

# Water and Security

## Hans Günter Brauch, Discussant

- ✍ 4 papers on water and security by four colleagues: a former IPRA president & three Ph.D. candidates and IPRA newcomers
- ✍ from 4 countries: France, Germany, Italy, Mexico
- ✍ from 3 disciplines: internat. law, political science, sociology
- ✍ All three Ph.D. candidates: first year: search phase
- ✍ Presented one aspect of their thesis project.
  - **Houdret** on water scarcity in the Maghreb (Morocco)
  - **Nathan:** on water-induced urban hazards (Bolivia, La Paz)
  - **Tignino:** on international water law (in peace and in conflict)
- ✍ All three are prospective contributors to a new book on *Facing Global Environmental Change and Globalisation: Reconceptualising security in the 21<sup>st</sup> Century* (Berlin: Springer 2006)
- ✍ 3 women and one man: a good gender balance

# Water and Security Linkages

- ✍ **What have water and security in common?**
- ✍ **What do we mean with „security“? How to conceptualise „water security“, „environmental challenge“ and „vulnerability“.**
- ✍ **Too little water (water scarcity) as a challenge to survival?**
- ✍ **Too much water (floods, storms, mudflows) as a threat to life?**
- ✍ **Water & conflicts on access, control, sharing, distribut., price:**
  - ✍ a societal, domestic conflict (water distribution, price), referent: individual
  - ✍ an international conflict (water control and sharing), referent states, humans
- ✍ **Water security exists when the demand and access to water (food) of human beings can be satisfied.**
- ✍ **Water security against hazards exists when environmental and societal vulnerability can be reduced and resilience enhanced.**



# **Water: too little or too much?**



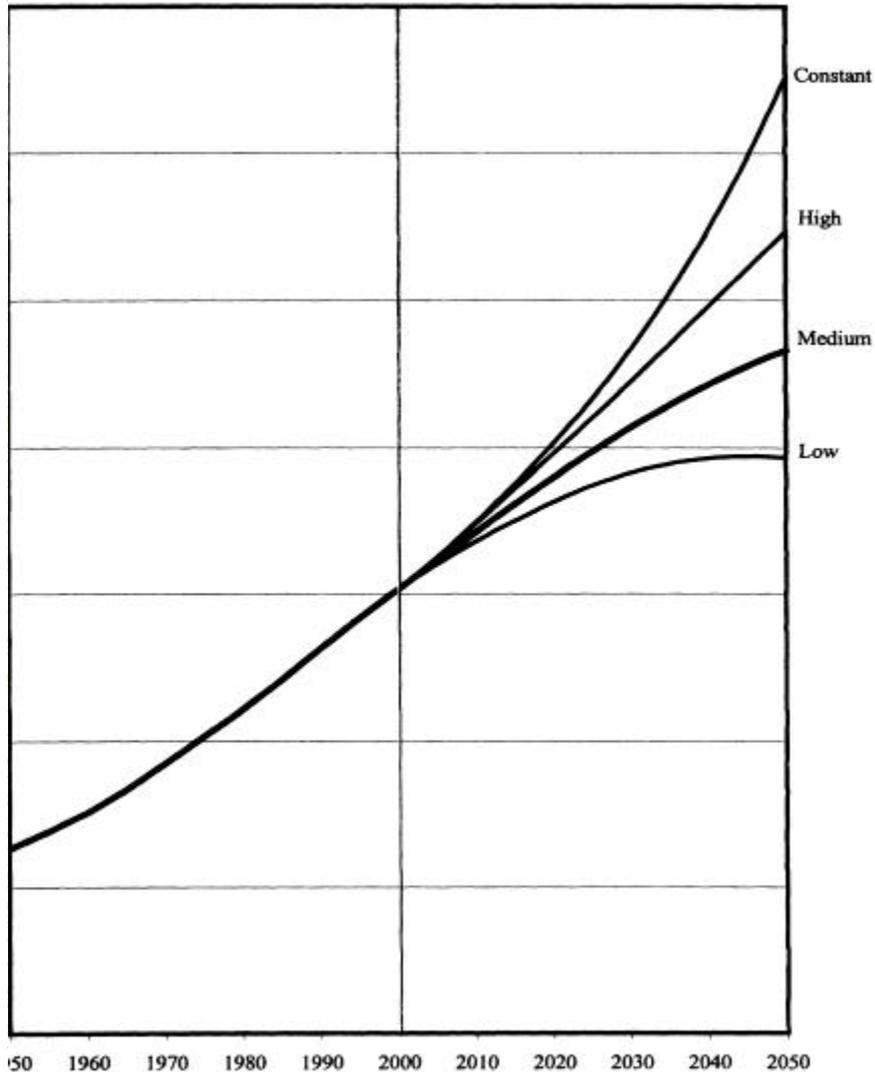
*Drought and desertification threaten the livelihood of over 1 billion people in more than 110 countries around the world.*

*Kofi Annan*

# UNU: Two billion will be in flood path by 2050, UNU expert warns

- ✍ The number of people worldwide **vulnerable to a devastating flood** is expected to mushroom to **2 billion by 2050** due to climate change, deforestation, rising sea levels and population growth in flood-prone lands, a UNU expert warns.
- ✍ **One billion people** – one sixth of the global population, the majority of them among the **world's poorest inhabitants** – are estimated to live today in the potential path of a 100-year flood and, unless preventative efforts are stepped up worldwide, that number could double or more in two generations, said Dr. Janos Bogardi, director of **UNU Institute for Environment and Human Security** (UNU-EHS).

# UN World Population Projections



## World Population, Medium Scenario 2000-2150 (UN, 1998 Rev.)

	2000	2050	2100	2150
<b>Total</b>	6,01	8,91	9,50	9,75

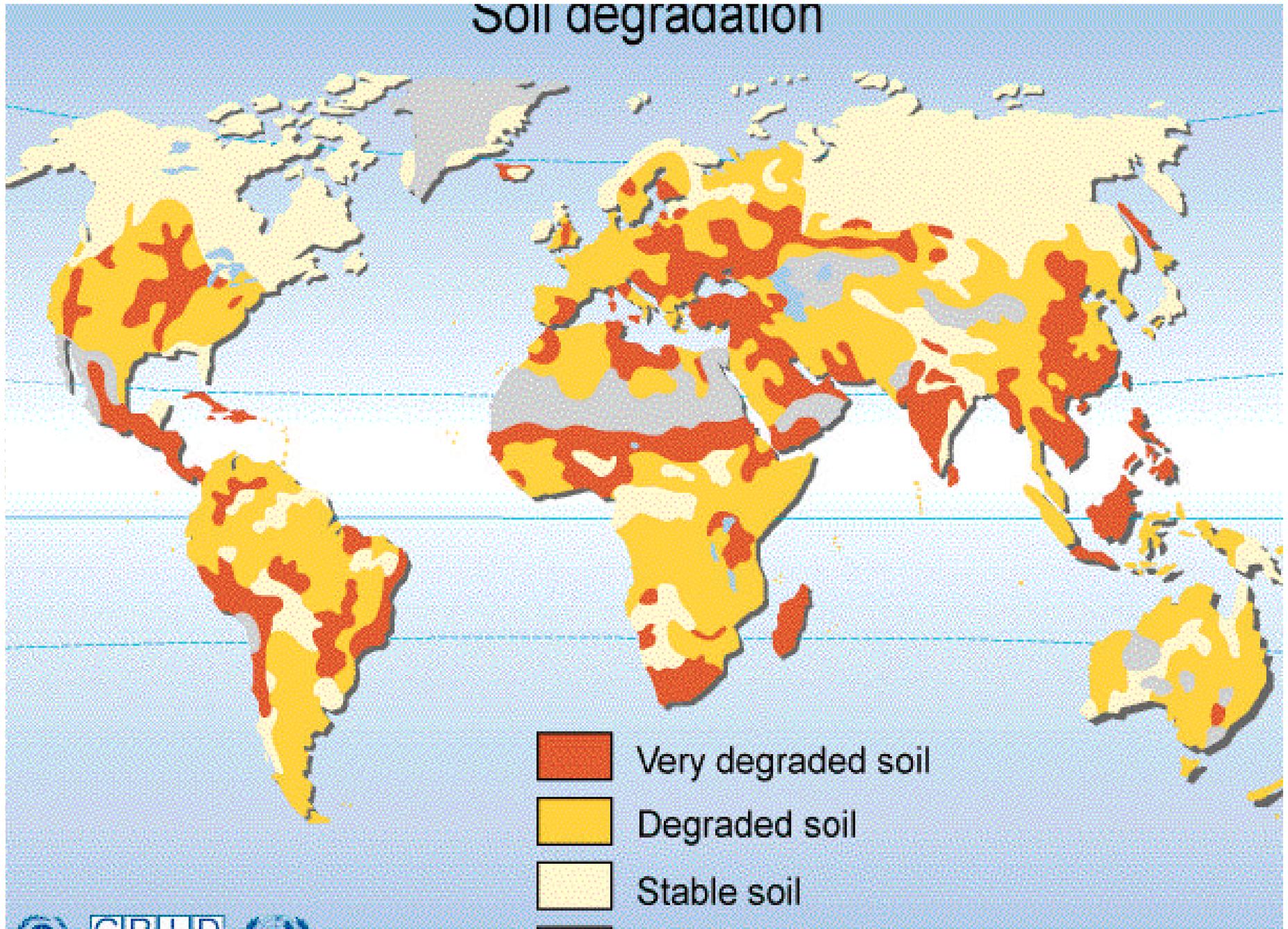
## World Population in 2300. Highlights (UN, Dec. 2003), Med. Scenario

	2000	2050	2100	2200	2300
<b>World</b>	6,071	8,919	9,064	8,499	8,97
<b>Develop.</b>	1,194	1,220	1,131	1,207	1,27
<b>Less Dev.</b>	4,877	7,699	7,933	7,291	7,69

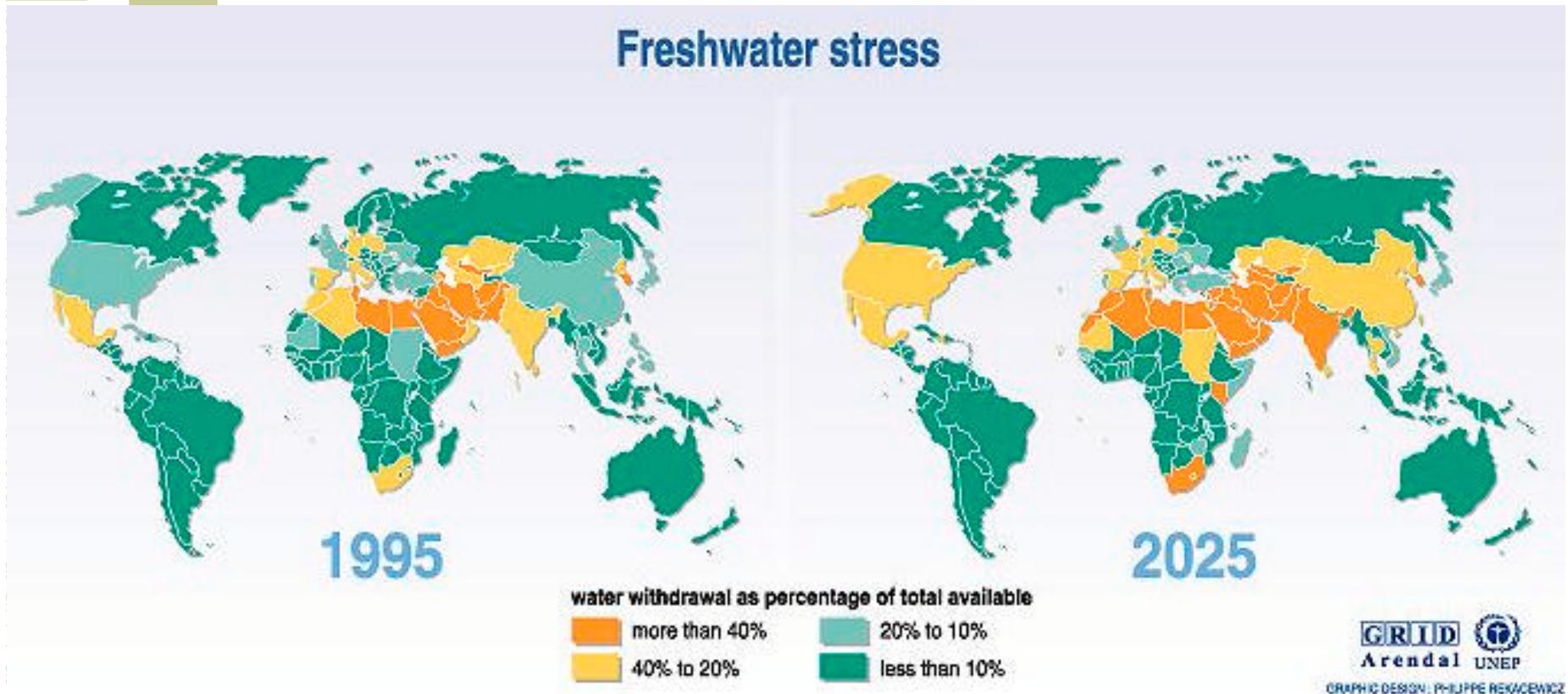
✍ **Urbanisation: will increase**

✍ **Water, Food & Agriculture: Demand will grow due to population growth**

# Soil degradation



# Global Fresh Water Stress, 1995-2025 (UNEP)



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

**MENA Region will remain the region with highest water stress**

**2025: water stress will become severe due to population growth & climate change, it will affect South Africa, India, China & USA**

# Since 1990: Widening, Deepening & Again Shrinking of Security Concepts

Arnold Wolfers (1962) distinguished objective vs. subjective security

„Security, in an *objective sense*, measures the *absence of threats* to acquired values, in a *subjective sense*, the *absence of fear* that such values will be attacked.“

Security dimension? ?	Milit. Buzan	Polit. Costa	Economic (Mesjasz)	Environment (de Wilde)?	Societal (Waever)
Level of interaction					
Human individual ?			✍️ Water	Cause, victim	Security ✍️
Societal/Community			✍️ ✍️	✍️ ✍️	✍️ ✍️
National	View of USA & of MENA & Third World governments		✍️ ✍️	Water scarcity, hazards & fatal outcome ✍️ ✍️	✍️ ✍️
International/Regional			✍️ Water	Water law	Security ✍️
Global/Planetary ?				GEC & CC	

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# Annabelle Houdret, Ph. D. candidate, political science, FU Berlin & Paris VIII

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- ✍ **What is new? A contribution to the fourth phase of research on environment & security?**
- ✍ **Focus on: relationship between nature – social system**
- ✍ **water scarcity as a domestic conflict and potential for constructive social innovation and co-operation at problem solution**
- ✍ **environmental security and conflict transformation**
- ✍ **local water user organisation: adaptation to water demand man.**
- ✍ **changes of water management: conflict or constructive evolution**
- ✍ **Focus on institution. framework: impact on conflict/cooperation**
- ✍ **Water conflict avoidance by improved local water management**

# Anabelle Houdret, Ph. D. candidate, political science, FU Berlin & Paris VIII

## **How to implement this approach in the thesis design?**

-  Widening gap: increasing demand and declining water supply?
-  Area of application: Maghreb, especially Morocco
-  Applicability of the approach to the region?
-  Theoretical approach and working hypothesis
-  What is the empirical focus: space and time?
-  Methods to conduct the research: comparative case studies?

## **What are constraints/impediments of social innovation?**

-  local power and governance constraints (democratic procedures)?
-  resource constraints (money, knowledge)
-  traditional vs. modern knowledge: implementation gap

## **Conceptualisation of water scarcity as a security issue**

# **Fabien Nathan (France), Graduate Institute of Development Studies (IUED) NCCR-NS/IP8, Geneva:**

- ✍ **Sociology of disasters, focus: vulnerability of cities**
- ✍ Existing deficits: lack of data on urban disasters, no theoretical study on urban water-related and water-induced hazards and disasters.
- ✍ Vulnerability: a synonym of (or cause of) insecurity?
- ✍ Two sides of vulnerability: *external* (environmental vulnerability), *internal* (societal, incapacity to prevent, prepare, cope with disasters)
- ✍ *Nine aspects of vulnerability*: 1. Physical exposure; 2. Socio-ecological vulnerability; 3. Physical weakness; 4. Legal vulnerability; 5. Organisational vuln.; 6. Technical vuln.; 7. Political vuln.; 8. Socio-economical vuln.; 9. Psychological and cultural vulnerability
- ✍ **How to analyse urban vulnerability in terms of security?**
- ✍ **What can sociology of disasters contribute to a reconceptualisation of security? Who are the referents? State/humans?**

# Mara Tignino (Italy), Graduate Institute of International Studies, Geneva

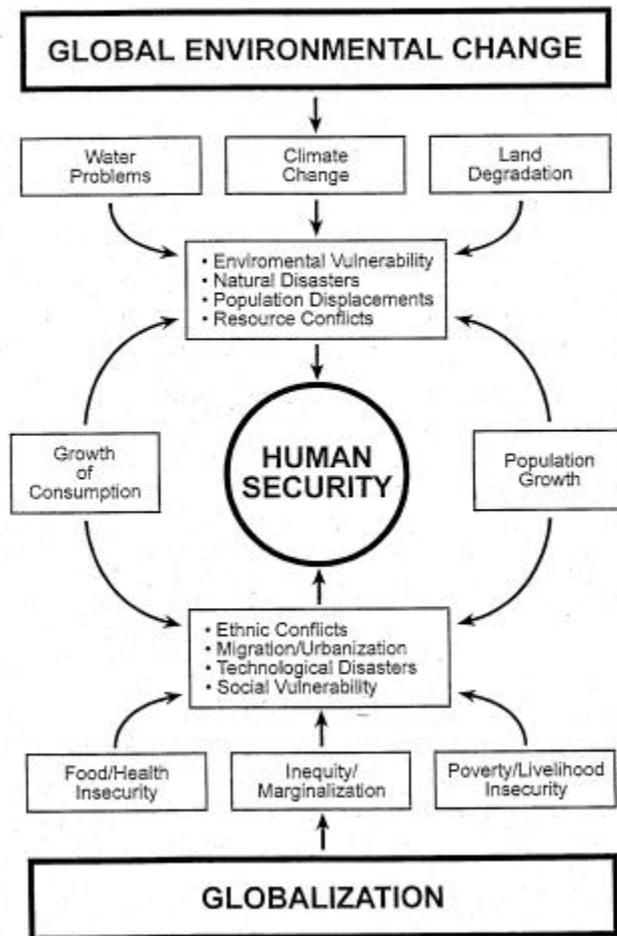
- ✍ *UN Watercourses Convention (1997), Helsinki Rules on the Uses of Waters of International Rivers (1966)*
- ✍ **Legal quality: Treaty law, internat. customary law, legal principles**
- ✍ **Legal principles**
- ✍ Water sharing principles: equitable and reasonable use
- ✍ No-harmful use of a states' territory
- ✍ Protection of the environment of international watercourses
- ✍ Obligation of cooperation: international river commissions (Rhine, Danube)
- ✍ **What is the research question, goal and research focus?**
- ✍ Evolution of international water law?
- ✍ Protection of „water“ in conflicts?
- ✍ **Are their international legal approaches on „water security“?**

# Ursula Oswald (Mexico), UNAM, Mexico

- ✍ **Increase in water demand: population growth & urbanisation,**
- ✍ **Increase in environmental vulnerability to hazards (Mitch)**
- ✍ **Increase in societal vulnerability (poverty)**
- ✍ **Contributing factors to environm. vulnerability: deforestation**
- ✍ **Four conflictive processes:**
- ✍ Poverty, misery, inequality (societal vulnerability) generates **human insecurity**
- ✍ Environmental destruction (environmental vulnerability), **environm. insecurity**
- ✍ Physical violence (wars, genocide, ethnocide, drug, illegal migrants) **public insecurity**
- ✍ Discrimination of gender (women, youth, elders, indigenous, minorities) produce **gender insecurity**
- ✍ **Task: definition: of public (state?) and gender (in)security!**

# H.G. Bohle: Dual Global Challenge: GEC & Globalisation

## Global Change and Human Security



## Human Security Perspective

referent: **individual & mankind?**

✍ value at risk: **human survival?**

✍ threat: **humans, nature, Global environmental (& climate) change, globalisation?**

✍ **GEC > environm. vulnerability > disaster > migration > insecurity**

✍ **Globalisation > inequity > social or societal vulnerability > insecurity**

✍ **How will GEC & globalisation affect the individual, society, countries?**

✍ **Is human survival at risk, for whom?**

✍ **Can global environmental security challenges (GEC) be solved by hard or soft security strategies and means?**