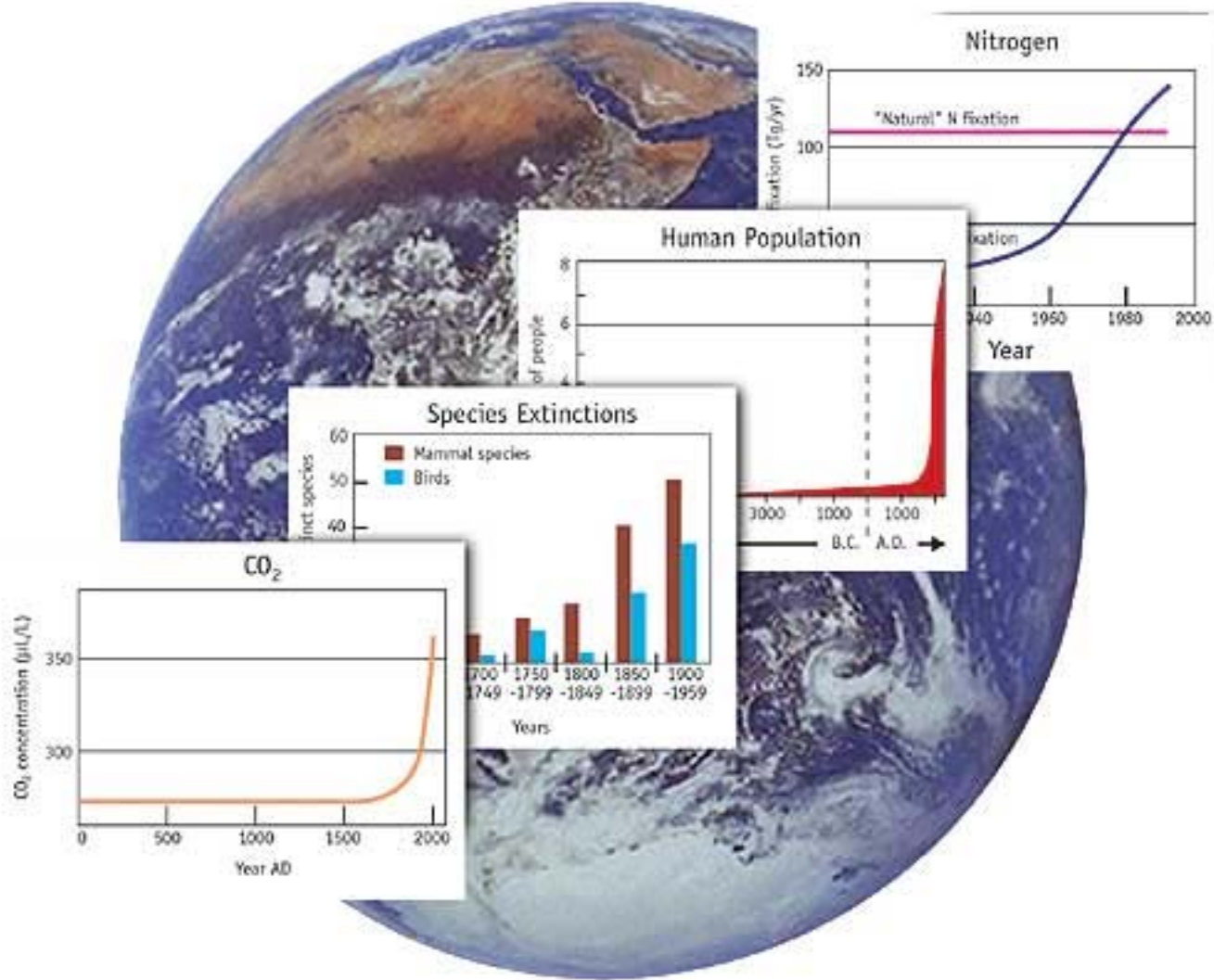
Kilimanjaro 2020?



Northern Hemisphere Average Surface Temperature









Global
Issues



Local
Issues

aging affluent millions
"global people"
resource surpluses
causes of global change
technological knowledge
theory driven research

Digital divide

poor, young billions
poverty "local people"
resource shortages
impacts of global change
traditional knowledge



IGBP SYNTHESIS:

Major Research Findings

- The Earth is a system that life itself helps to control.
- Global change is much more than climate change. It is real, it is happening now, and in many ways it is accelerating.
- The human enterprise drives multiple, interacting effects that cascade through the Earth System.
- The Earth's dynamics are characterised by critical thresholds and abrupt changes. Human activities could inadvertently trigger changes with catastrophic consequences for the Earth System.
- The Earth is currently operating in a no-analogue state.

Coastlines Have Become the Primary Human Habitat

- Almost half the people on 15% of the inhabitable landspace
 - 75% projected by 2050
- 12 of the 15 largest cities
 - sprawling tropical coastal megalopoli with the majority in poverty by 2050

Major Forces of Change in LMEs

- Results from 29 case studies
- overfishing principle driver of biomass yield (14)
- climate change principle driver (13)
- eutrophication (1)

Generic Issues In LMEs

- incursion of industrial fleets into inshore artisanal grounds
- the need for improved forecasting of climate driven change
- increasing threat of eutrophication

The Paradigm Shift

- Individual species
- Small spatial scale
- short-term perspective
- humans independent of ecosystem
- management divorced from research
- managing commodities
- Ecosystems
- Multiple scales
- long-term perspective
- Humans integral parts of ecosystems
- adaptive management
- sustained production of goods and services