



10th Scientific Forum

Global Challenges and the Development of Atomic Energy: The Next 25 Years

IAEA, Vienna, 18 - 19 September 2007



Session 2

Meeting New Challenges in Food, Agriculture and Health

Moderator: P. Schuller

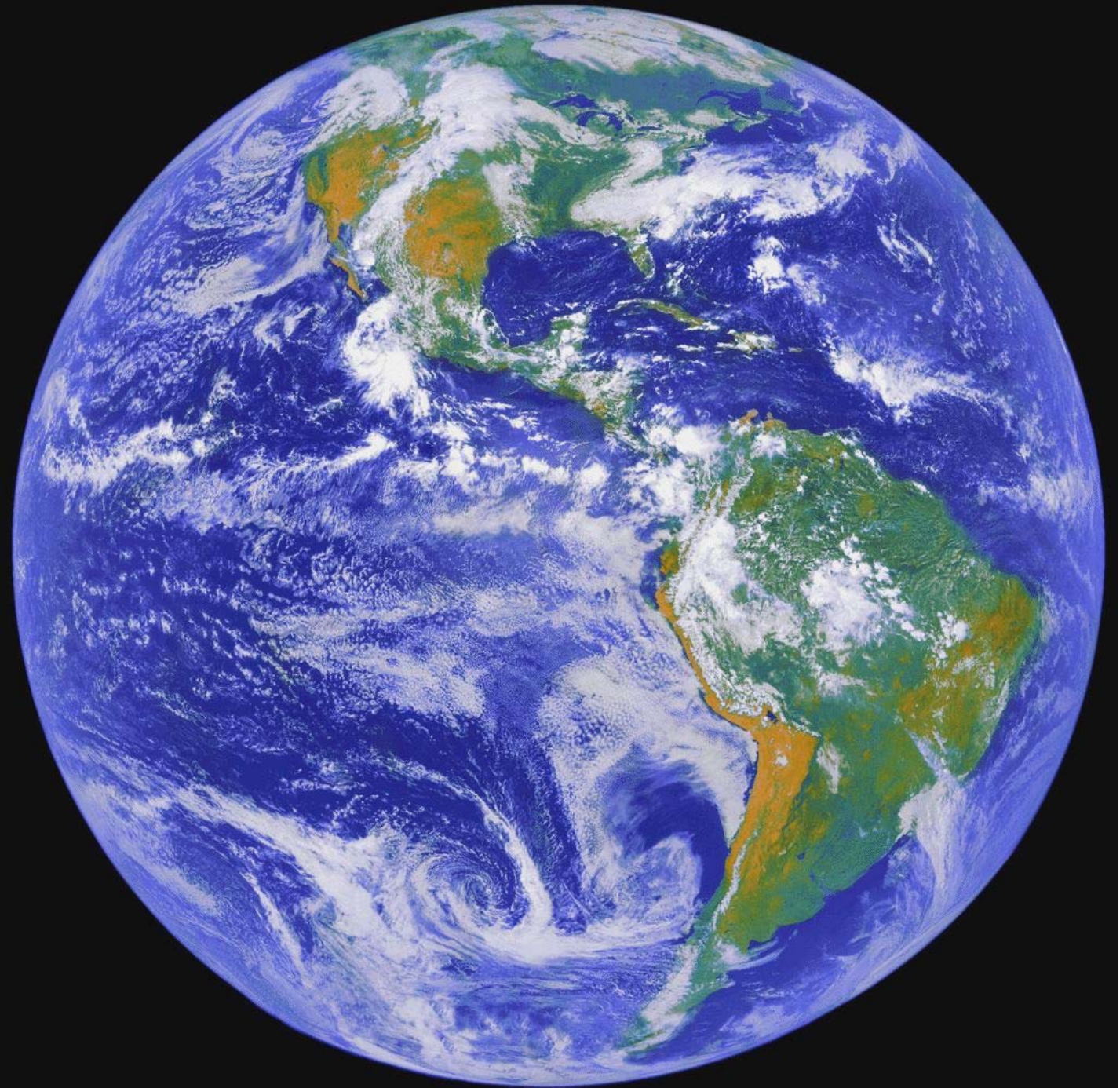
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THE CONTEXT

GLOBAL CHANGES

- Climate Change
- Land Use Change
- Land Clearance
- Infrastructure
Development
- Water Resource
Development



CLIMATE CHANGE



LAND USE CHANGE



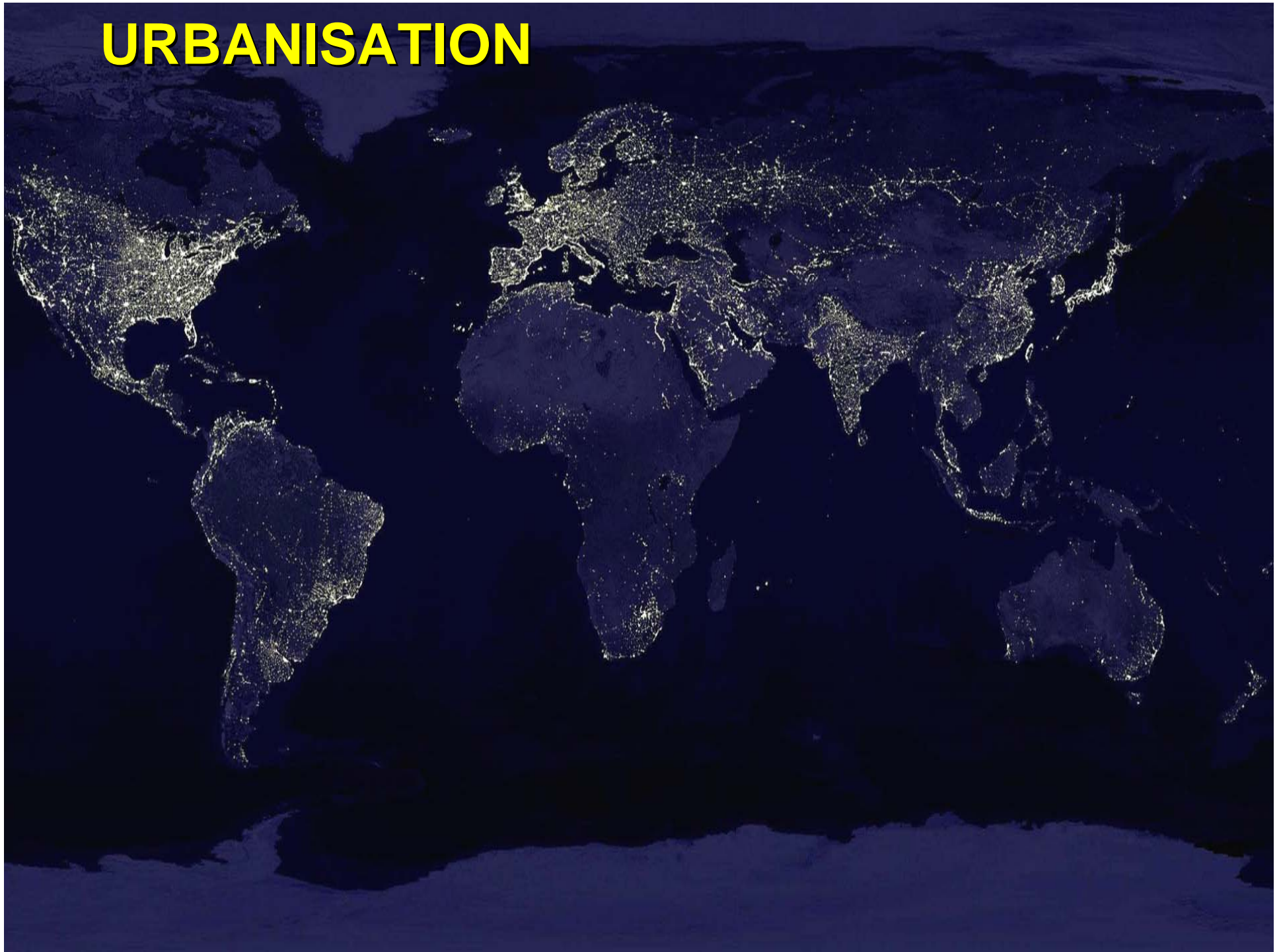
FOREST CLEARANCE



INFRASTRUCTURE DEVELOPMENT

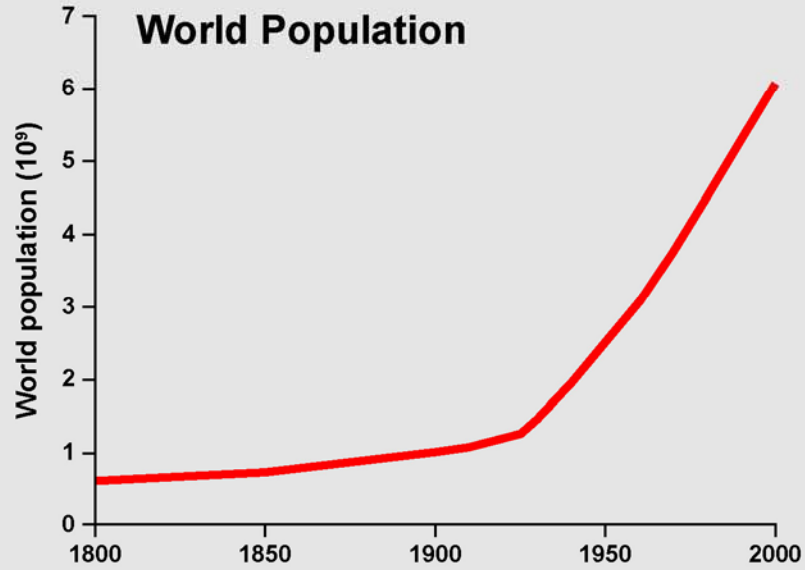
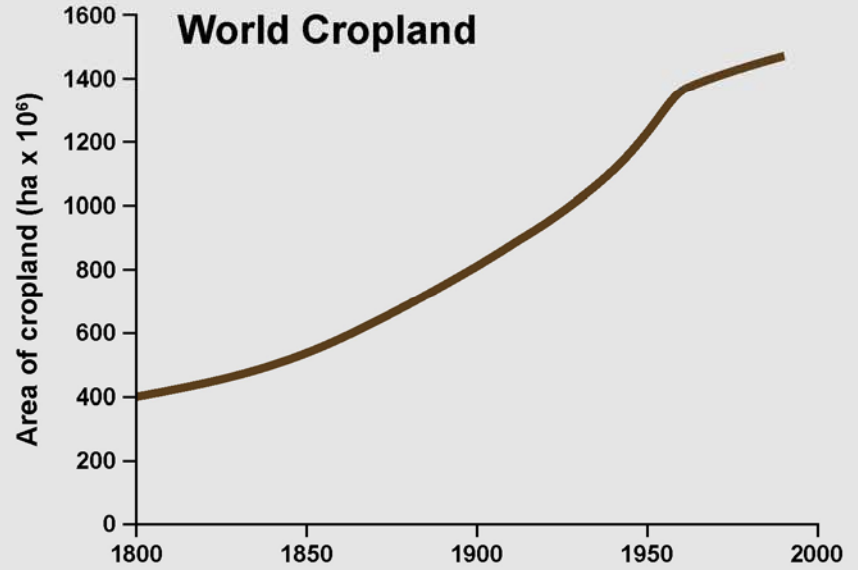
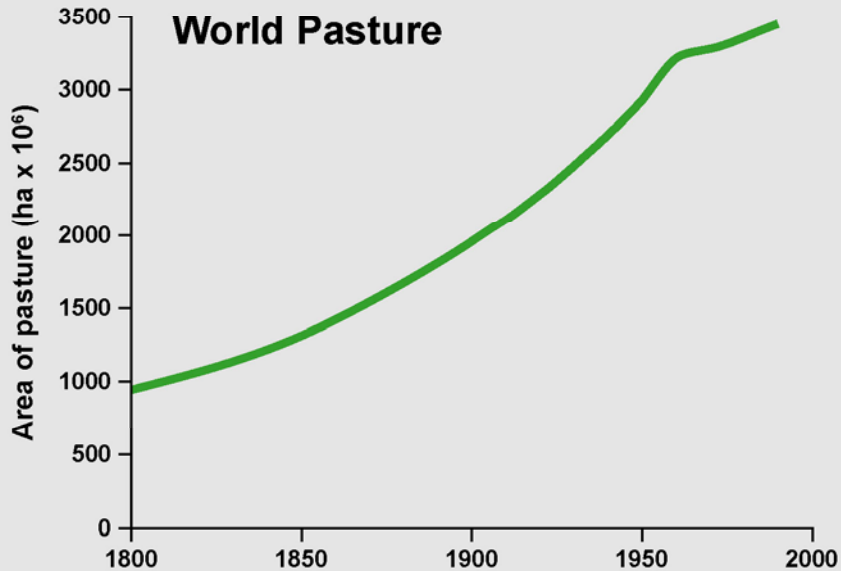
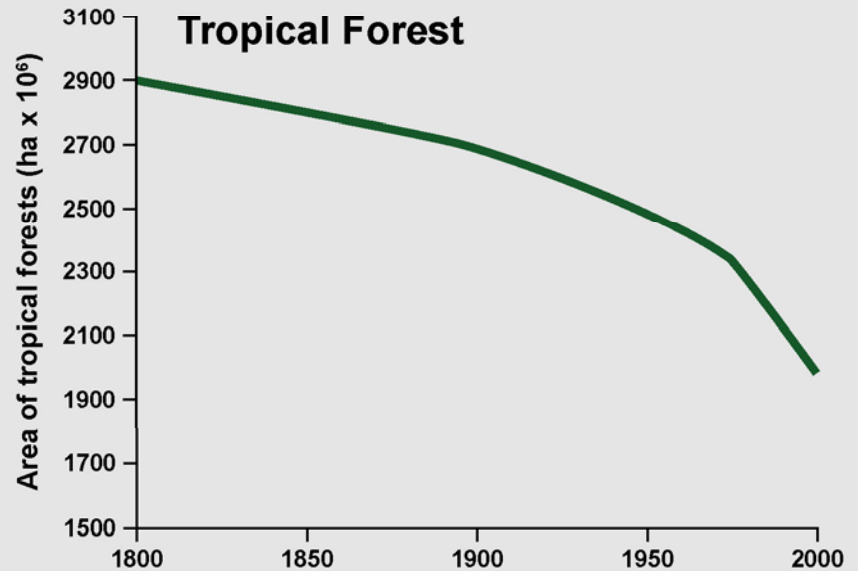


URBANISATION



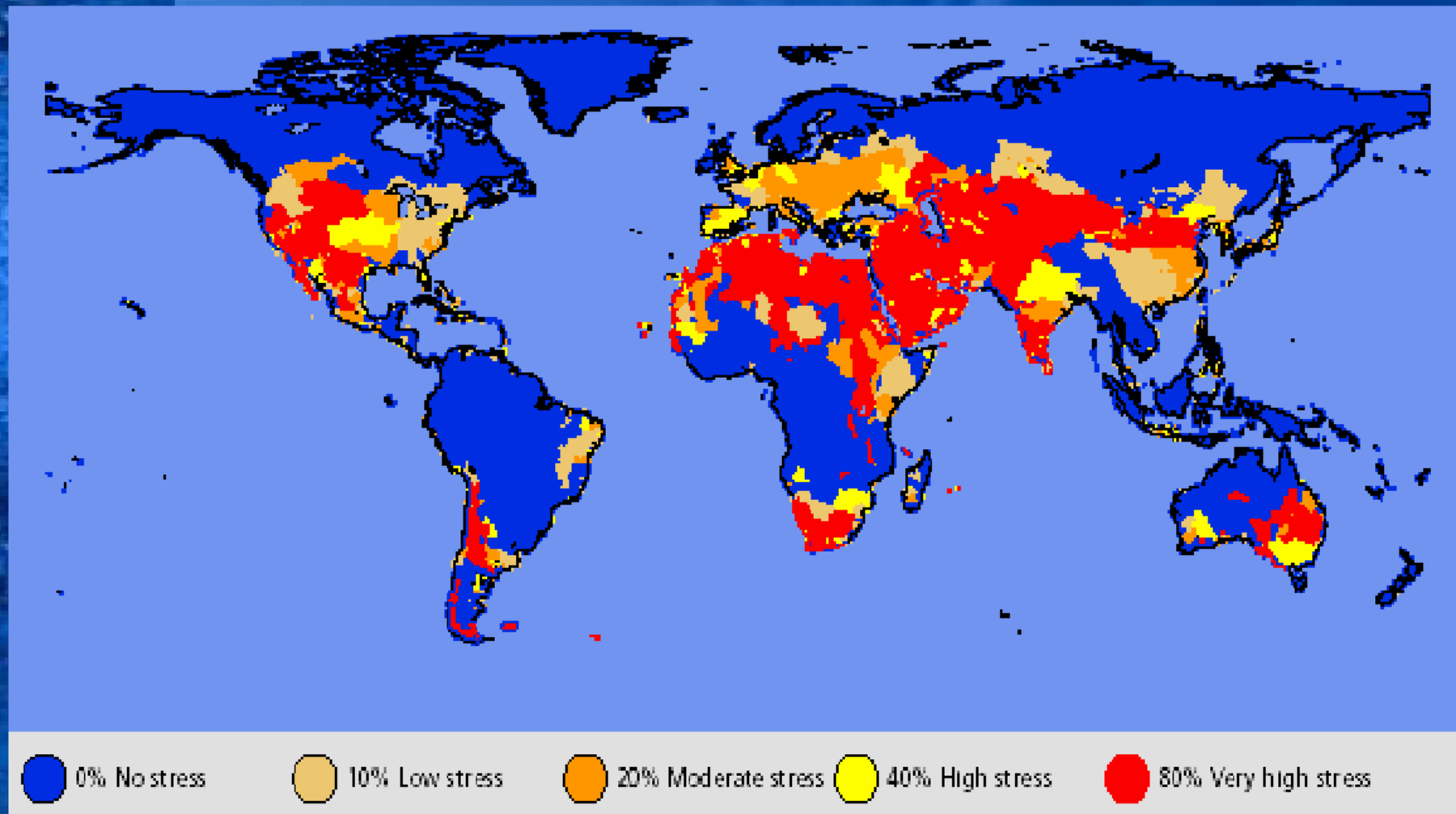
WATER RESOURCE DEVELOPMENT



A)**B)****C)****D)**

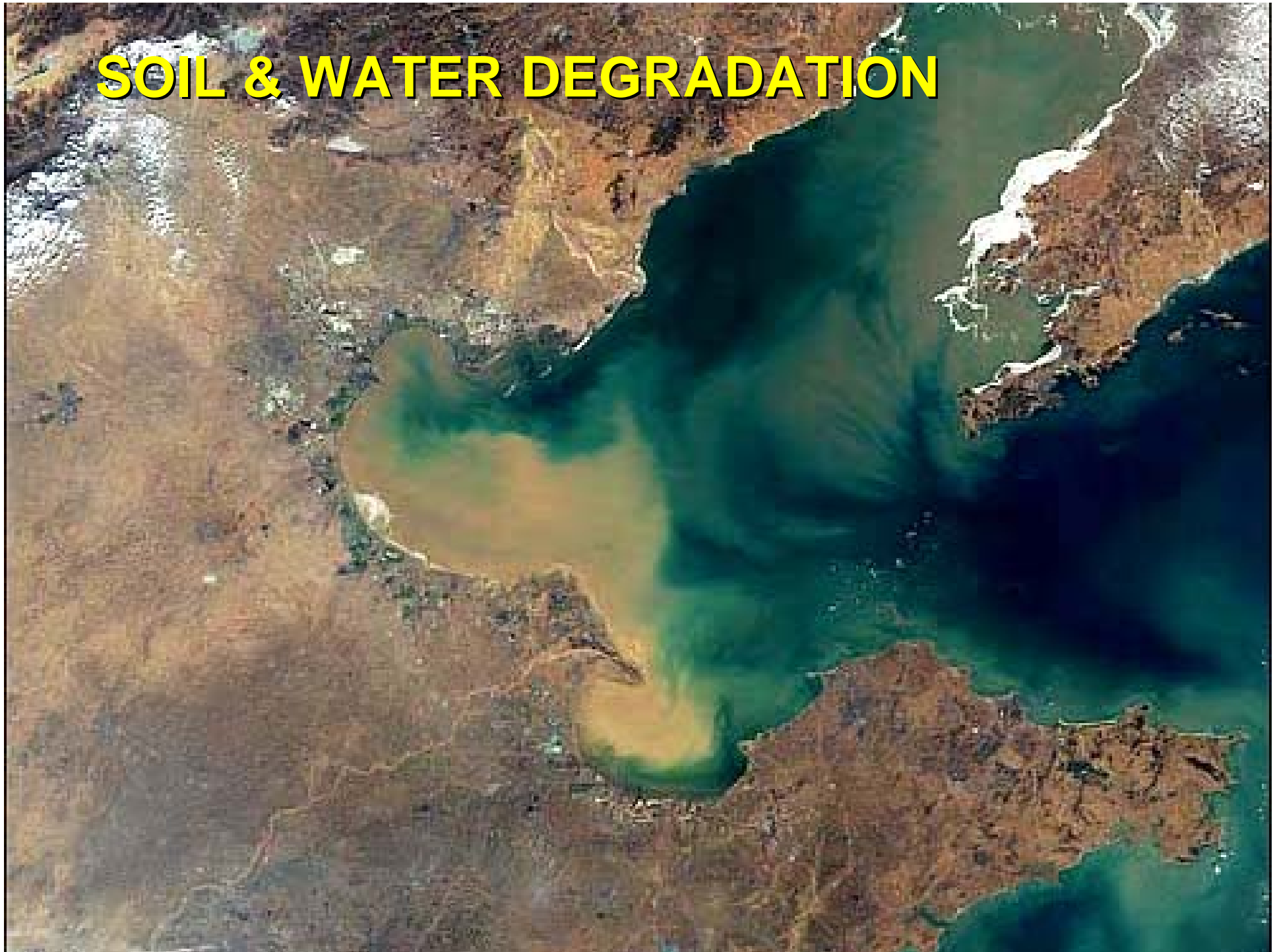
Source: Goldewijk (2001); Roper and Roberts (1999); Walling (2007)

Water stress in 2025 under the business as usual scenario



Percentages in terms of the criticality ratio, i.e., the ratio of withdrawals for human use to total renewable resources

SOIL & WATER DEGRADATION



Cancer could be prevented!

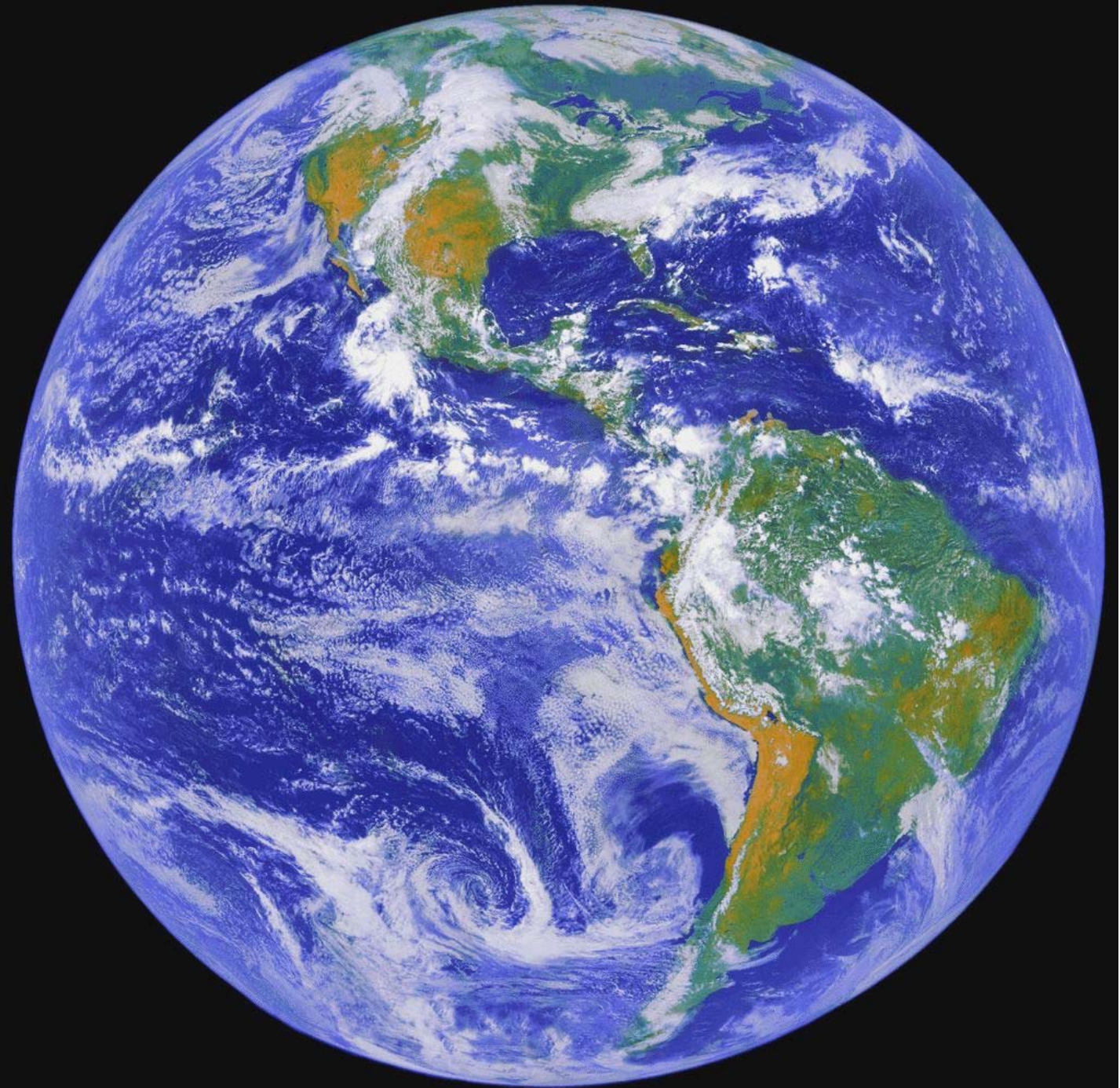
- **Tobacco 1/3 of cancer**
- **Infections 16% of global cancer burden, 6 % to 32 % (low income countries); Hepatitis B/C, Ebstein-Barr, papillomas, Helicobacter pylori, Schistosomas- Liver fluke**
- **43% due to tobacco, diet and infection**

GLOBAL CHANGES



GLOBAL CHALLENGES

- Health of Increasing Population
- Sustainable Food Production & Water Supply
- Soil & Water Conservation



GLOBAL CHALLENGES

Food

Agriculture

Health

