

A photograph of a large, overflowing pile of garbage, including plastic bags, bottles, and other debris. A black dog is visible in the foreground on the right side, standing near the trash. The background shows some greenery and trees under an overcast sky.

# **Perspectives on the Intersection of Sustainable Development, Equity, and Social Justice**

## **Environmental Perspective**

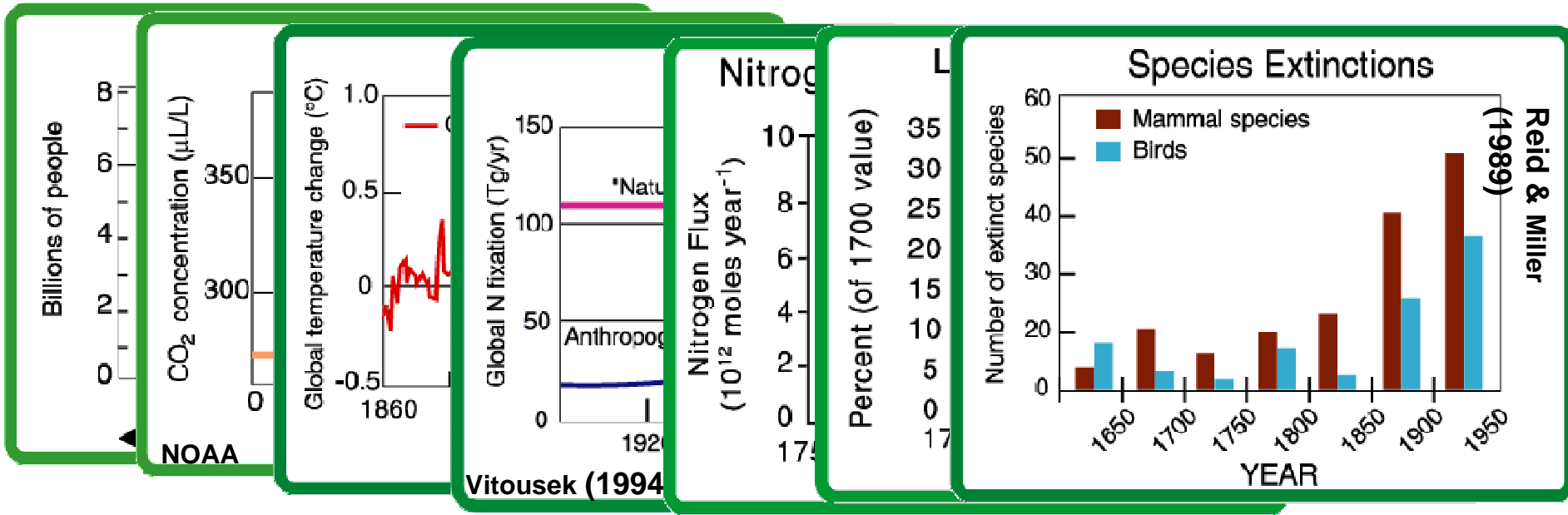
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Regional Centre of Multidisciplinary  
Research, UNAM  
20. December, 2012**

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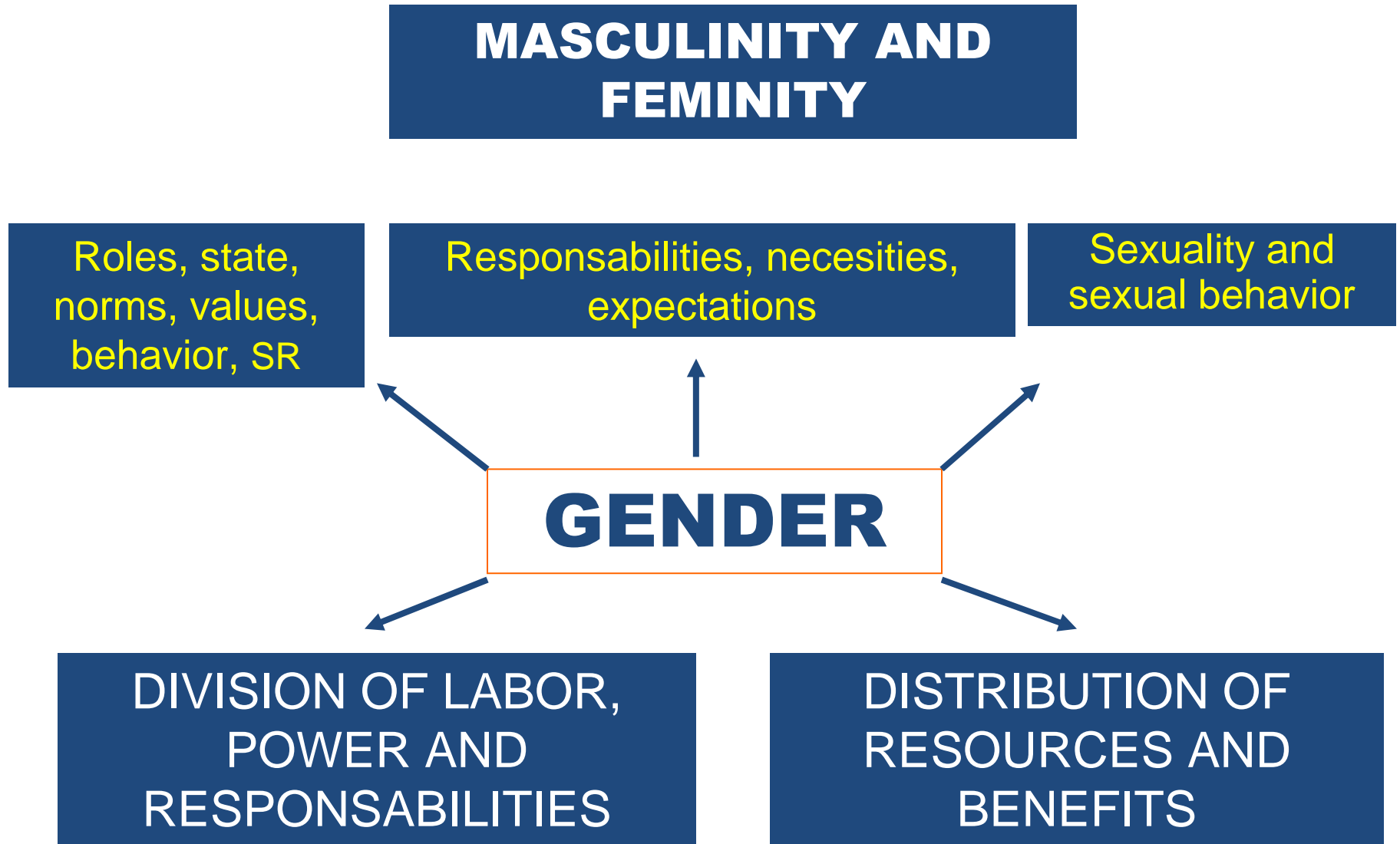
# Global Environmental Change affecting health

- GEC is more than climate change
- Includes natural **plus** human components
- It is a constellation of changes in different spheres, such as:



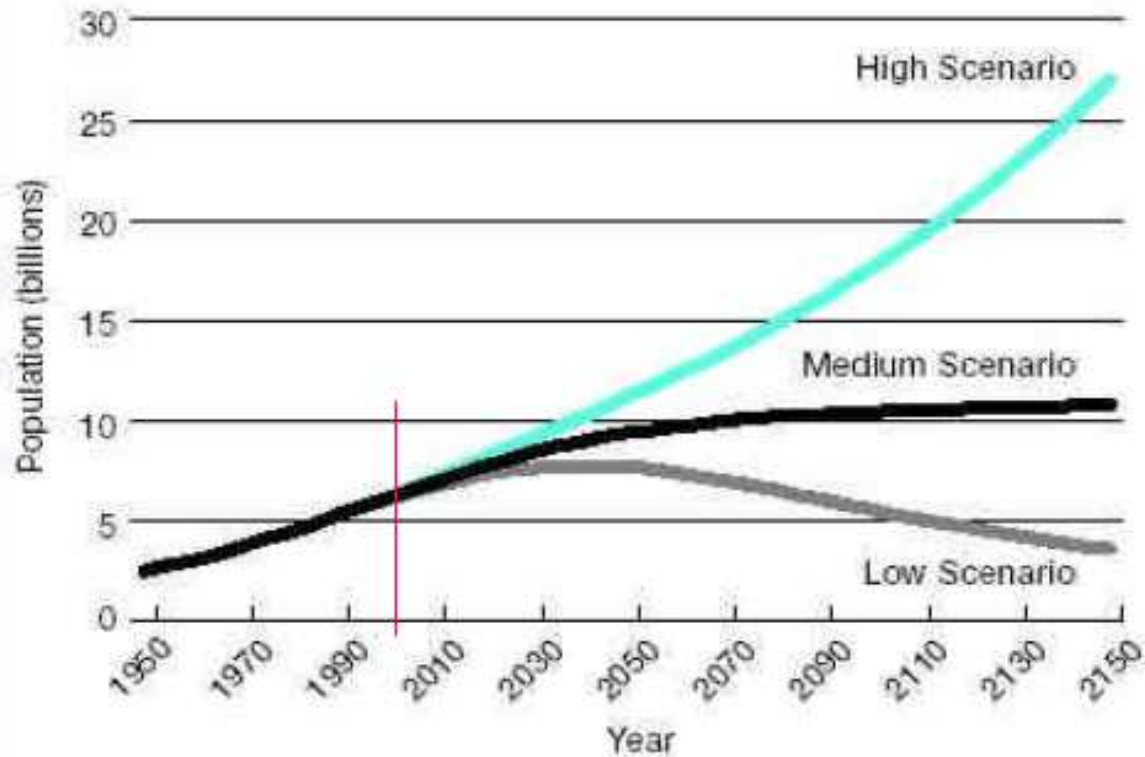
# Social construction of gender

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## World Population: Three Alternative Scenarios

This chart shows three possible paths of future population growth.



Source: United Nations.

10 000 BC

5000 BC

Year 1

1000

2000

0

1 billion

2 billion

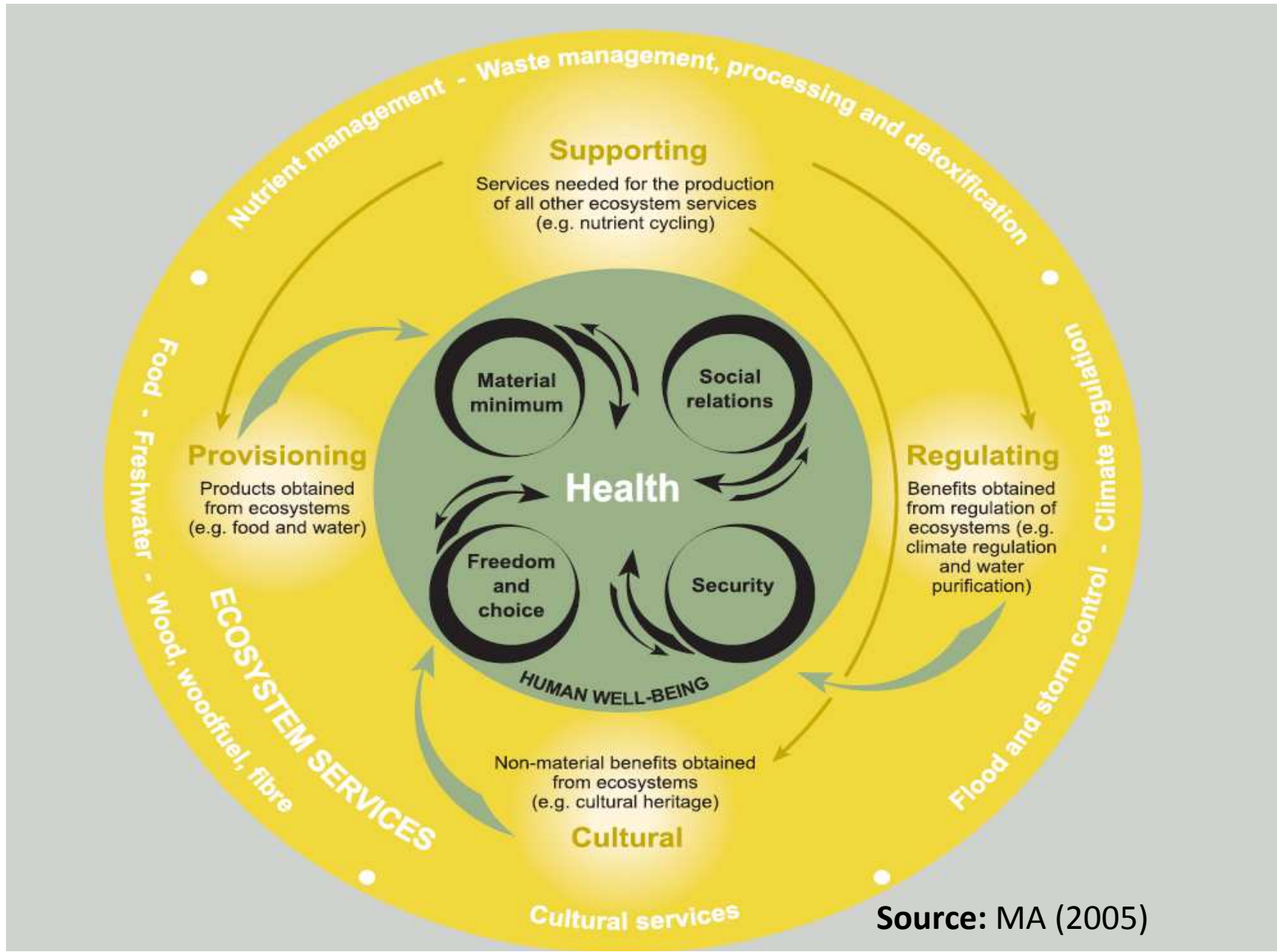
3 billion

4 billion

5 billion

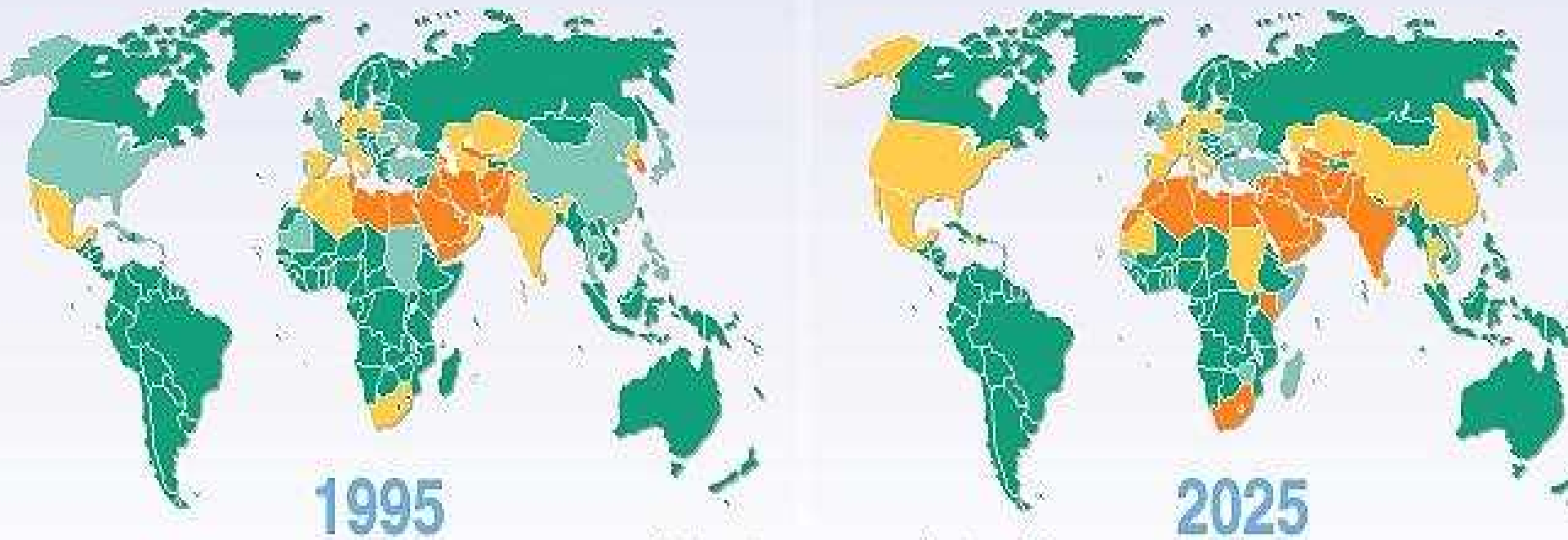
6 billion

# Ecosystem services in danger



Source: MA (2005)

# Freshwater stress



1995

2025

water withdrawal as percentage of total available

- more than 40%
- 40% to 20%
- 20% to 10%
- less than 10%

GRID Arendal UN  
GRAPHIC DESIGN: PHILIPPE R.

Source: Global environment outlook 2000 (GEO), UNEP, Earthscan, London, 1999.

# Unprecedented changes in Ecosystems

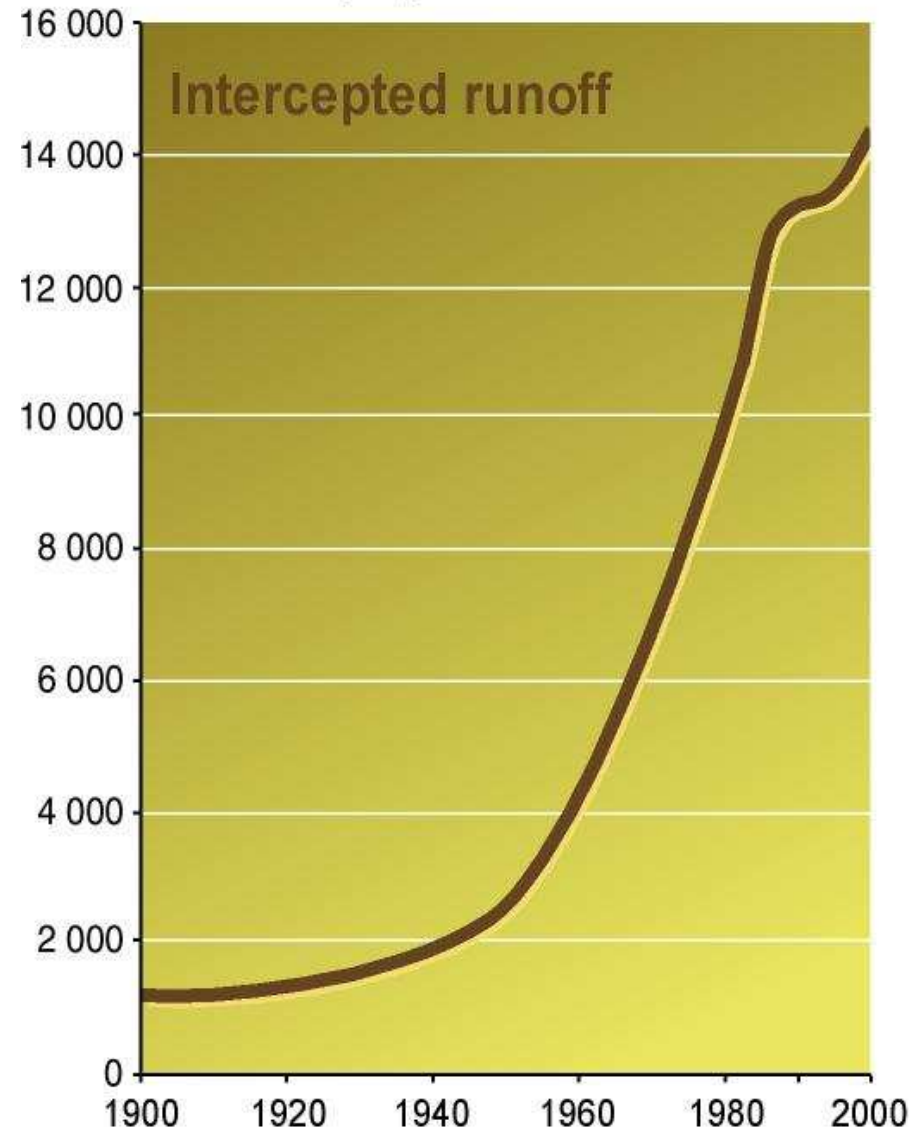
- 20% of the world's coral reefs were lost and 20% degraded in the last several decades
- 35% of mangrove area has been lost in the last several decades
- Amount of water in reservoirs quadrupled since 1960
- Withdrawals from rivers and lakes doubled since 1960; most water use (70% worldwide) is for agriculture

**Intercepted Continental Runoff:  
3-6 times as much water in reservoirs as in  
natural rivers**

(Data from a subset of large reservoirs totaling  
~65% of the global total storage)

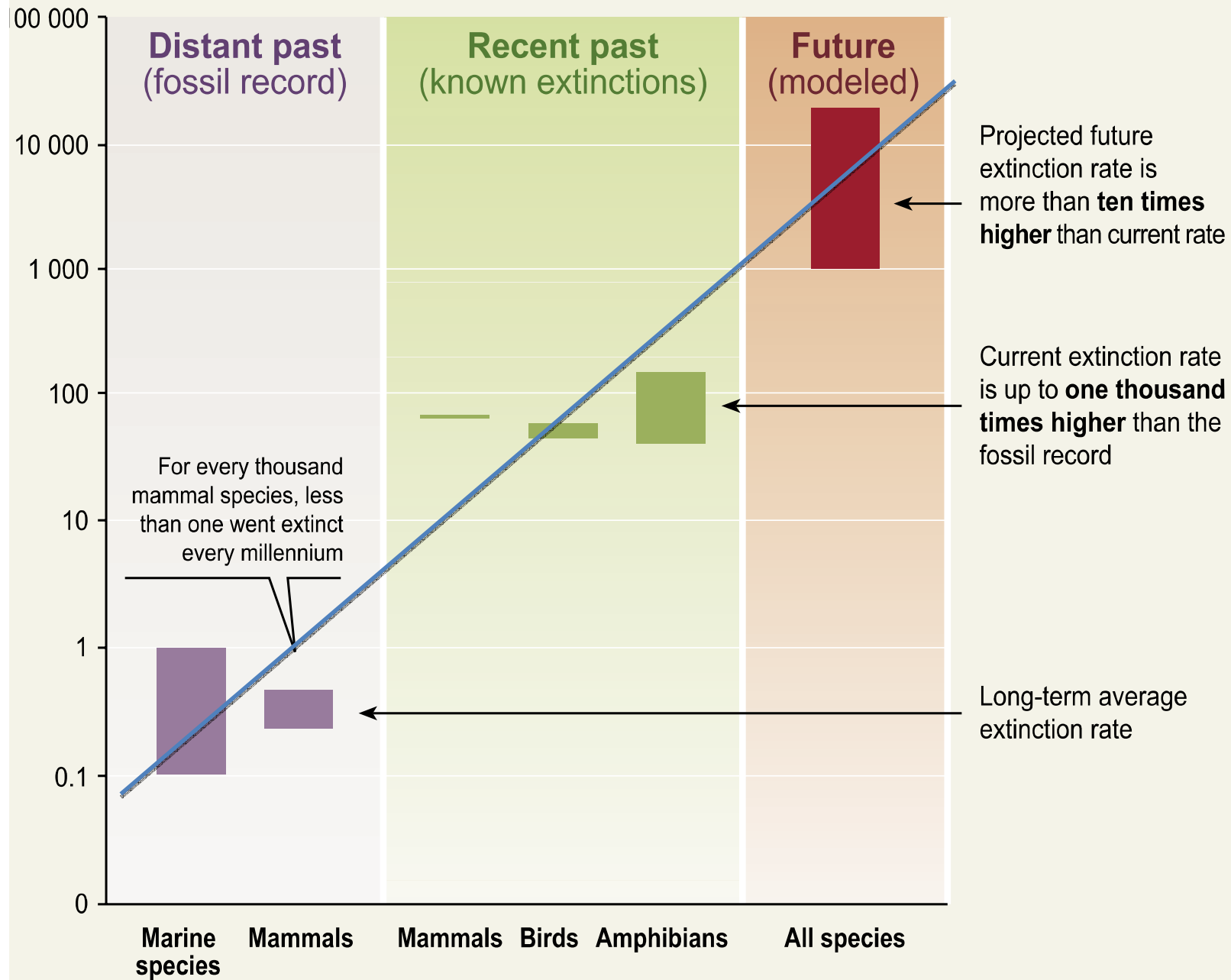
**Source:** MA (2005)

Sum of discharge  
in cubic kilometers per year



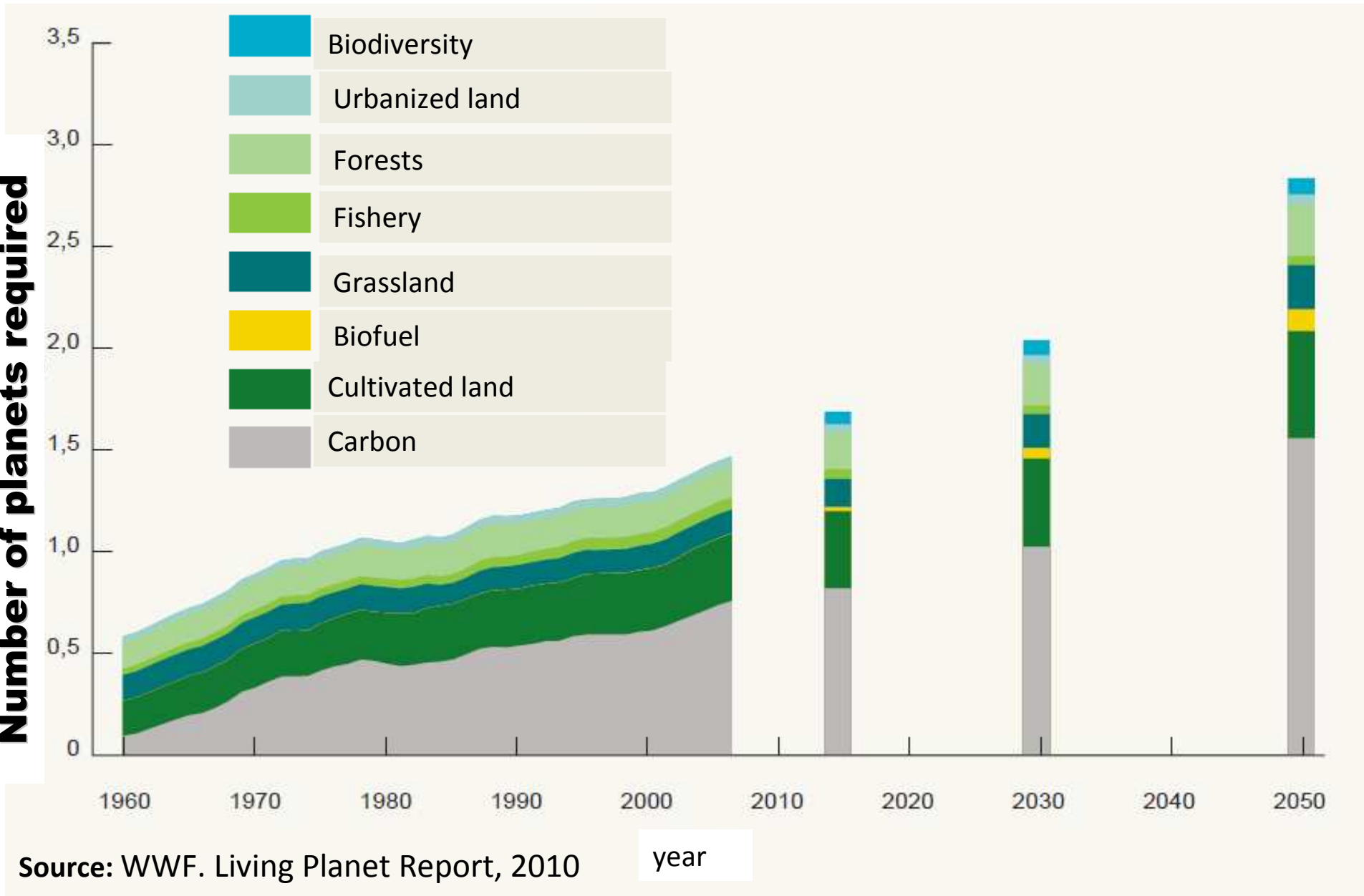


# Extinctions per thousand species per millennium



Source: Millennium Ecosystem Assessment

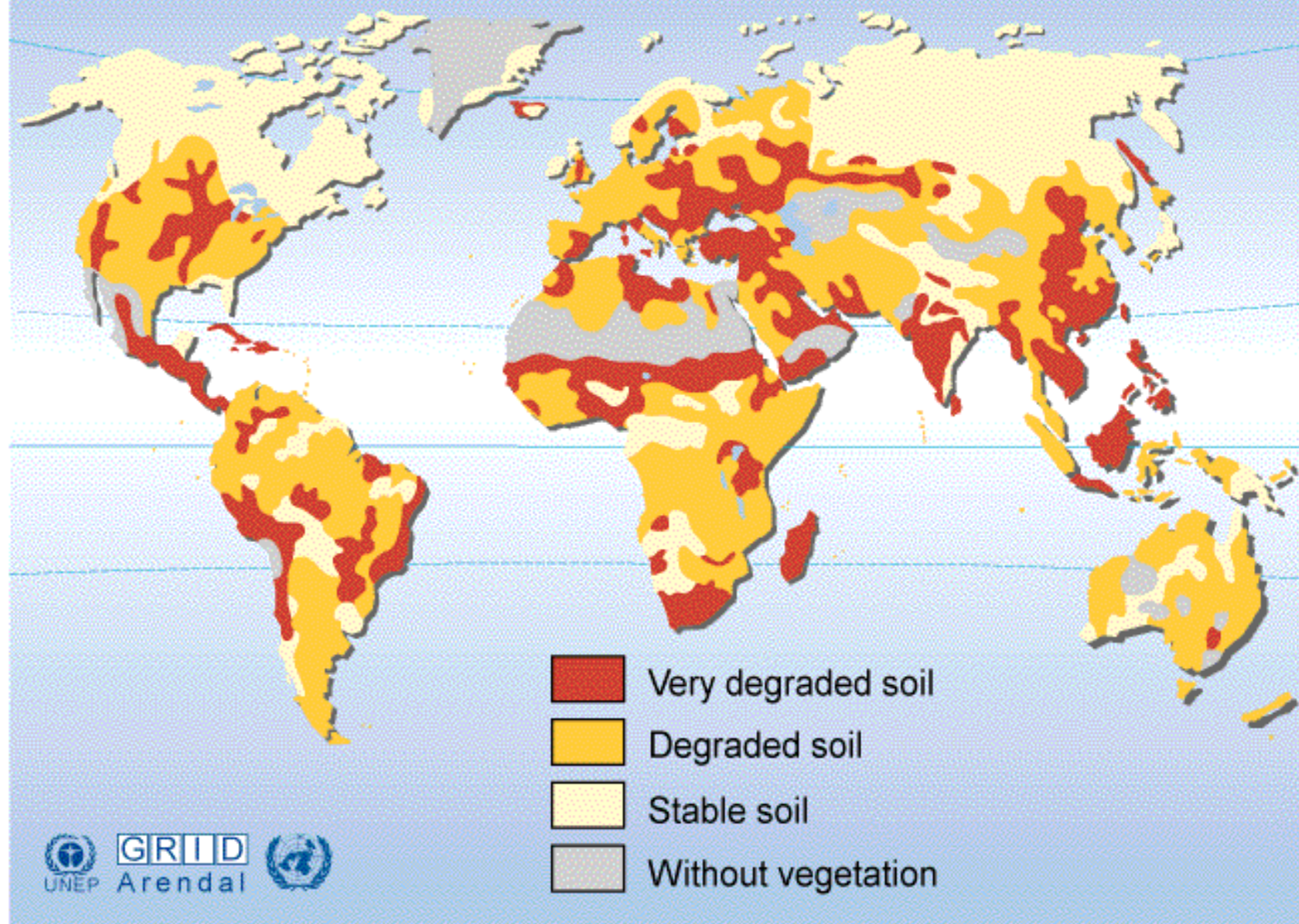
# Projections of anthropogenic impacts on the planet



Source: WWF. Living Planet Report, 2010

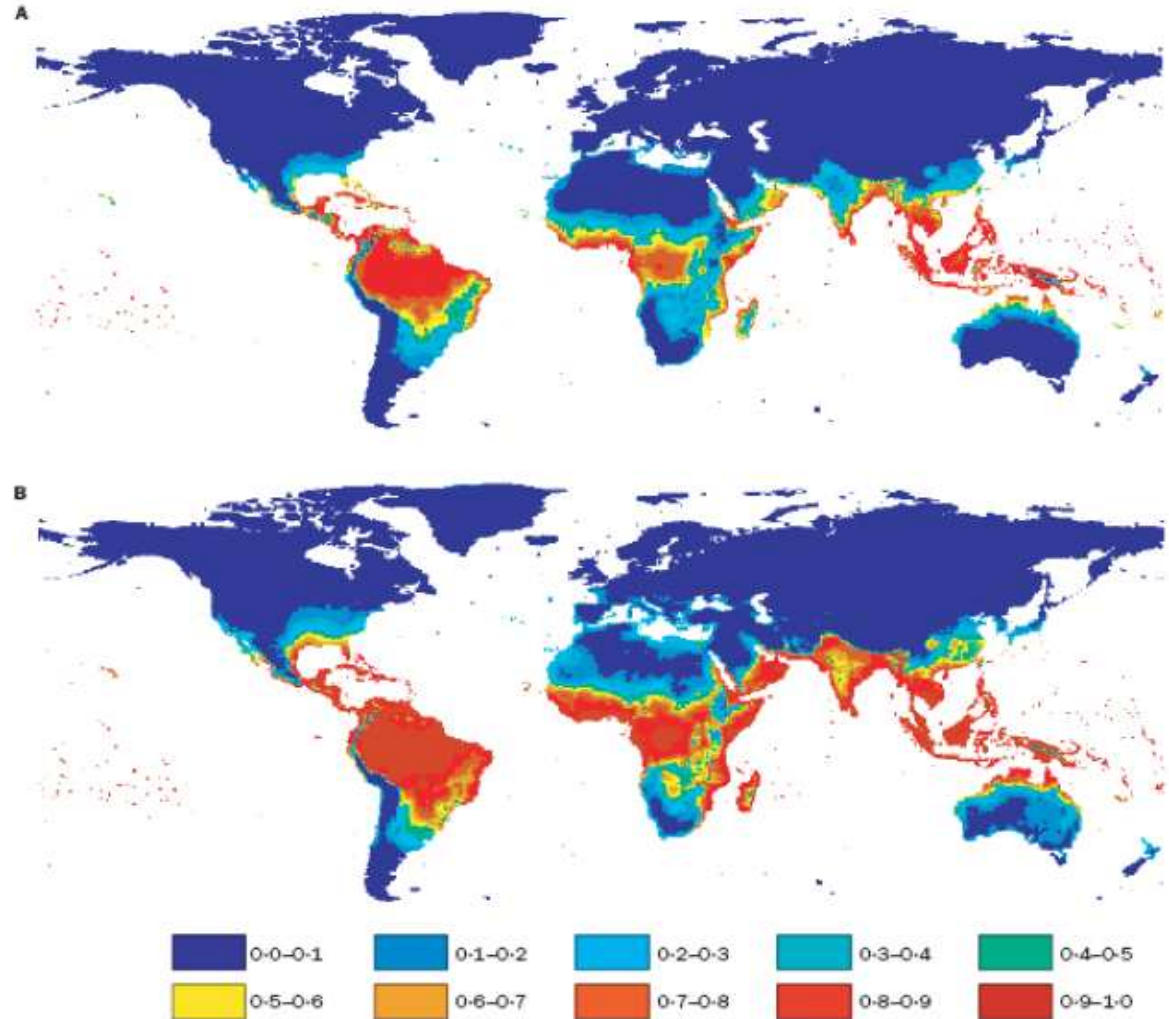
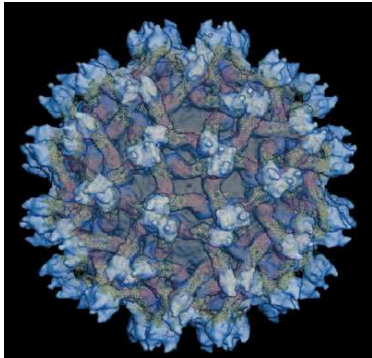
year

# Soil degradation

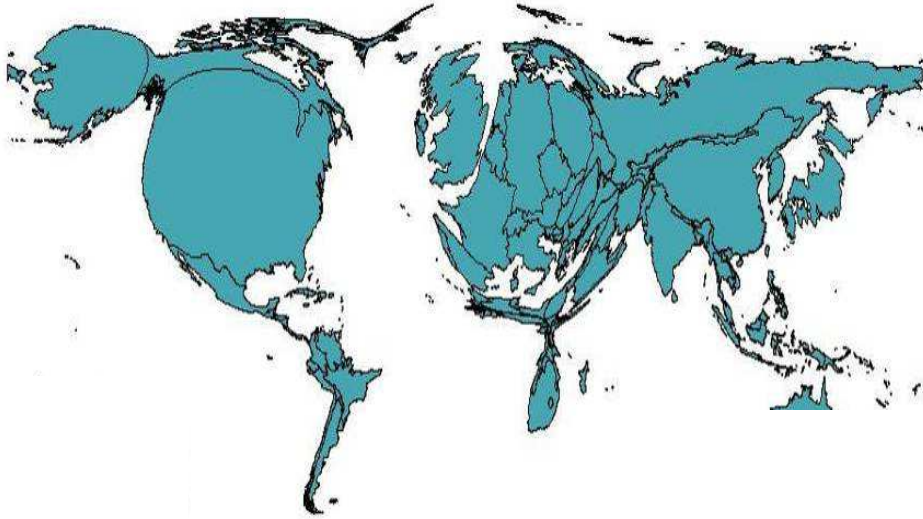


# Dengue: vectors

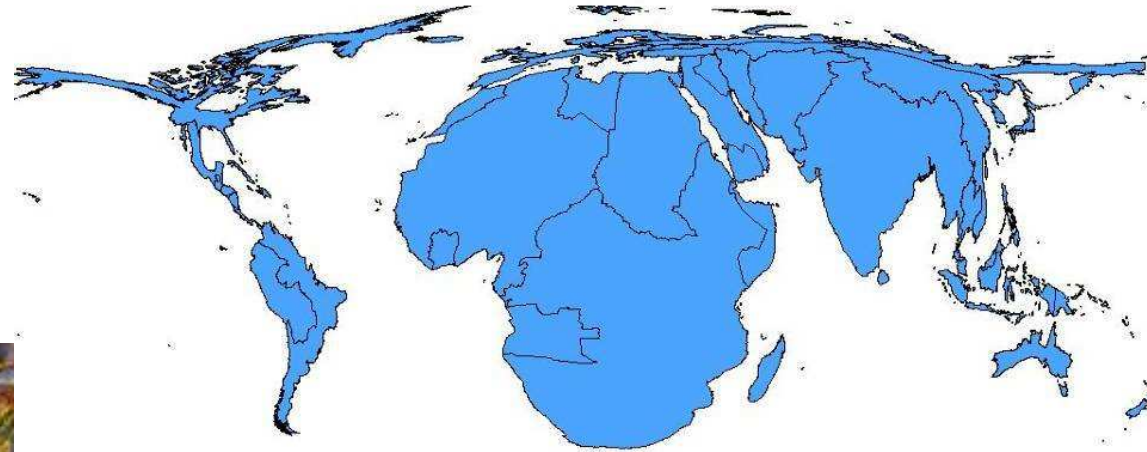
Increase of population exposed to dengue: **35% - 60%** and estimations in 2085 ~ **6 billion** people at risk



# Inequality: Emissions of Green House Gases



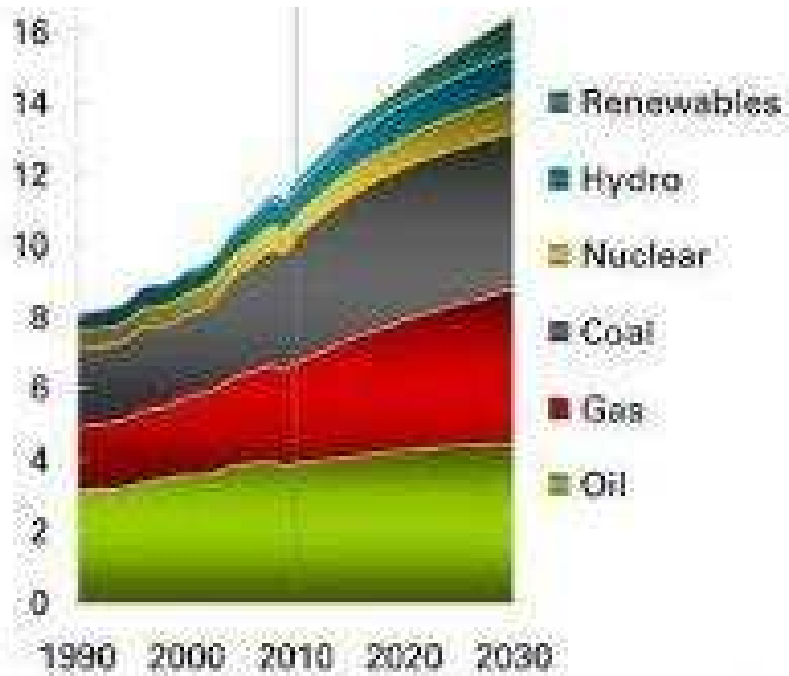
## Health impacts related to climate change



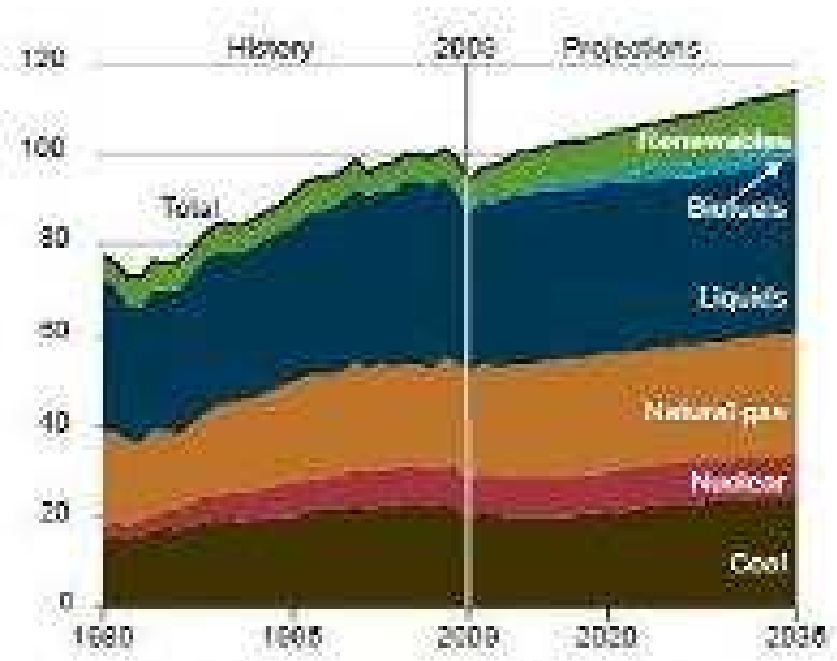
Patz et al., 2007; WHO, 2008.



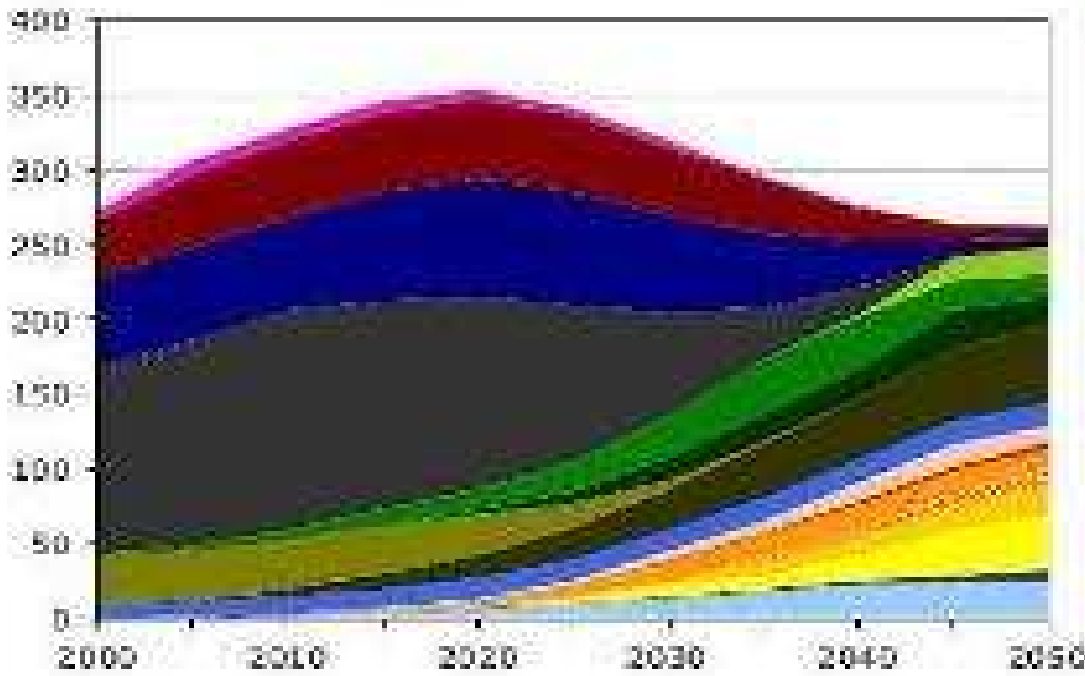
This map shows estimated mortality (per million people) attributable to climate change by the year 2000. Map is a density-equalizing cartogram in which the sizes of the 14 WHO regions are proportional to the increased mortality.



BP Outlook 1990-2030: 16



Energy Information Agency Outlook 1980-2035: 63

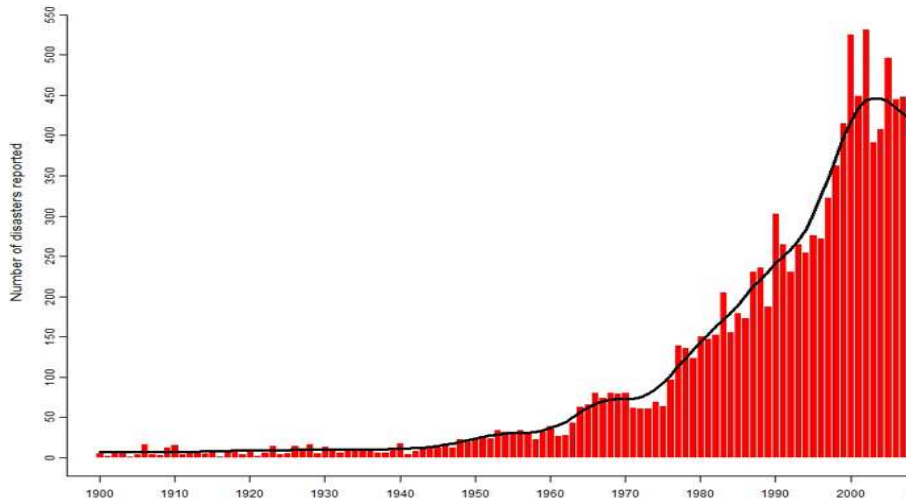


WWF Outlook 2000-2050: 92

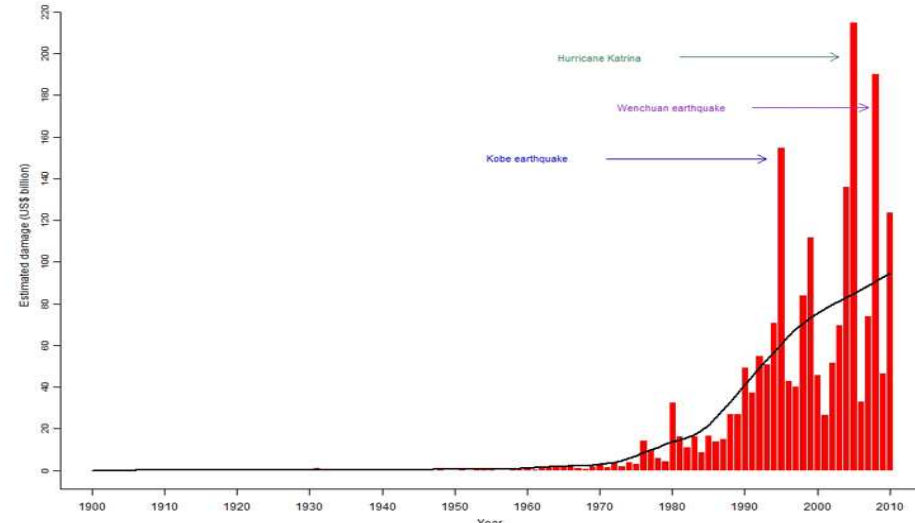
**Three  
mind-  
sets  
interest-  
driven**

# Disaster risks, death, affected and costs

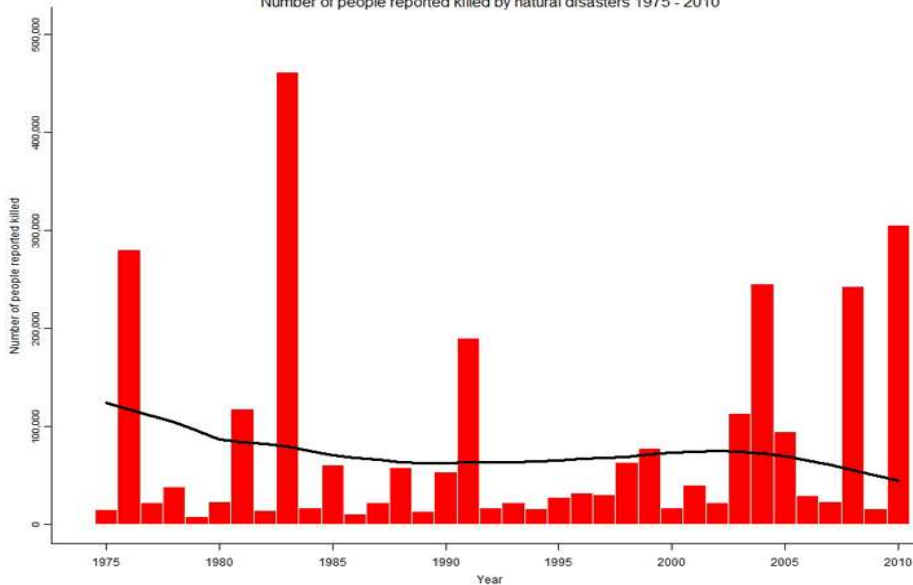
Natural disasters reported 1900 - 2010



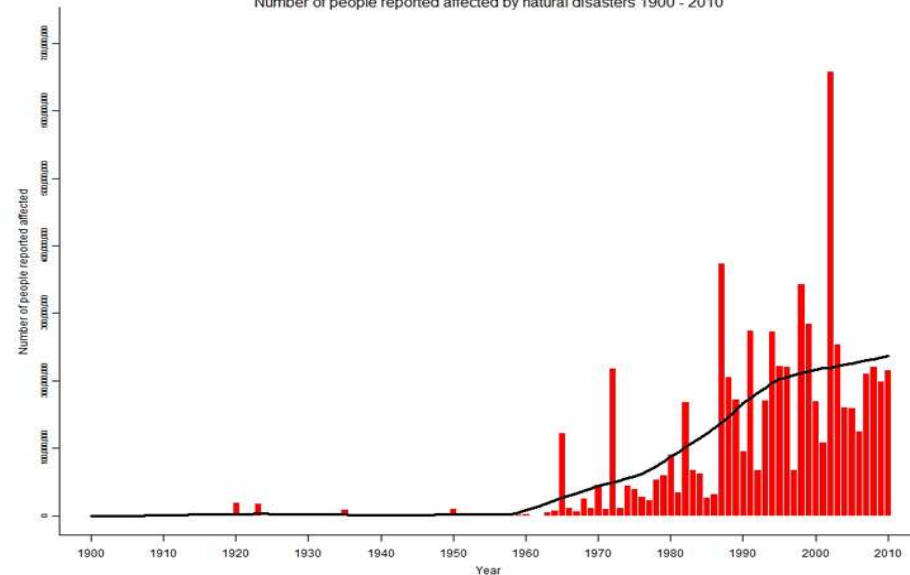
Estimated damage (US\$ billion) caused by reported natural disasters 1900 - 2010



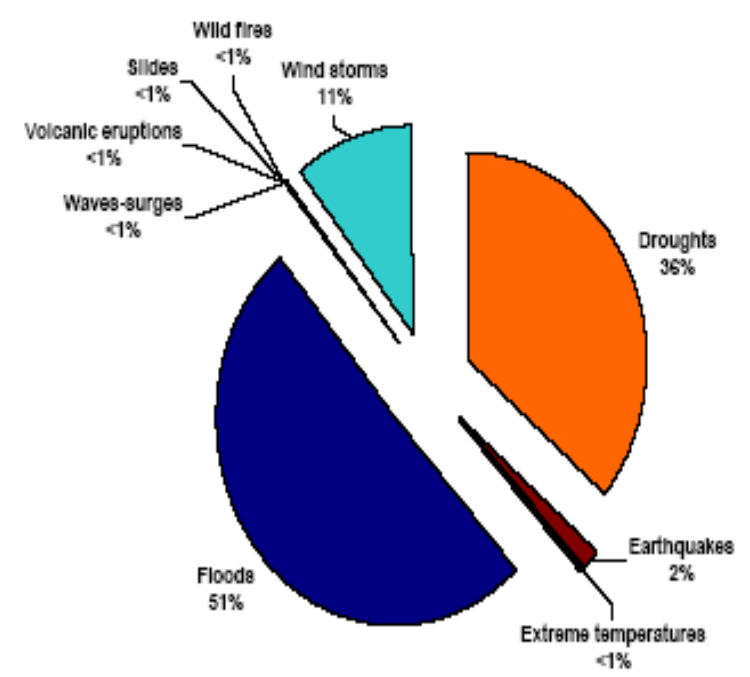
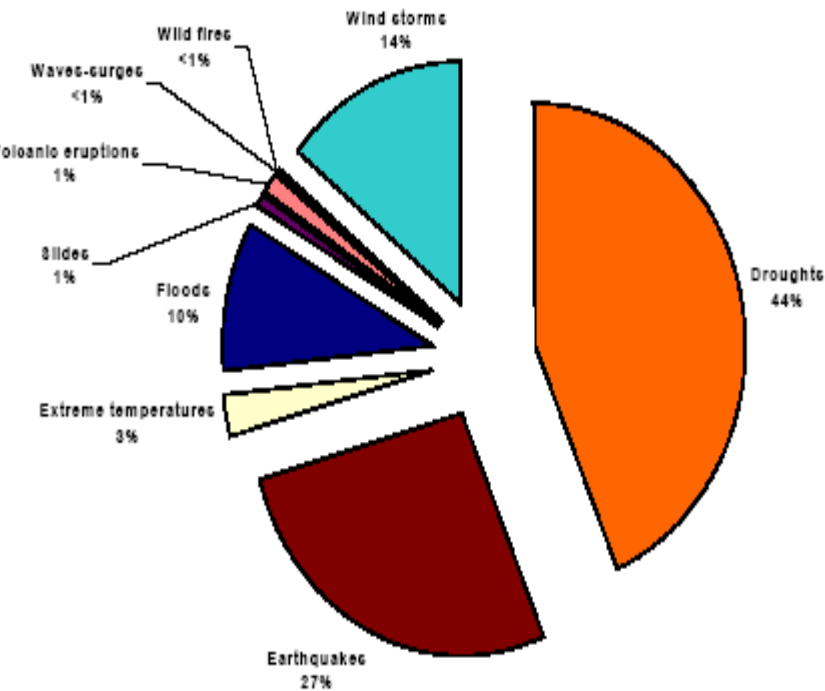
Number of people reported killed by natural disasters 1975 - 2010



Number of people reported affected by natural disasters 1900 - 2010



# Vulnerabilities during disasters: deaths and affected people in all disasters worldwide (1974-2003)



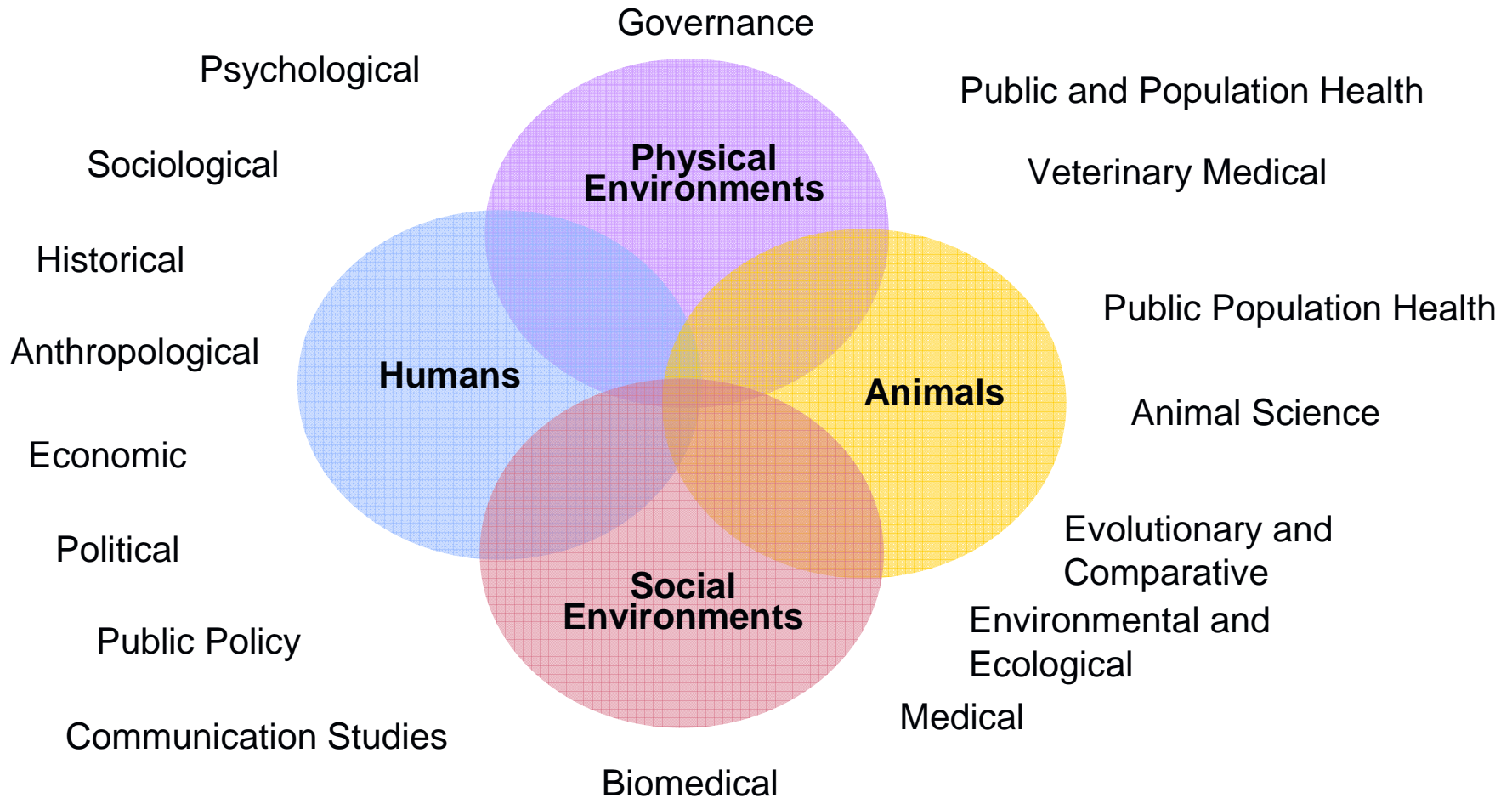
(1) injured + homeless + affected

**Total: 2.066.273 deaths; 5 076 494 541 affected**

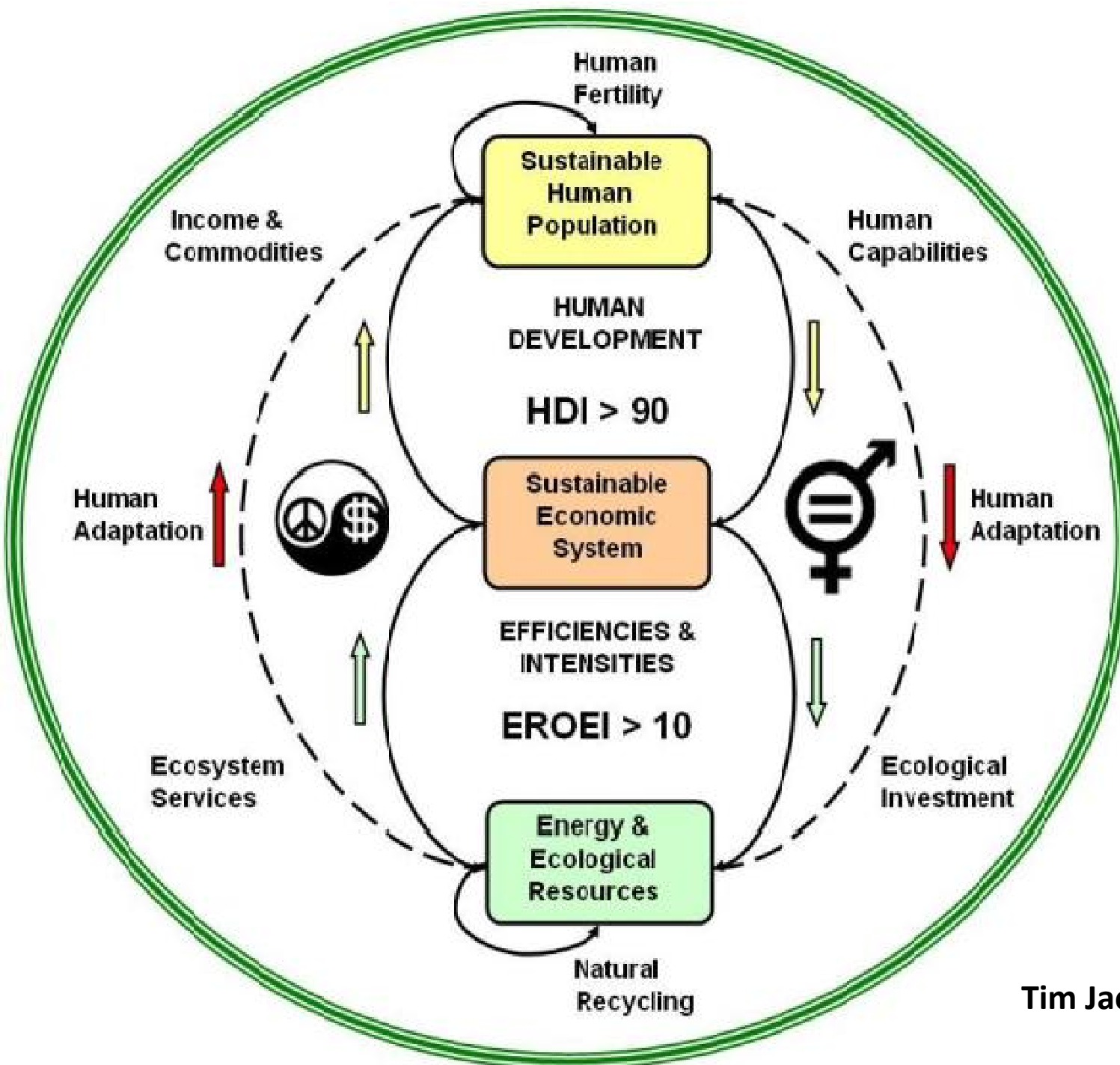
Source: Hoyois and Guha-Sapir (2004)



# The Next Generation of One Health Practitioners



Source: Rock et al., 2009



# Adaptation nature with gender perspective

An aerial photograph of a large crowd of people gathered around a large globe of the Earth. The globe is the central focus, showing continents and oceans. The people are dressed in various colorful outfits, and some are holding signs. The scene is set on a dark, paved surface. The text "Thank you very much for your attention" is overlaid in yellow on the globe.

**Thank you very much for your  
attention**