

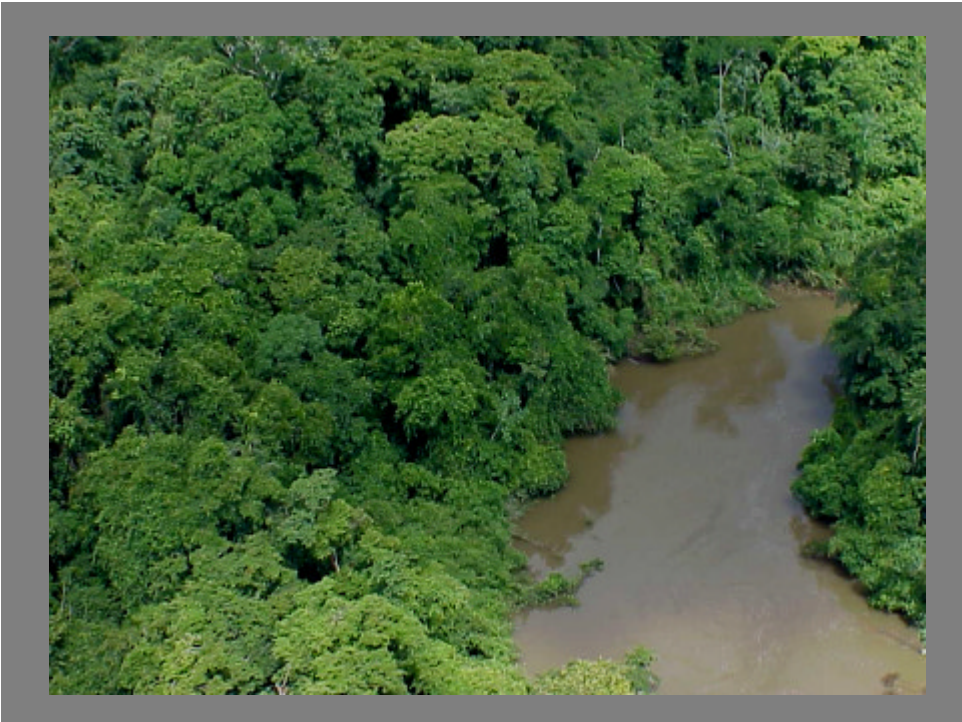
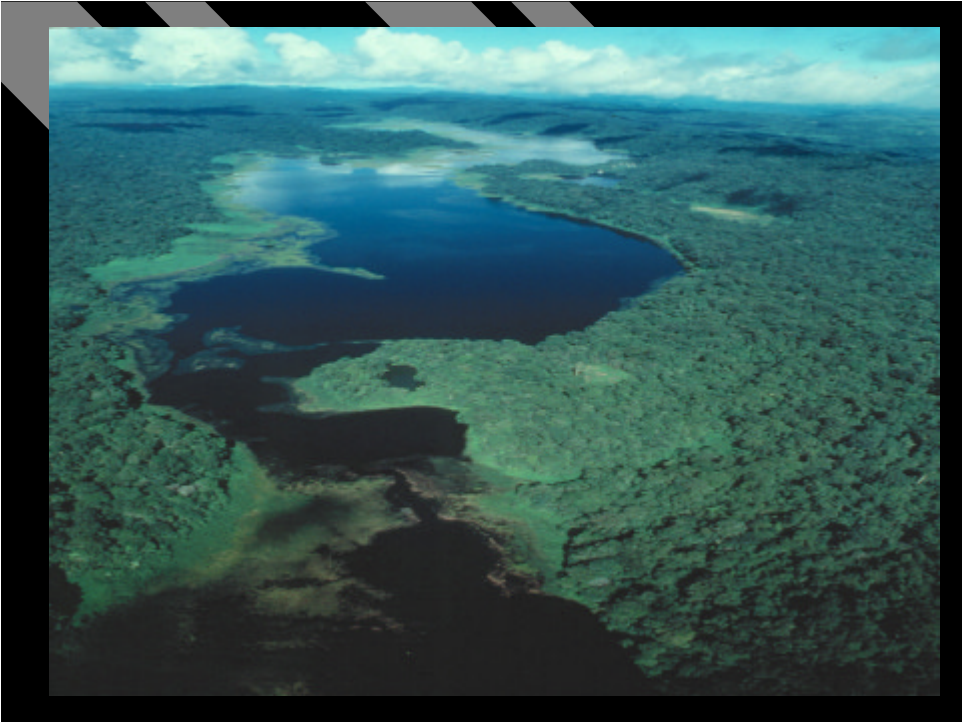


**GLOBAL CHANGE AND CHALLENGES FOR SUSTAINABLE
DEVELOPMENT FOR THE 21st CENTURY**

Harmonious Coexistence of Nature and Mankind

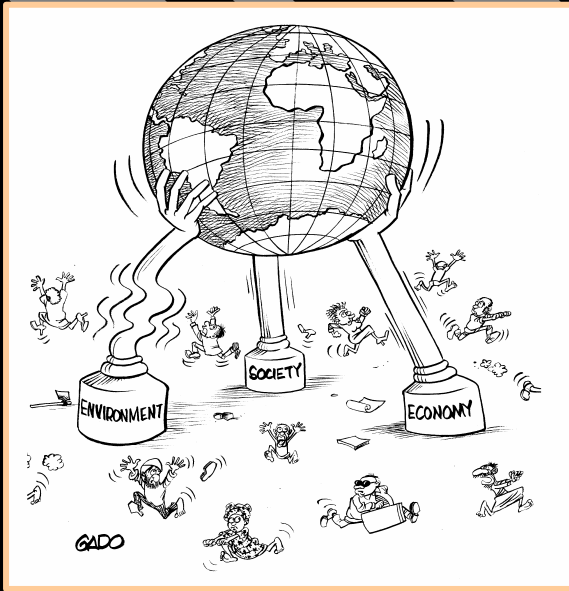
Julia Carabias

Japan 2004





A view of the present?

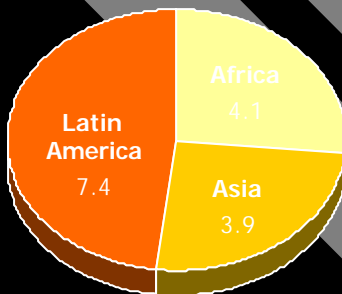


**World at risk
- the weak
pillar of
sustainable
development**

Tropical Deforestation

Global tropical deforestation

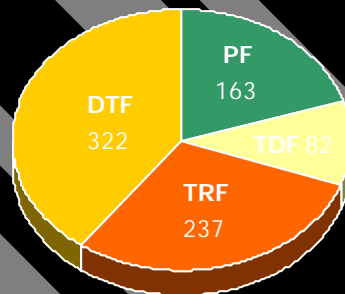
(10⁶ ha/year)



Total 15.4

Deforestation in Mexico

(10³ ha/year)

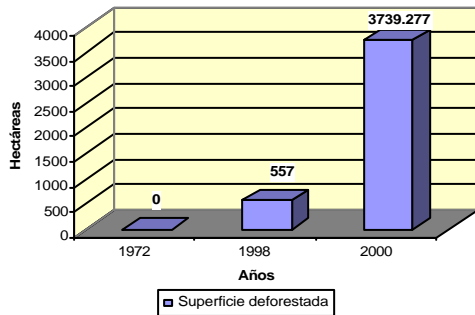
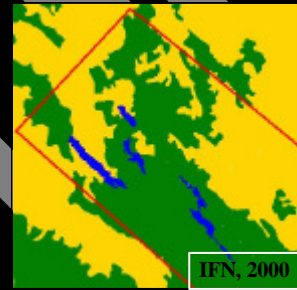
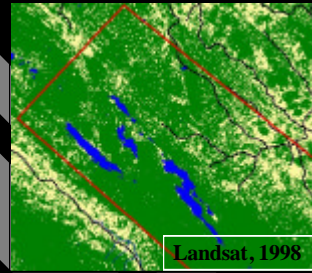
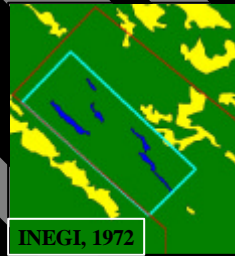


Total 804

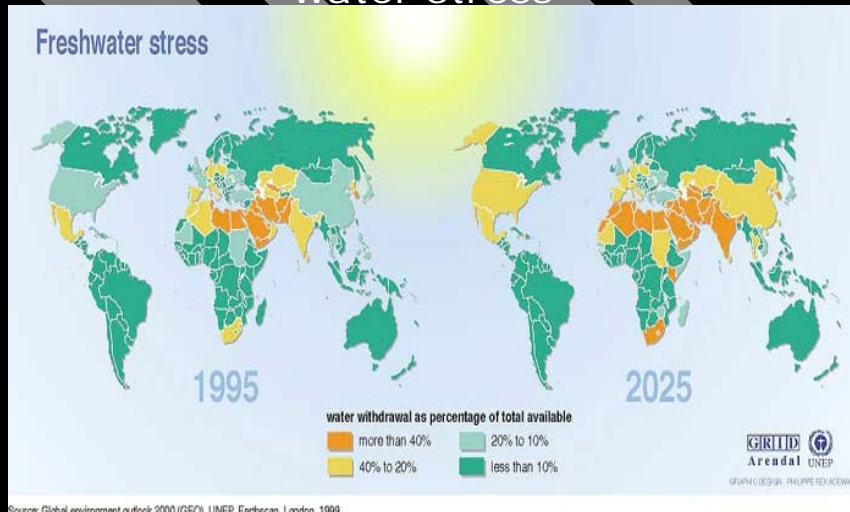
DTF = Dry tropical forests
TRF = Tropical rain forests

PF = Pine forests
TDF = Temperate deciduous

Change in the forest cover in the region of Lagunas de Ocotlal



Water scarcity is growing - by 2025 more than half of the world's population is projected to live under conditions of severe water stress



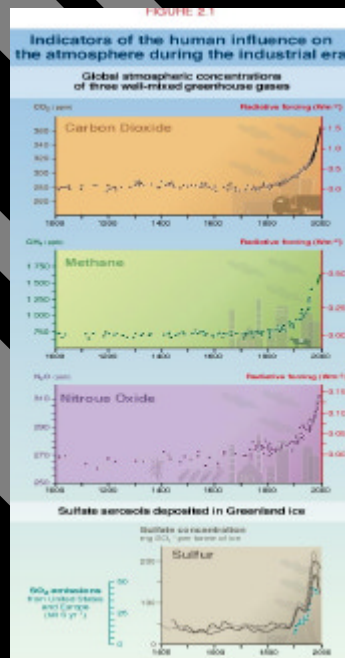
The Pantanal



- 50-60% of wetlands have been lost, altering hydrological and ecological functions

The mission of RAMSAR is the conservation and wise use of all wetlands through local, regional and national actions and international cooperation; to date there are 1387 wetland sites totaling 122.7 million hectares.

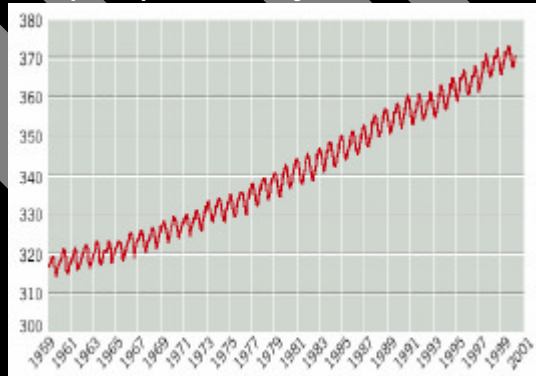
Human activities have changed the composition of the atmosphere since the pre-industrial era – primarily due to energy practices and changes in land-use



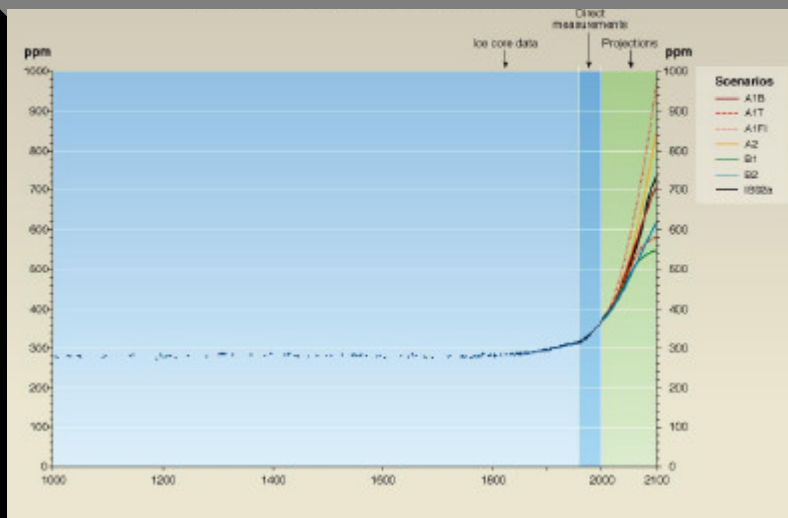
Carbon Dioxide levels

(parts per million by volume)

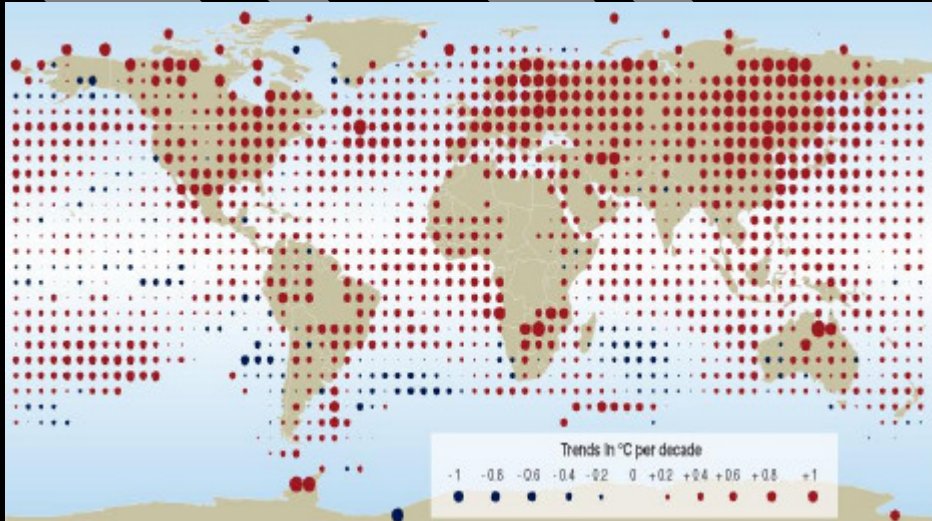
An increase
of carbon
dioxide of
12% in 30
years



Projected concentrations of CO₂ during the 21st Century are two to four times the pre-industrial Level



The land and oceans have warmed

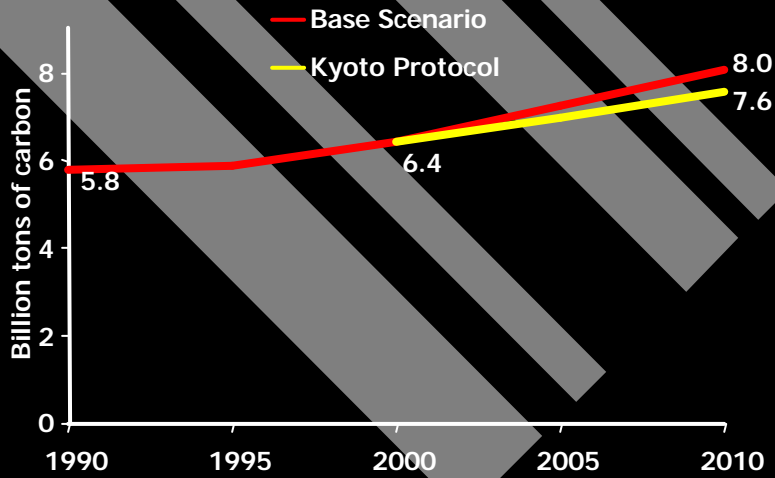


Arctic sea ice image
1973



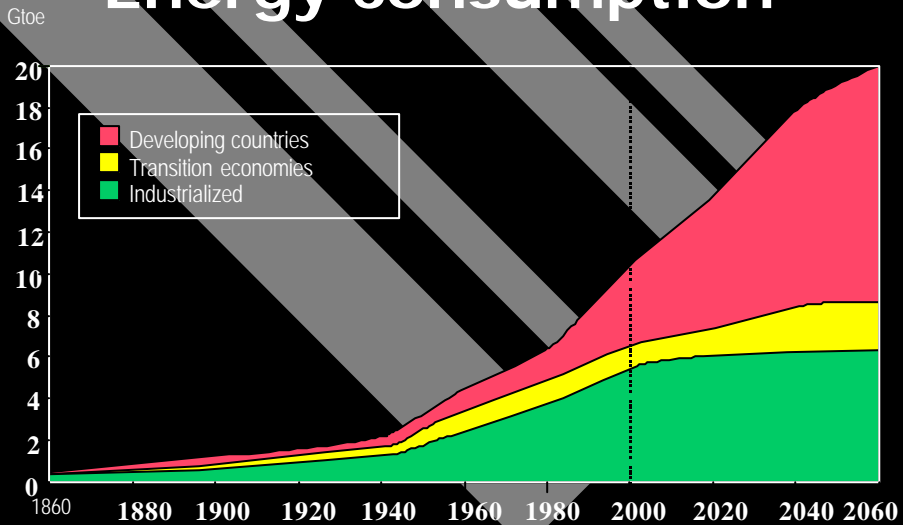
Arctic sea ice image
2003

Effects of the Kyoto Protocol



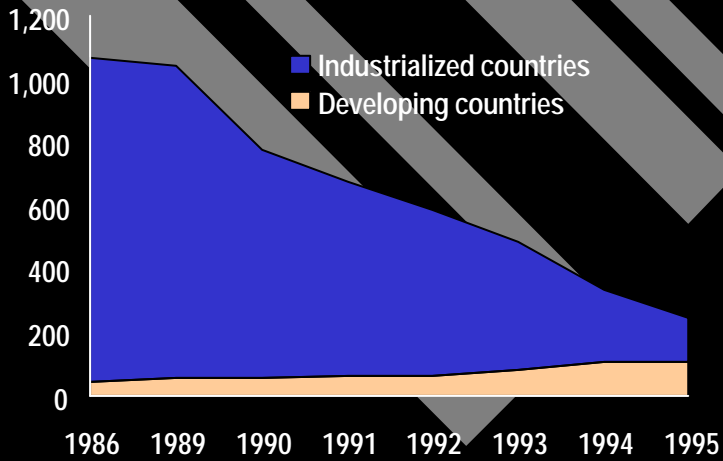
Data Sources: United States Department of Energy, Energy Information Administration, *International Energy Outlook 1998* and *1999*.

Energy consumption



Source: World Energy Council, World Bank.

Reduction in chloroflourocarbons



A view of sustainability!



**World on track -
a balanced trio!**