



IHDP

International Human Dimensions Programme
on Global Environmental Change

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29 April 2009, 4.00-5.30 pm

**Panel: Responding to Social Challenges of Global Change:
Role of Knowledge**

Responding to Social Challenges Posed by Global Change:

Knowledge and State, Societal and Business Actors

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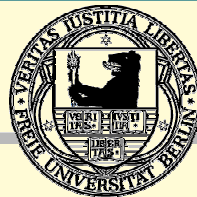


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Speakers

- ◆ **Hans Günter Brauch (Germany):**
Responding to Social Challenges Posed by Global Change: Knowledge and State, Societal and Business Actors
- ◆ **Úrsula Oswald Spring (Mexico):**
Global Environmental Change (GEC) and Equity: A Challenge for Food Sovereignty
- ◆ **P.S. Ramakrishnan (India):**
Traditional Knowledge in Responding to Social Challenges of Global Change in India

Contents

- ◆ Introduction
- ◆ Responding to global challenges by GEC
- ◆ Models of nature-society relationship
- ◆ PEISOR model
 - **Pressure:** causes of global env. change
 - **Effect:** env. scarcity, degradation & stress
 - **Impact:** hazards & complex emergencies
 - **Societal Outcomes:** crises & conflicts
 - **Response:** State, society and business
- ◆ Role of traditional & modern knowledge
- ◆ Conclusions

Introduction

- ◆ **Topic:** *Responding to Social Challenges Posed by Global Change: Knowledge and State, Societal and Business Actors*
- ◆ **Cause:** global environmental change (GEC)
- ◆ **Societal Outcome:** Social Challenges
- ◆ **Role of Knowledge** in Facing the *Cause* and Coping with the *Societal Outcome*
- ◆ **Which knowledge?** Modern scientific/technological vs. traditional for adaptation/mitigation
- ◆ **Use by whom?** State, Society & Business
- ◆ **For What:** sustainable development & peace!
- ◆ **Paradigm Shift:** need for a scientific revolution towards a *sustainability science*

Responding to global challenges posed by GEC

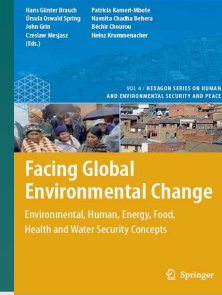
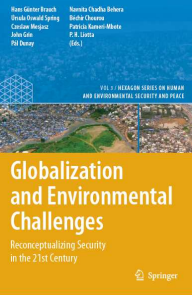
- ◆ Modern scientific knowledge in the natural and social science has put GEC since the 1970s on the scientific and 1980s (climate change, desertification) on the national & international policy agenda (**IPCC, UNFCCC, UNCCD**).
- ◆ Since 2000 climate change has been “securitized” & the links between climate change & conflicts are being addressed in scientific studies and policy declarations.
- ◆ This new knowledge challenges the traditional narrow conceptualization of security as a state-centred and power-based concept and has contributed to the development of an environmental dimension of human security where ‘freedom from hazard impacts’ has been suggested as a 4th pillar as well as to a shift from a ‘security dilemma’ to a ‘survival dilemma’.

Securitizing Global Environmental & Climate Change in the 21st Century



GEC poses threats, challenges, vulnerabilities and risks for human security and survival.

Widening, Deepening and Sectorialization of Security Threats, Challenges, Vulnerabilities & Risks



| Security dimension ⇒ ↓ Level of interaction | Military | Political | Economic | Environmental ↓ | Societal |
|--|--|-----------|----------------------------------|---------------------------|----------------------------------|
| Human individual Human security ⇒ | | | Food security Health security | Cause & victim | Food & Health security . |
| Societal, community security | | | | ↓↑ | |
| National security | During Cold War Shrinking (in USA since 2001) | | Energy security | ↓↑ | Energy Food & health security |
| International and Regional security | | | Water security | ↓↑ | Water security |
| Global and planetary security ⇒ | | | | GEC | |

Human Security Conceptualizations: South Asian Initiatives

(South) Asian Origins of the Concept:

- ◆ **UNDP Report of 1994: human security: Mahbub ul Haq**
 - Security ... means safety from the constant threat of hunger, disease, crime and repression. It also means protection from sudden and hurtful disruption in the pattern of our daily lives – whether in our homes, in our jobs, in our communities or in our environment.
- ◆ **CHS: Human Security Now: S. Ogata/Armatya Sen**
 - Human security complements state security, enhances human rights and strengthens human development. It seeks to protect people against a broad range of threats to individuals and communities and, further, to empower them to act on their own behalf. And it seeks to forge a global alliance to strengthen the institutional policies that link individuals and the state – and the state with a global world. Human security thus brings together the human elements of security, of rights, of development.
- ◆ **UNGA Outcome Document:**
 - 143. We stress the right of people to live in freedom and dignity, free from poverty and despair.

Four Pillars of Human Security

- ◆ **“Freedom from fear”** by reducing the probability that hazards may pose a survival dilemma for most affected people of extreme weather events (UNESCO, HSN), **Canadian approach: Humanitarian agenda**
- ◆ **“Freedom from want”** by reducing societal vulnerability through poverty eradication programmes (UNDP 1994; CHS 2003: Ogata/Sen: Human Security Now), **Japanese approach; Development agenda**
- ◆ **“Freedom to live in dignity”** (Kofi Annan in report: *In Larger Freedom* (March 2005) **Human rights agenda**
- ◆ **“Freedom from hazard impact”** by reducing vulnerability & enhancing coping capabilities of societies confronted with natural & human-induced hazards (Bogardi/Brauch 2005). **Hazard/disaster agenda**

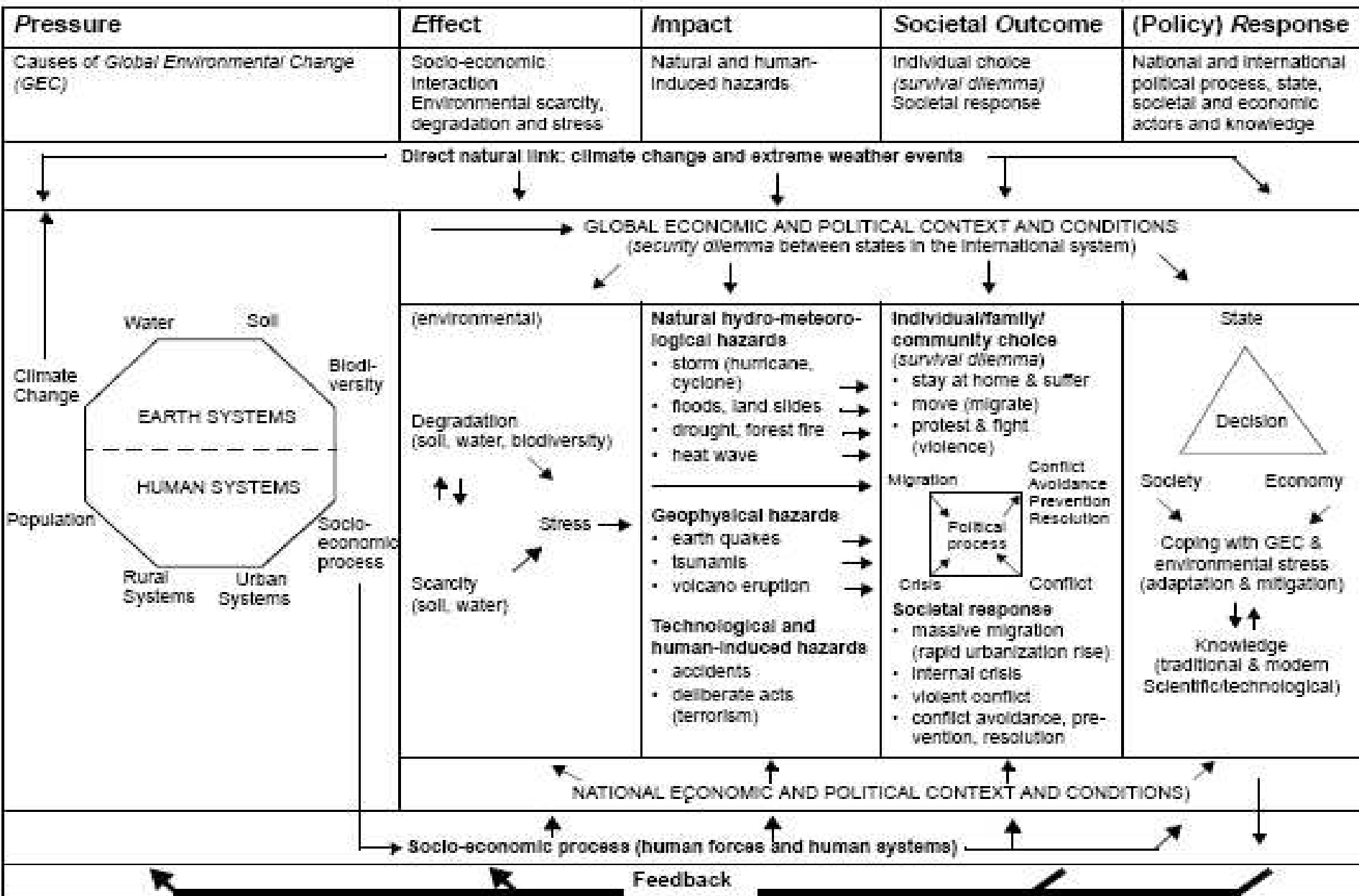
Towards the Environmental Dimension of Human Security

- ◆ **A Human security approach focuses on five dimensions of a widened security concept**
- ◆ **UN context: Environmental Security: issue of**
 - UNEP Post Conflict and Disaster Management Branch
 - UNDP, UNESCO
 - ENVSEC: OSCE, UNDP, UNEP, UNECE, NATO, REC
- ◆ **UN context: Human Security an issue of:**
 - UNDP, UNESCO, UNU-EHS
 - Human Security Network, Friends of Human Security
- ◆ **UNESCO article: in Intern. Soc. Science J. 2008**
 - Climate change, water, desertification and natural hazards as challenges for human security
 - From short-term reactive to long-term proactive initiatives.

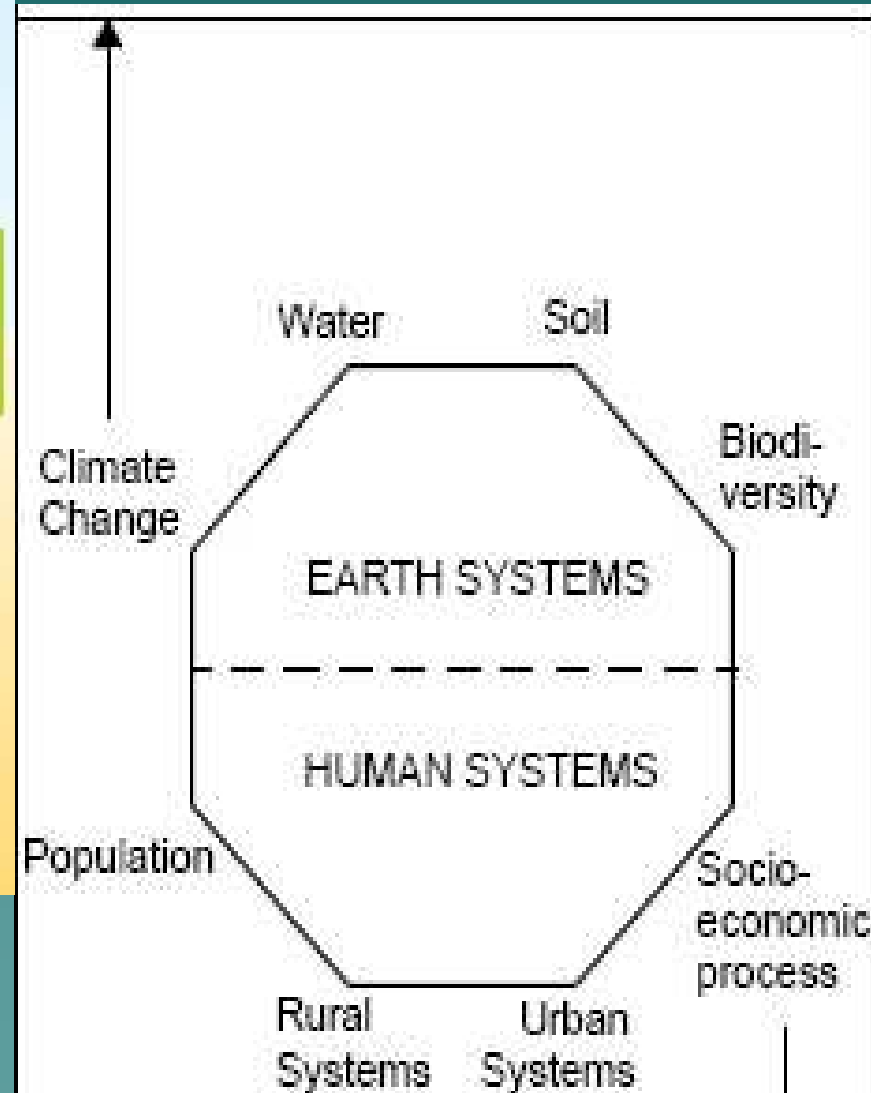
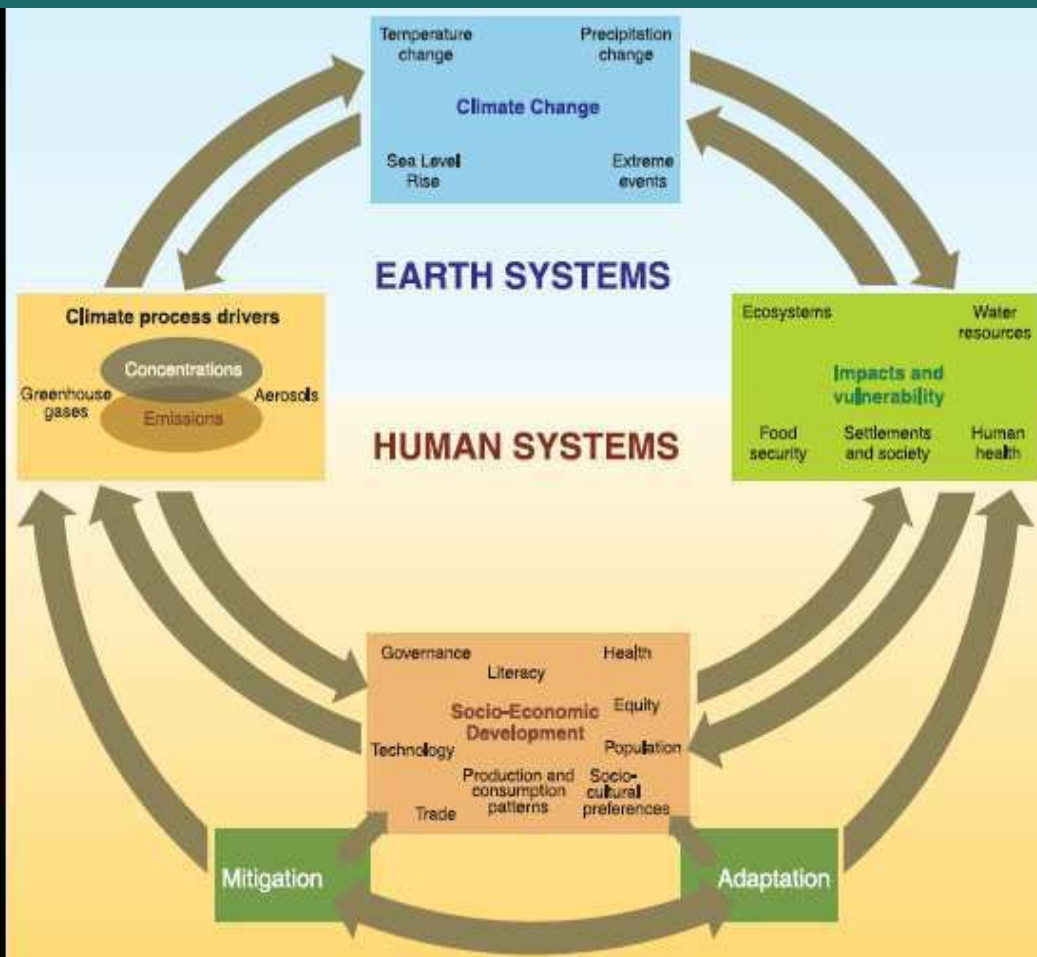
Models of nature-society relationship

- ◆ **Other Models: Environment – Response**
 - **OECD:** Pressure – State of Environment – Response - Model
 - **UN-CSD** (Committee for Sustainable Development)
- ◆ **PEISOR model distinguishes 5 stages:**
 - **P: Pressure:** Causes of GEC: Survival hexagon
 - **E: Effect:** environmental scarcity, degradation & stress
 - **I: Impact:** Extreme or fatal outcome: hazards
 - **SO: Societal Outcomes:** disaster, migration, crisis, conflict
 - **R: Response** by state, society, the economic sector and by using *traditional* and *modern scientific* knowledge to enhance coping capacity and resilience

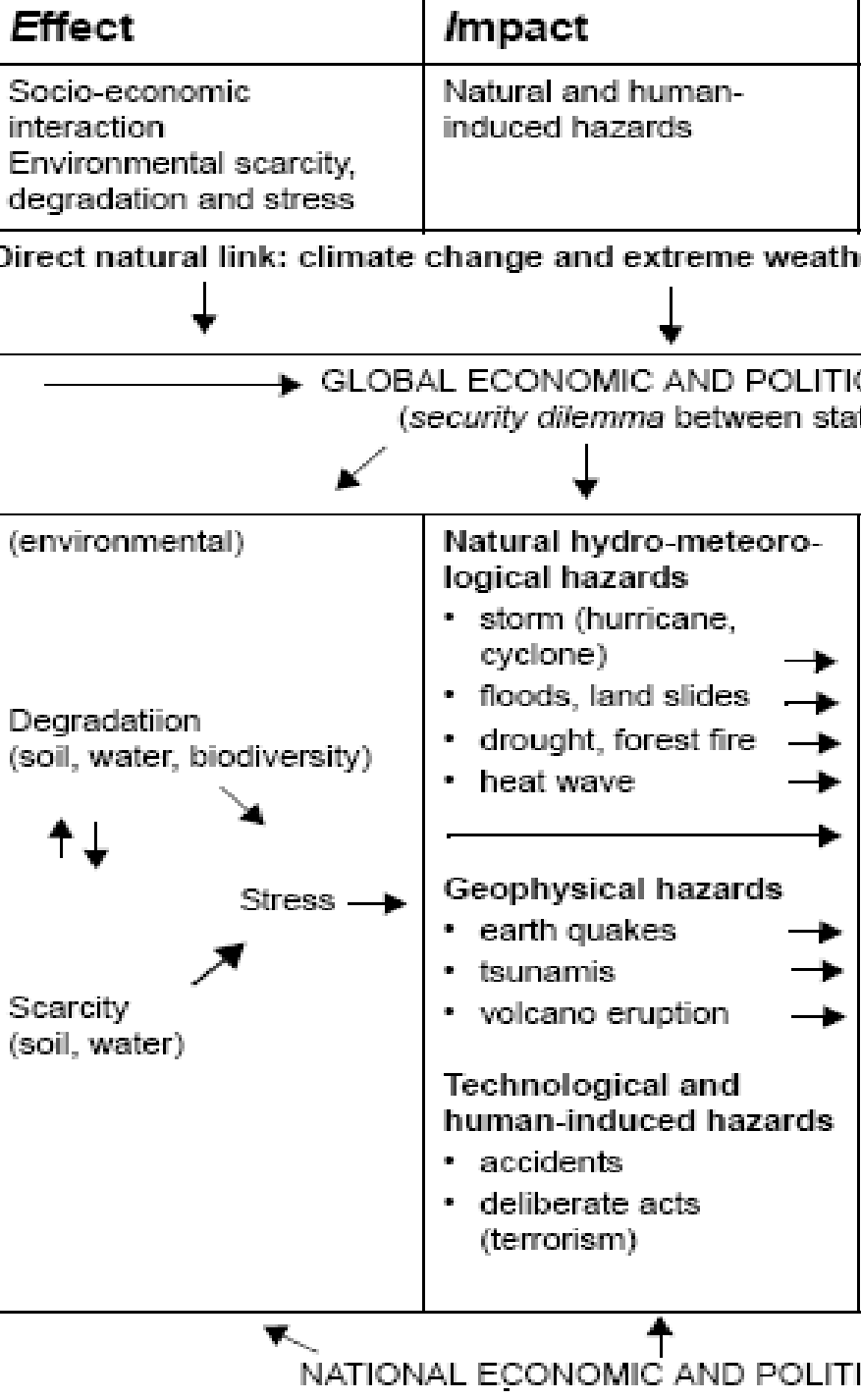
PEISOR Model © Brauch/Oswald 2009



P: Pressure: Causes of GEC



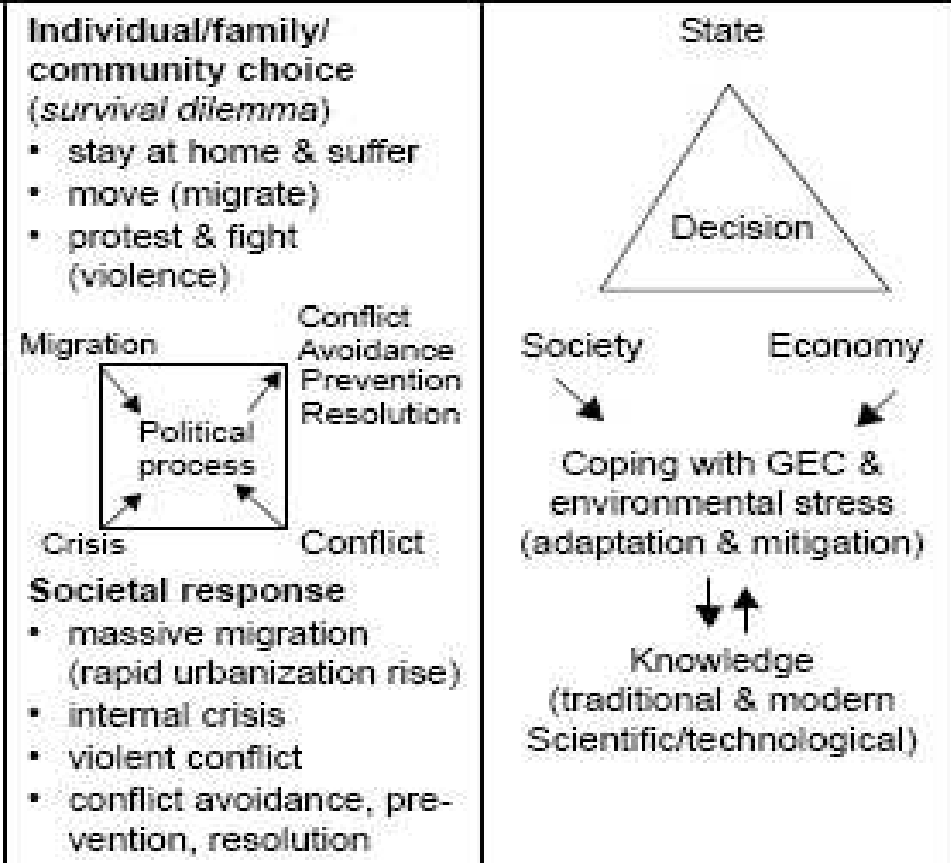
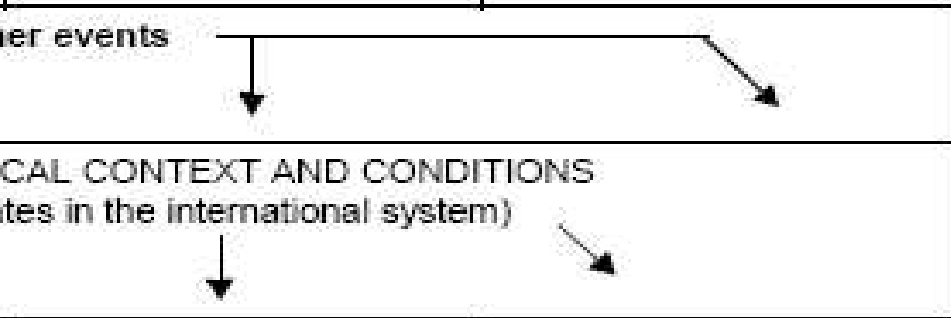
↑ © Synthesis Report of IPCC Fourth Assessment Report (2009)
 Brauch/Oswald Spring: UNCCD Study: Securitizing the Ground-
 Grounding Security (Bonn: UNCCD, 2009) →



E: Effect & I: Impact

- ◆ **E:** Environmental security debate of 1990s
 - Toronto school (Homer-Dixon and colleagues)
 - Swiss school (ENCOP): Bächler and Spillmann
- ◆ **I:** climate change -> extreme weather events
 - Natural-hydrometeorological hazards
 - ◆ Storms (hurricanes)
 - ◆ Flash floods & landslides
 - ◆ Drought
 - ◆ Heatwaves
 - ◆ Forest fires

| Societal Outcome | (Policy) Response |
|---|--|
| Individual choice (<i>survival dilemma</i>) Societal response | National and international political process, state, societal and economic actors and knowledge |



SO: Societal Outcomes

- ◆ Individual level (choice)
 - Human security perspect.
 - „Survival dilemma“ of human beings
- ◆ State/society level
 - Migration to urban slums
 - Rural-rural migration
 - Transborder migration
 - ◆ Seasonal (labor, nomads)
 - ◆ Permanent
 - Crises: domestic
 - Conflicts:
 - ◆ Peaceful protests
 - ◆ Violent clashes
 - Complex emergencies

R: Policy Response to GEC Dangers

- ◆ **How? Responsive vs. proactive action**
 - **Reponse:** cost of non-action (Stern R.)
 - **Proactive:** anticipatory knowledge, learning and action
- ◆ **What? Addressing causes (pressure)**
 - **Earth system:** environmental quartett
 - **Human:** productive/consumptive behaviour
- ◆ **Responding to Effects & Impacts**
 - **Environmental stress**
 - **Climate-related natural hazards**
- ◆ **Dealing with Societal Outcomes**

Role of traditional & modern scientific knowledge



- ◆ Need for modern scientific knowledge for problem recognition:
 - Diagnosis and trend projection
 - ◆ Climate modelling
 - ◆ Climate impact studies
 - Coping:
 - ◆ Adaptation
 - ◆ Mitigation
- ◆ Need for traditional knowledge for adaptation & mitigation
 - Fighting desertification
 - Water harvesting & management
 - Local policy response in close cooperation with/active involvement of people

Knowledge providers and users: State, Society & Business

- ◆ **State:** „Political will“ – state security
 - Funder of research and training institutions
 - Adopting policies/strategies for implementat.
 - Framework for government & societal action
- ◆ **Society:** „public awareness“ –human sec.
 - Public awareness & support matters
 - Ambiguous: can delay or request action
- ◆ **Business:** innovation & implementation
 - Innovation: energy efficiency & renewables
 - Tools for implementation: decarbinization of the economy

Goal: Knowledge for sustainable development & sustainable peace!

- ◆ Knowledge for what purpose?
 - Help humankind and human beings in facing and coping with the GEC dangers
 - Create new policy goals & frameworks
- ◆ Avoid and cope with the consequences
 - Complex adaptation and mitigations strategies
- ◆ Create new policy frameworks
 - Sustainability science for sustainable development
 - Sustainable peace policy for Anthropocene

Clark, Crutzen, & Schellnhuber (2004): Science for global sustainability

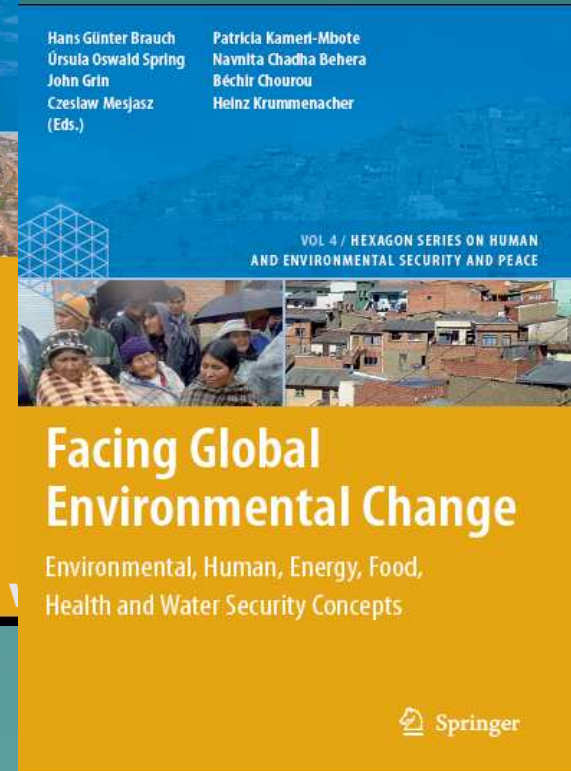
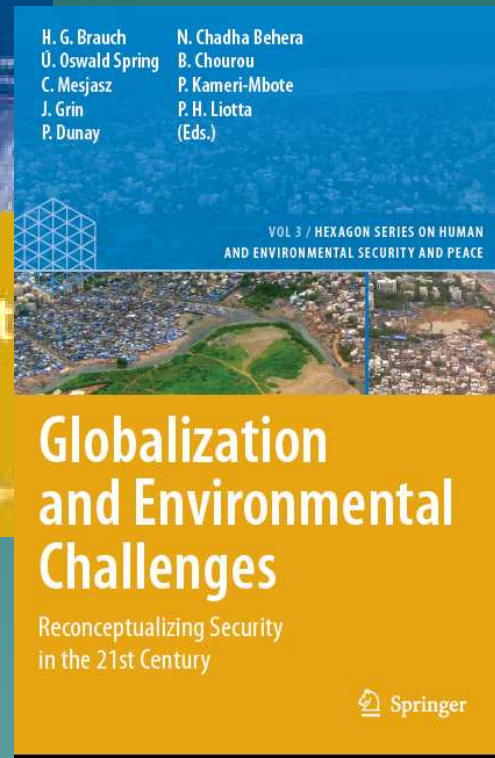
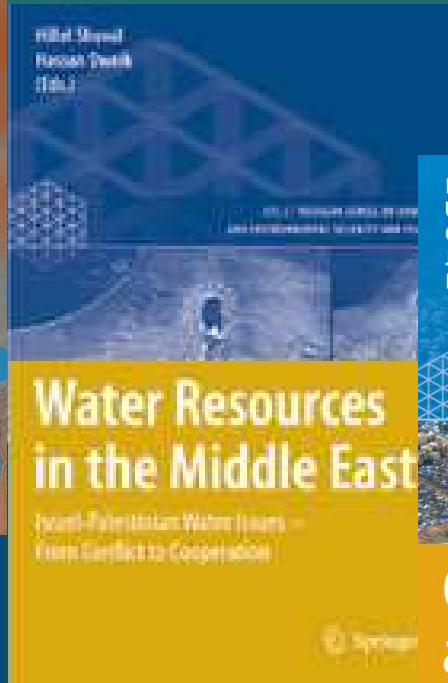
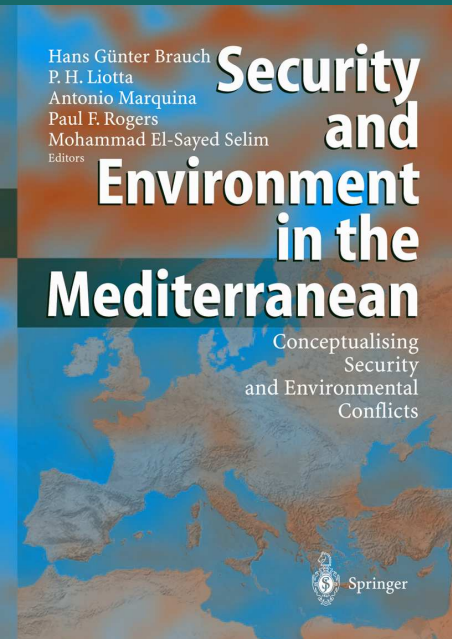
- ◆ Clark, Crutzen, & Schellnhuber (2004) called for a scientific revolution to a “sustainability science”
 - Second Copernican Revolution: Amsterdam Declaration of Earth Systems Science Partnership (2001)
 - ◆ To be sustained: nature, life support, community
 - ◆ To be developed: people, economy, society
- ◆ „We are currently witnessing the emergence of a new scientific paradigm that is driven by unprecedented planetary-scale challenges, operationalized by transdisciplinary centennium-scale agendas, and delivered by multiple-scale copro-duction based on a new contract between science and society.“

Conclusions:

From Science to Action

- ◆ **Scientization: Knowledge Creation**
 - Translation of paradigm shift into scientific agendas for knowledge creation
- ◆ **Politicization: Communicating Knowledge**
 - Communication of knowledge of sustainability science to policy makers & citizens
- ◆ **Securitization: Implementing Knowledge**
 - To make dangers posed by GEC to issues of utmost political importance
 - That necessitate & legitimate extraordinary measures
 - That are accepted by the audience
- ◆ **Securitization of GEC Implies:**
 - Not militarization of environment (military part of the problem)
 - But demilitarization of security (nonmilitary means for solution)

Hexagon Series: Volumes I -IV



Hexagon Series on Human, Environmental Security and Peace (HESP)

<http://www.afes-press-books.de/html/hexagon.htm>

A young girl with dark hair in a ponytail, wearing a red dress and a necklace, stands in profile facing right. She is holding a long, thin, cylindrical object horizontally across her body. The background is a pink wall with intricate white architectural details, including arched niches and domes. The lighting is bright, suggesting an outdoor setting.

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and patience.**

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