



GECHS
GLOBAL ENVIRONMENTAL CHANGE
AND HUMAN SECURITY

Climate Change, Globalization and Water Scarcity

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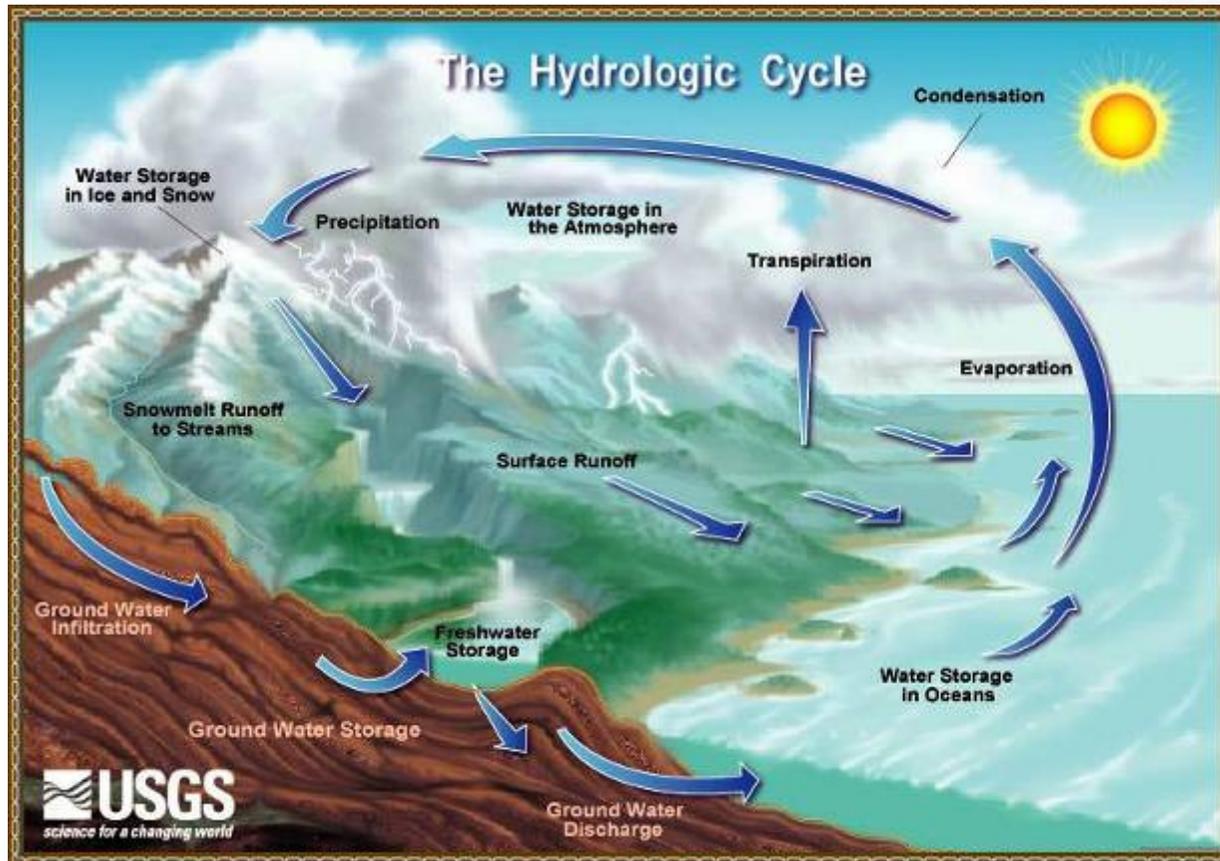
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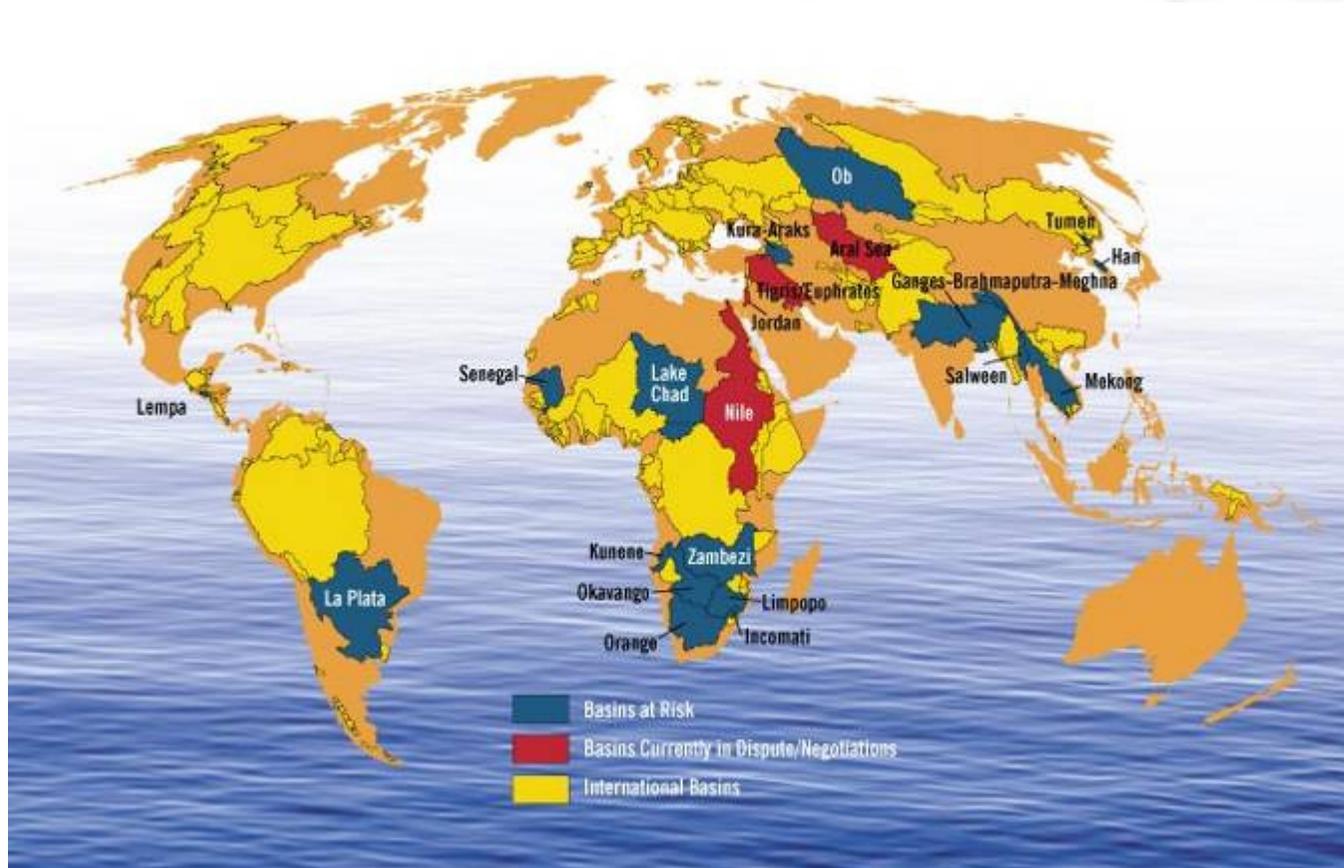
Key Points

- There are different perspectives on water, and they influence understandings of water scarcity;
- Both climate change and globalization processes influence water quality, availability and access;
- The outcomes of both global processes have implications for human security;
- Water management policies must recognize both climate change and globalization processes.

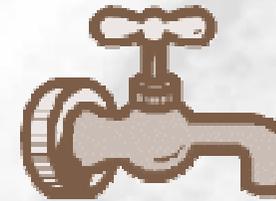
Water: A Global Resource



Water: A Shared Resource



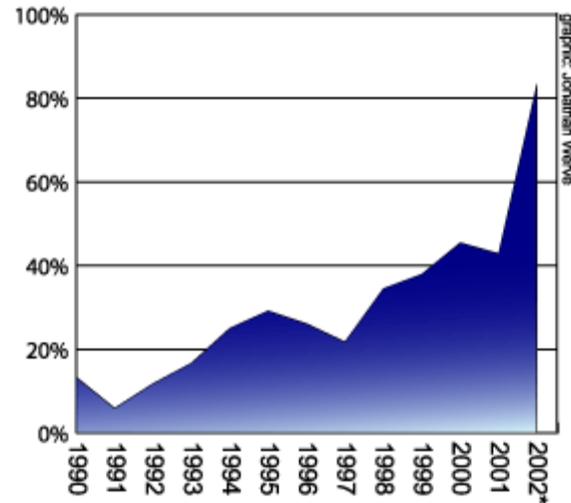
Water: A Local Resource



Water: An Economic Resource



Percent of water loans requiring privatization by year



*Data from Jan. 1, 2002 through Nov. 1, 2002
Source: World Bank and Center for Public Integrity analysis

Water: A Human Right

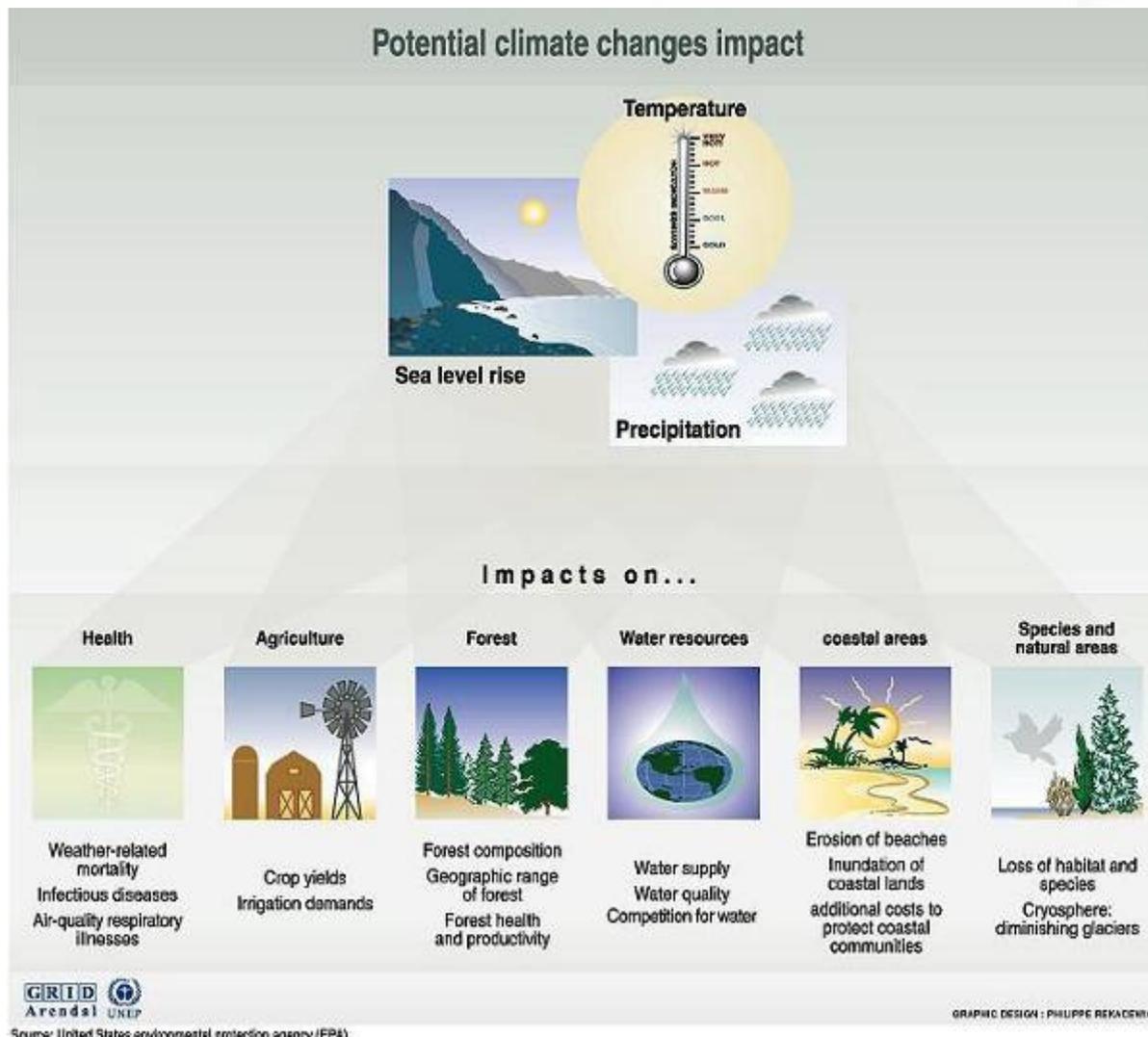


Water Scarcity

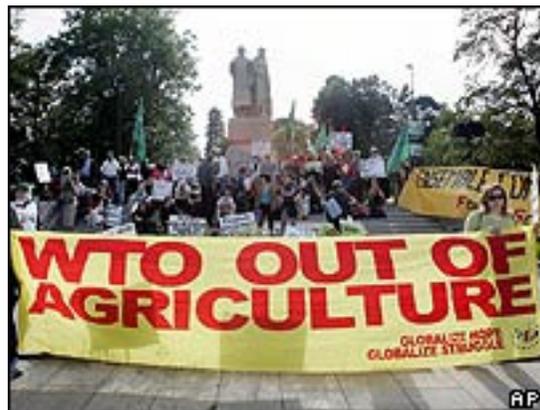
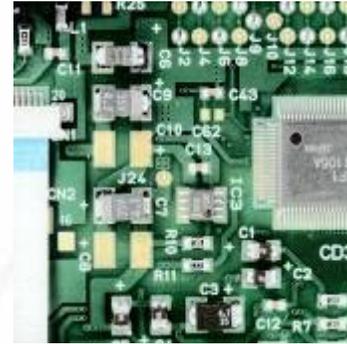
- Climatic variability and change
- Land use
- Population growth
- Food production
- Water quality
- Water demand
- Sectoral resources and institutional capacity
- Legislation and water resource management
- International waters
- Sectoral professional capacity
- Political realities
- Sociological issues
- Poverty and economic policy



Climate Change



Globalization



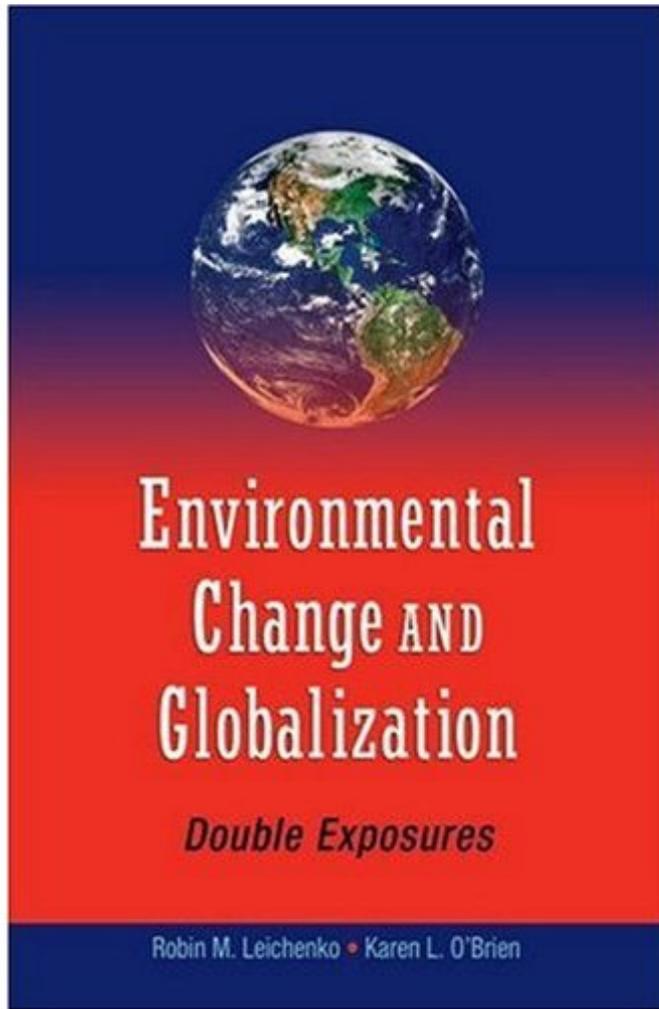


"In a world that is already facing mounting pressure on water resources, climate change could add around 1.8 billion people to the population living in a water-scarce environment." (UNDP 2007)

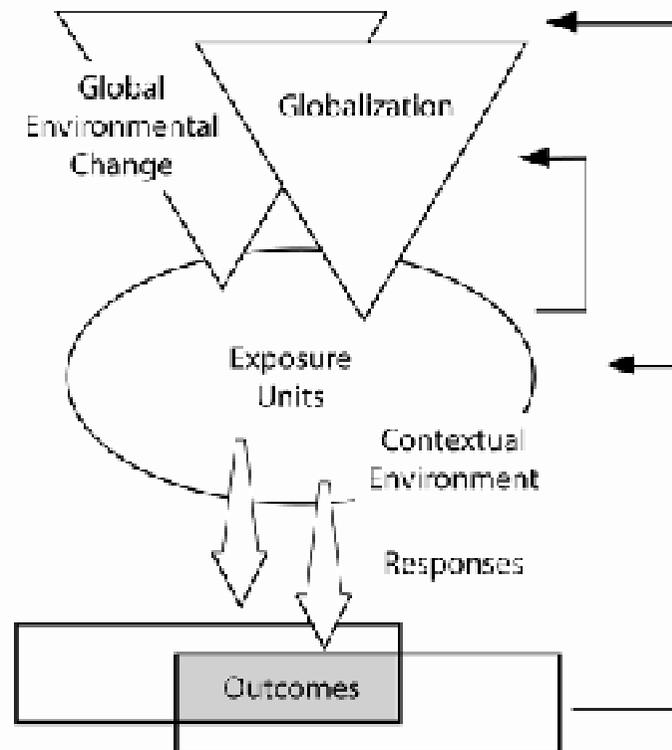


“Whether households can meet their basic need for clean water depends partly on their own resources and partly on how public policy shapes access to infrastructure and water through investment decisions, pricing policies and legislation governing providers.” (UNDP 2006)

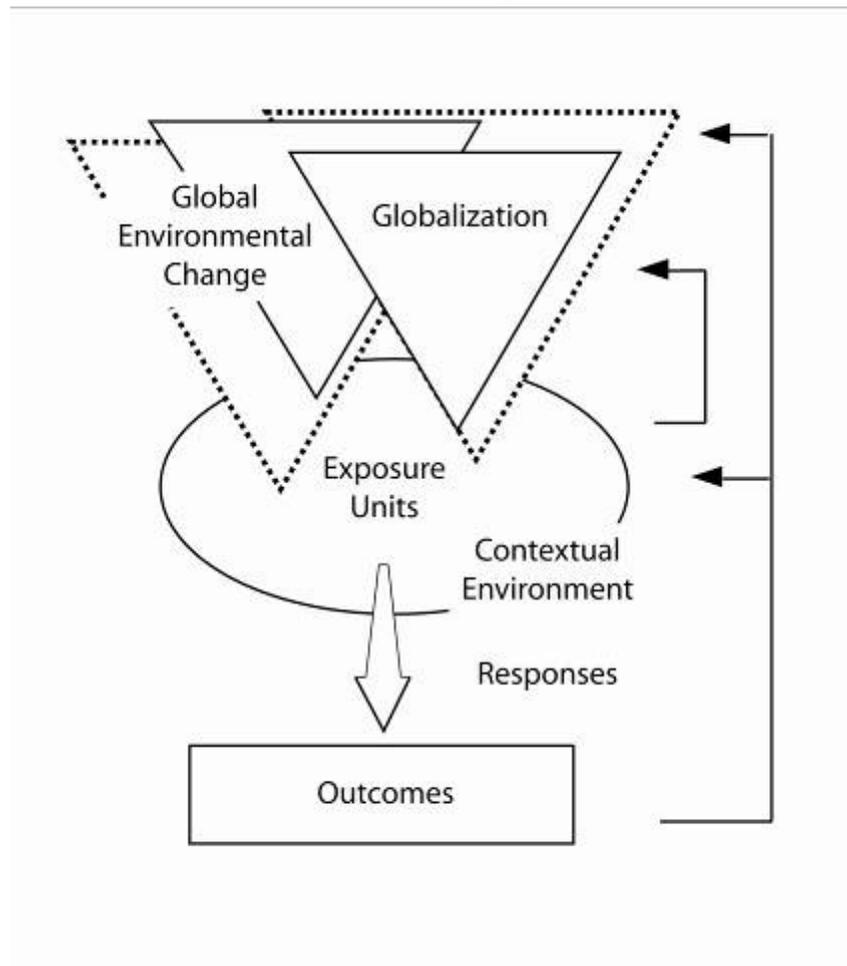
Double Exposure



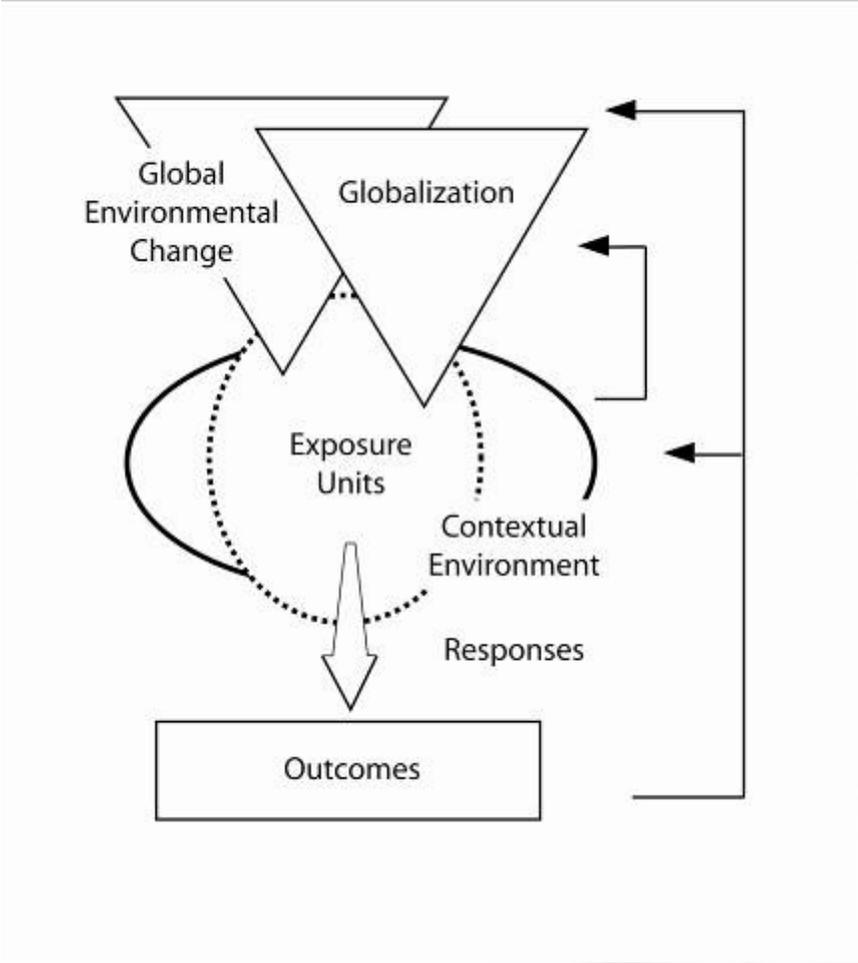
Outcome double exposure:



Feedback double exposure:



Context double exposure:



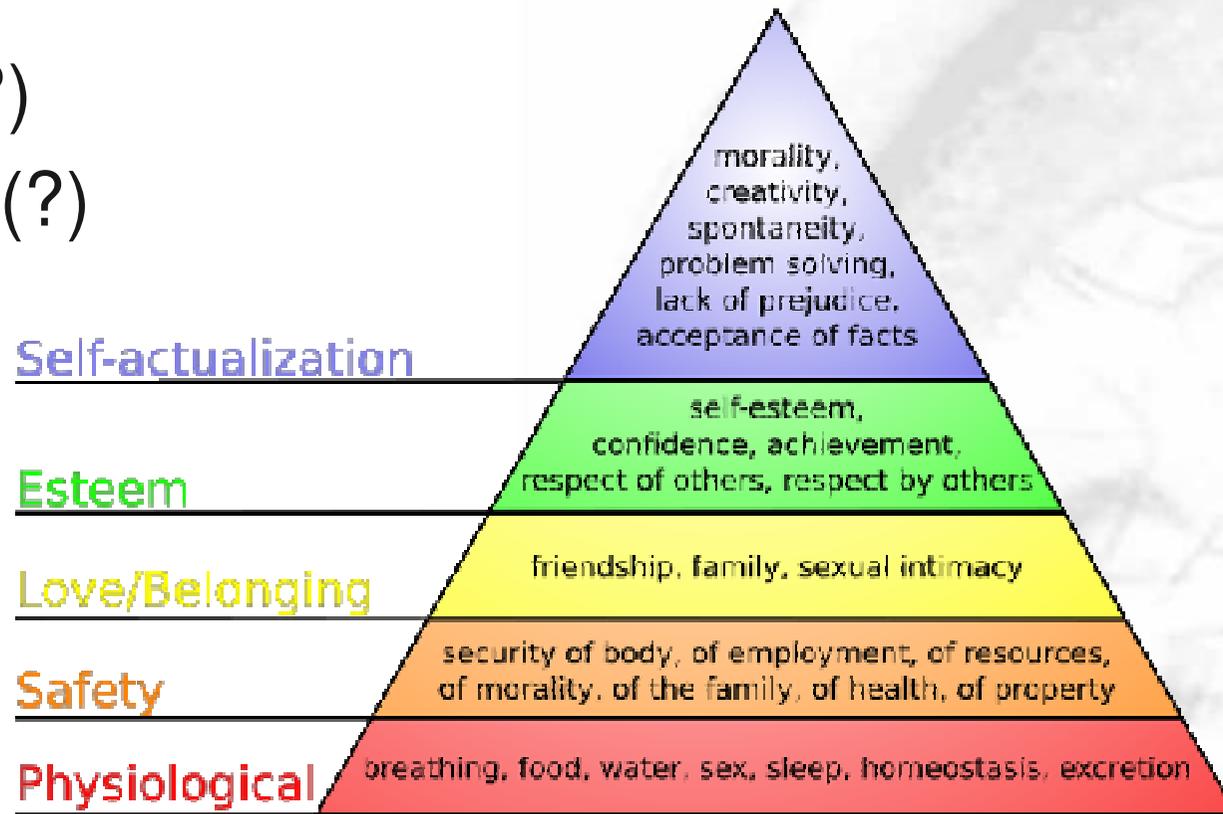
Water Marketization & Climate Extremes

Water marketization – the process of creating the economic and policy infrastructure to treat water as a commodity

- Who is most vulnerable and why?
- What types of responses are sustainable?
- Who are the winners and losers?
- What are the implications for human security?

Implications for human security

- Mortality
- Conflict (?)
- Migration (?)



Maslow's (1970) hierarchy of human needs

Can globalization processes reduce water scarcity?

- Water aid / trade
- Virtual water
- A new global social contract

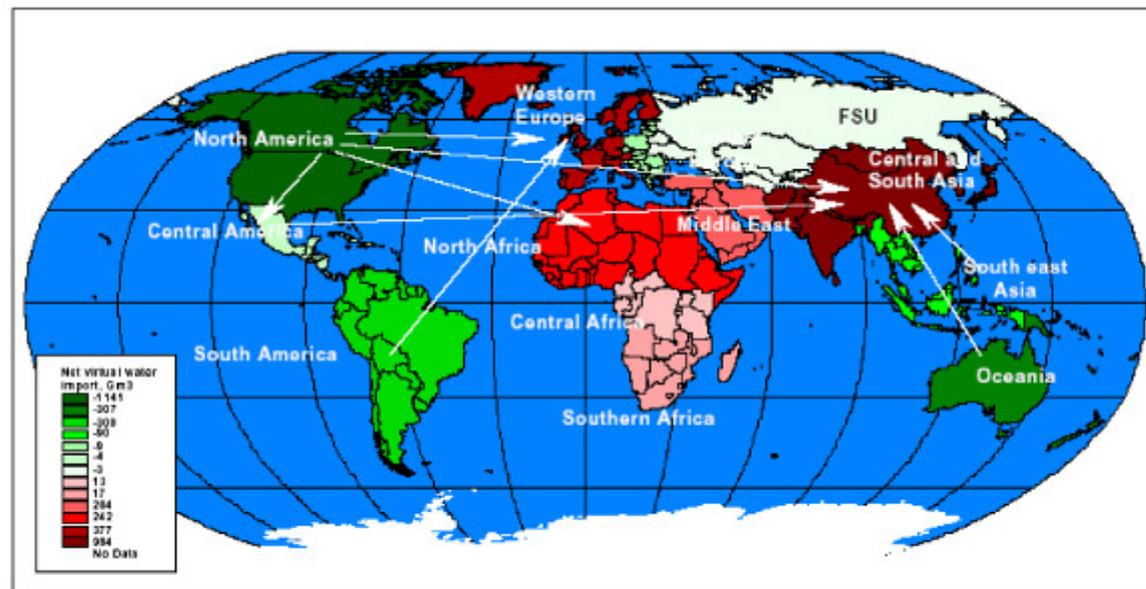


Figure 2. Major virtual water flows as a consequence of food trade for the period 1995-1999 - arrows show net volumes > 100 Gm³. (Hoekstra et al, 2003)

Conclusion

- Water management policies must recognize **both** climate change and globalization processes.

