



WG 2: Water Cycle in Asia-Oceanic Region

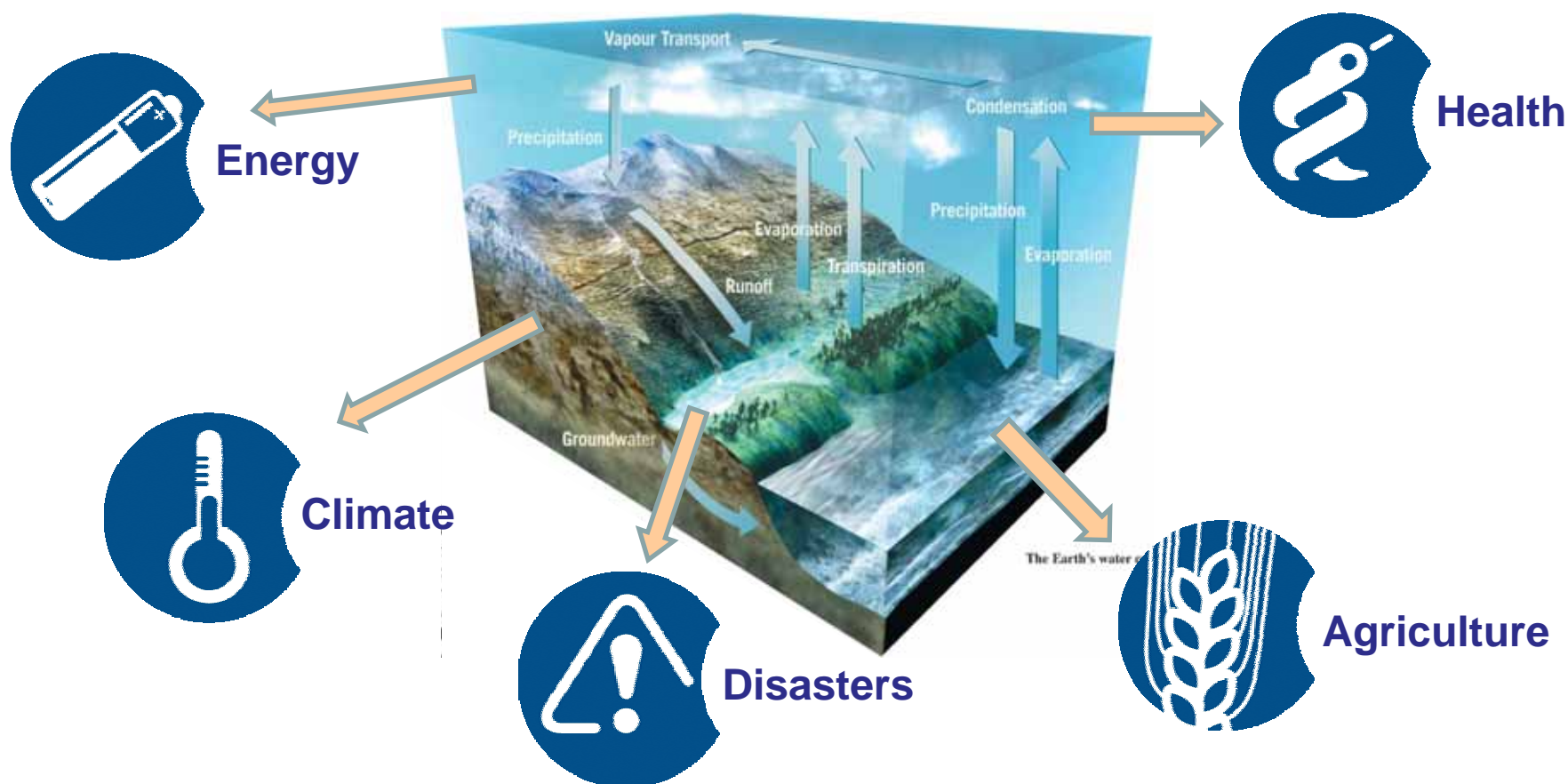
**Data Sharing for a Transverse GEOSS
Third Asia-Pacific Symposium
4-6 February 2009, Kyoto**

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GEO Secretariat**





Integrated Water Cycle Management: A cross-cutting issue.



Disasters and Health

Floods - number one
cause of disaster in
terms of loss of
human life /property



More than 5 million people die
each year from **water-borne**
diseases (malaria and cholera)

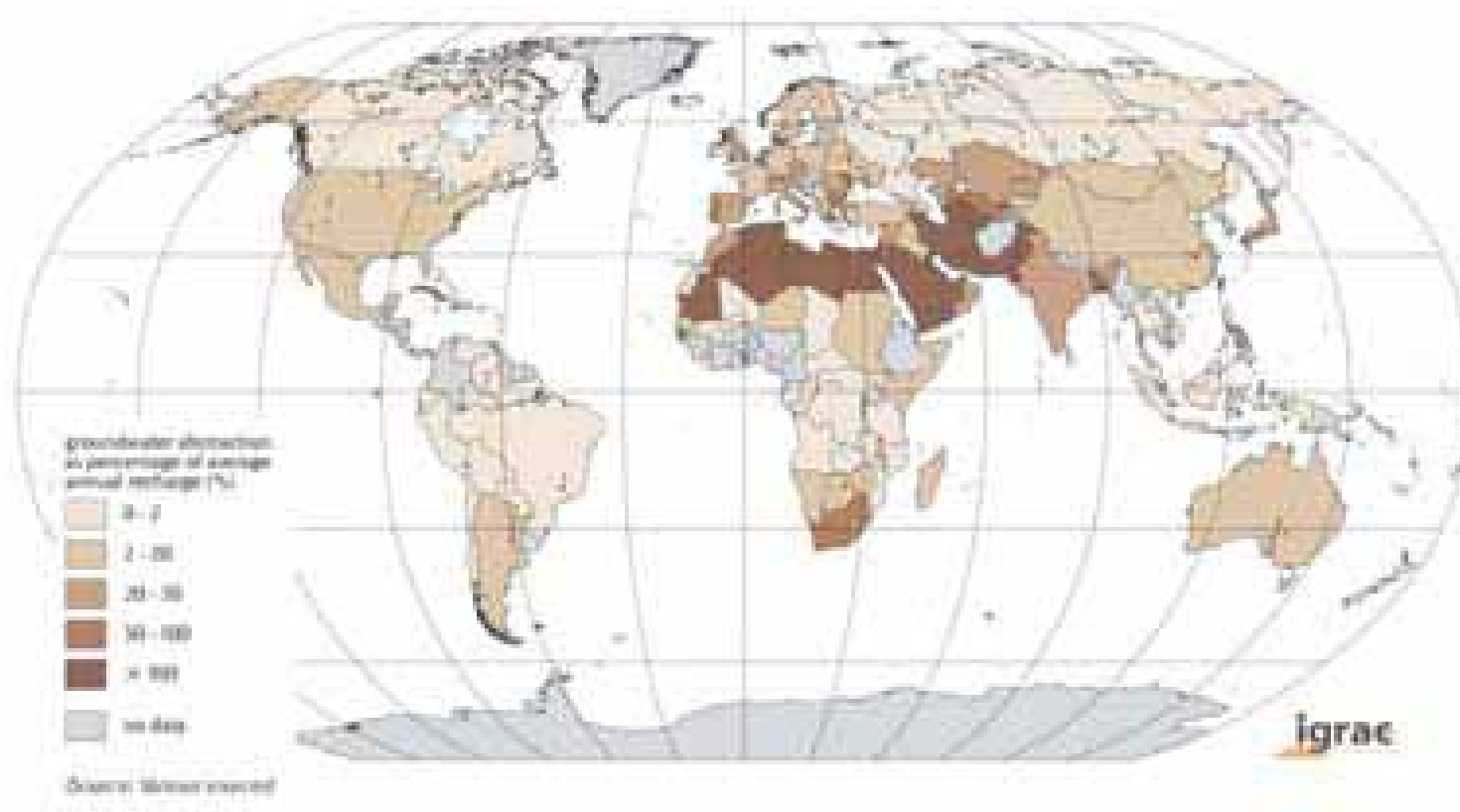
Impact of Climate Change and Pollution

Climate change - expected to have significant impact on weather patterns and hydrological cycle, affecting surface water availability, soil moisture, and groundwater recharge



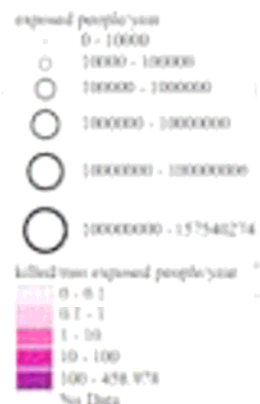
Groundwater resources - tapped at unsustainable rates and/or affected by pollution

Groundwater abstraction rate as percentage of mean recharge

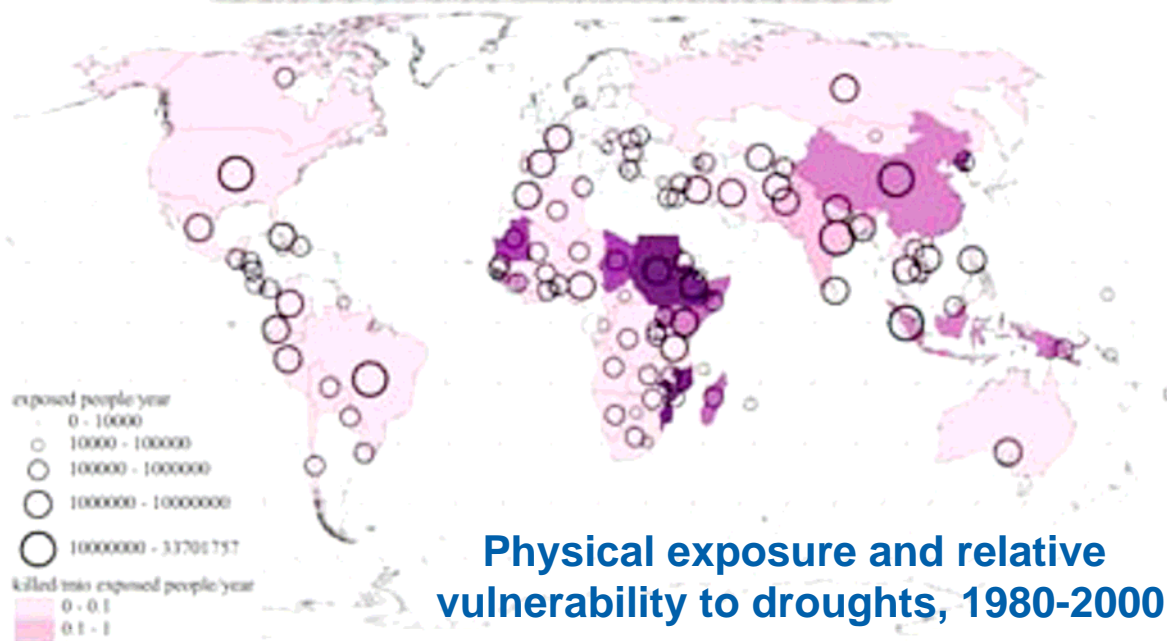




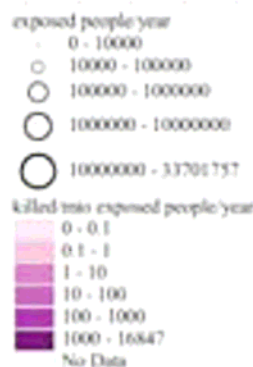
Physical exposure and relative vulnerability to floods, 1980-2000



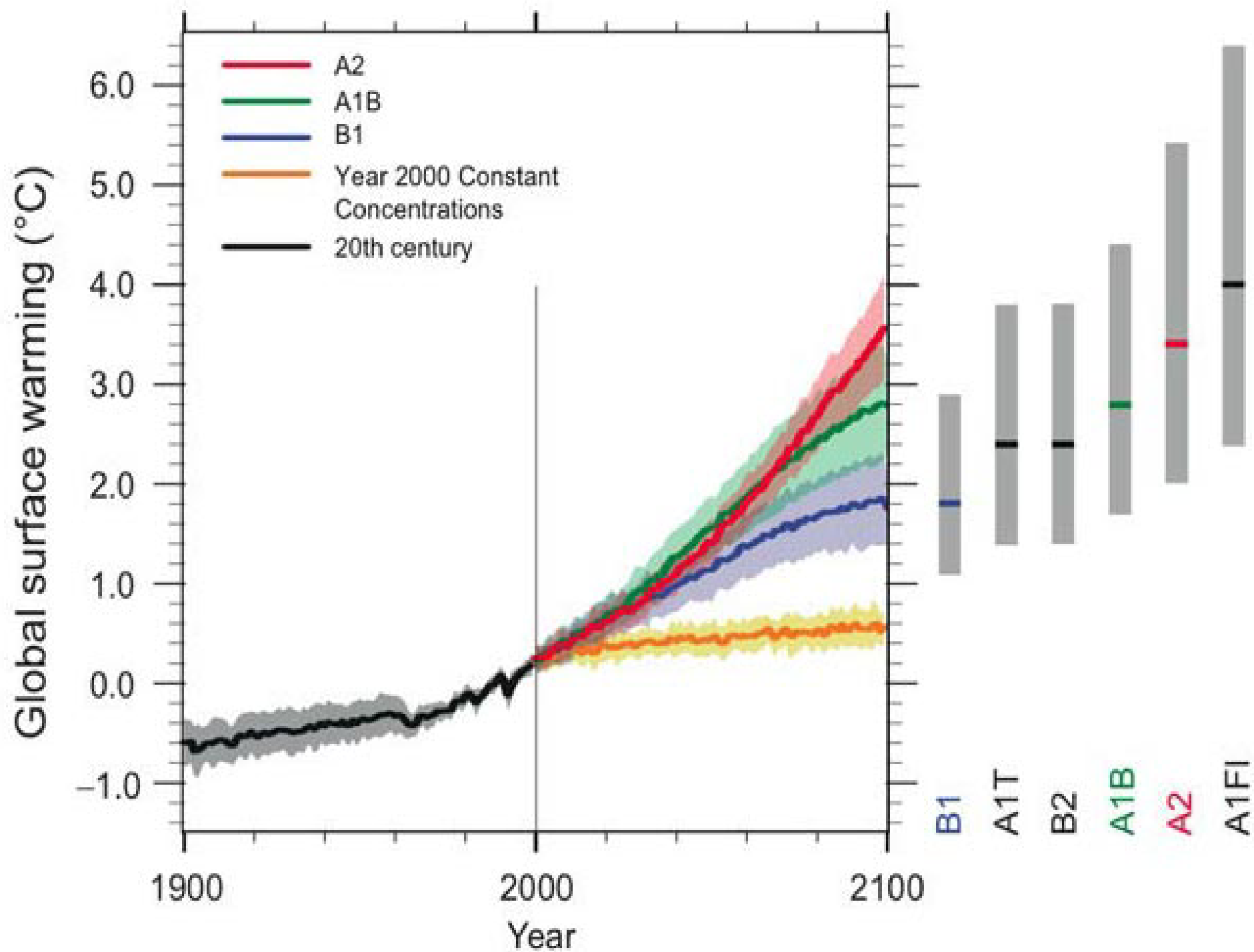
Data sources :
- Université Catholique de
- U.S. Geological Survey
- CIESIN, IFPRI, WRI : G
Compilation and computation



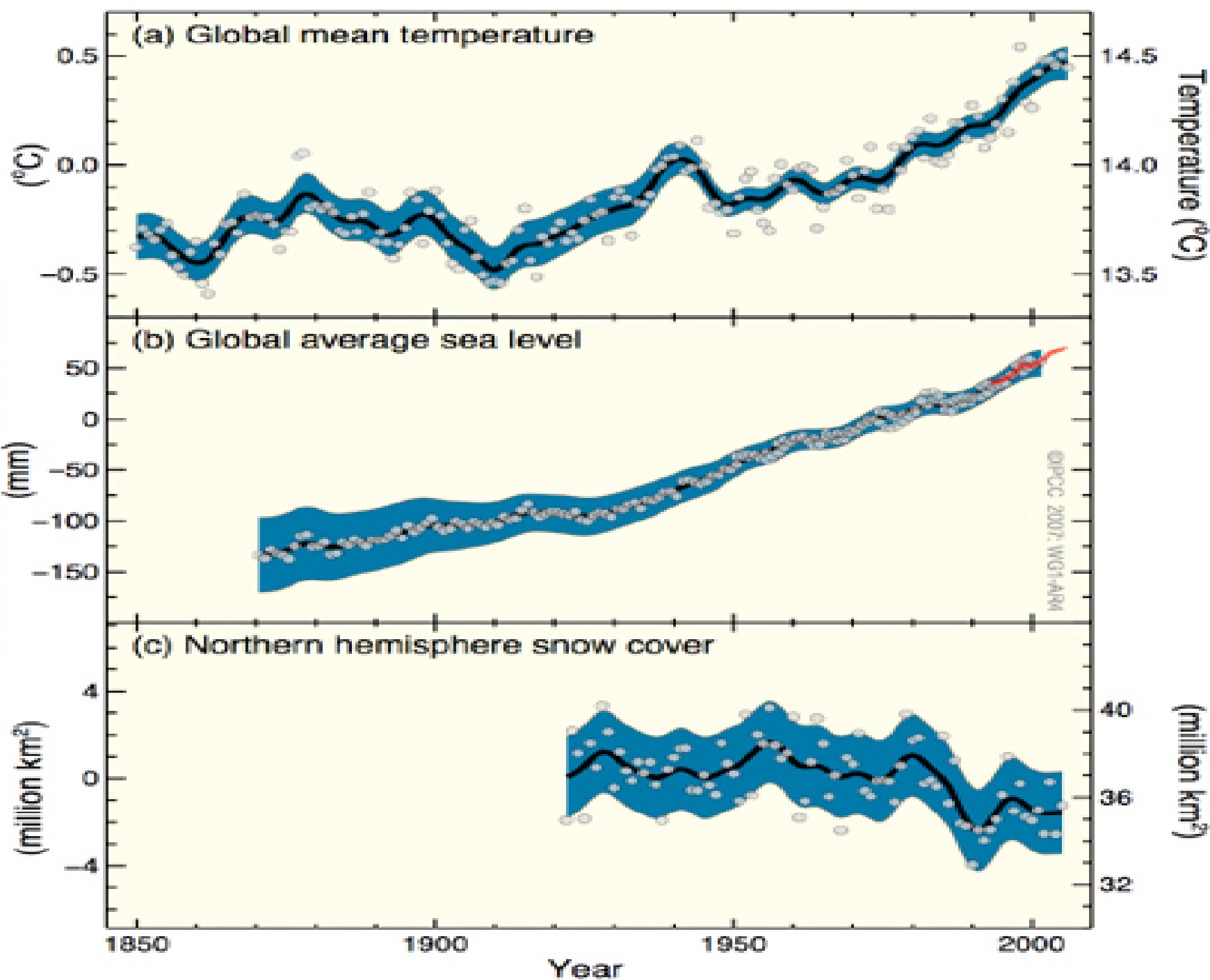
Physical exposure and relative vulnerability to droughts, 1980-2000



Data sources :
- Université Catholique de Louvain : EM-DAT: The OFDA/CRED International Disaster Database (victims)
- International Research Institute for Climate Prediction (droughts extent)
- CIESIN, IFPRI, WRI : Gridded Population of the World (GPW), Version 2 (population)
Compilation and computation by UNEP/GRID-Geneva



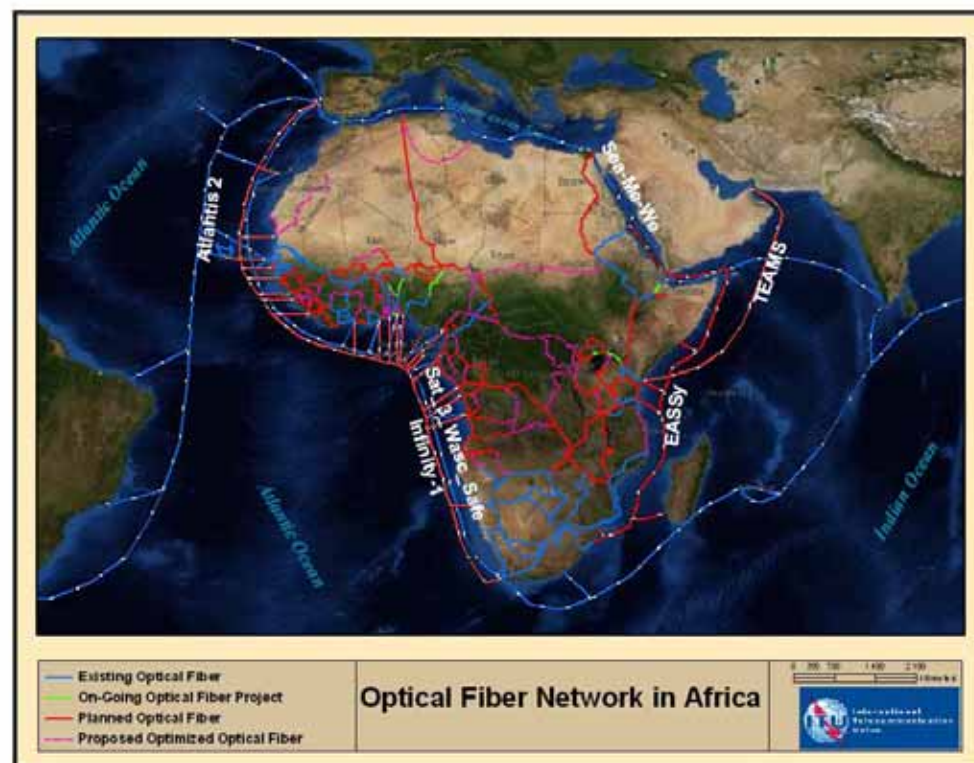
Difference from 1961–1990



Undersea Cables 2007



Source: TeleGeography Research





GEOSS Data Sharing Principles

- **There will be full and open exchange of data, metadata, and products shared within GEOSS, recognizing relevant international instruments and national policies and legislation.**
- **All shared data, metadata, and products will be made available with minimum time delay and at minimum cost.**
- **All shared data, metadata, and products being free of charge or no more than cost of reproduction will be encouraged for research and education.**
- **All new members of GEO are required to endorse the Plan and therefore these Principles.**



GEOSS is about...

- **Ensuring Access for All**
- **Making Basic Data Sets Available**
- **Developing End-to-end Services**
- **Coordinating and Sustaining Observing Systems**

Thank you!

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