



Chulalongkorn University

CHULALONGKORN UNIVERSITY
MA IN INTERNATIONAL DEVELOPMENT STUDIES
Semester 1, 2013-2014, Bangkok, Thailand
Critical Issues: Human Security & Development

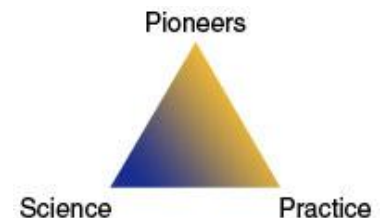
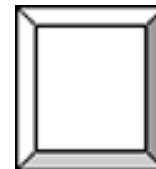
7th Session, 25 October 2013

Environmental Security

Hans Günter Brauch

Adj. Prof., Free University of Berlin (Germany) ret.
Chairman, Peace Research and European security Studies (AFES-PRESS)

Hexagon Series on Human, Environmental Security and Peace
Springer Briefs in Environment, Security, Development & Peace
SpringerBriefs on Pioneers in Science & Practice



Reading Texts (25 October 2013)

27. Dalby, Simon; Brauch, Hans Günter; Oswald Spring, Úrsula, 2009: “Environmental Security Concepts Revisited During the First Three Phases (1983-2006)”, in: Brauch, Hans Günter et al. (Eds.): *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (Berlin: Springer): 781-790.
28. Barnett, Jon, 2009: “Environmental Security in the Asia-Pacific Region: Contrasting Problems, Places, and Prospects“, in: Brauch, Hans Günter et al. (Eds.): *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (Berlin: Springer): 639-649.
29. Oswald Spring, Úrsula; Brauch, Hans Günter; Dalby, Simon, 2009: “Linking Anthropocene, HUGE and HESP: Fourth Phase of Environmental Security Research“, in: Brauch, Hans Günter; et al. (Eds.), 2009: *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (Berlin et al.: Springer): 1277-1294.
30. Karen O’Brien; Sygna, Linda; Wolf, Johanna, 2013: “A Changing Environment for Human Security”, in: Sygna, Linda; O’Brien, Karen; Wolf, Johanna (Eds.): *A Changing Environment for Human Security. Transformative approaches to research, policy and action* (London – New York: Routledge - Earthscan): 1-24.

Optional Additional Texts

31. Barnett, Jon; Matthew, Richard A.; O’Brien, Karen, 2008: “Global Environmental Change and Human Security”, in: Brauch, Hans Günter; et al. (Eds.): *Globalization and Environmental Challenges: Reconceptualizing Security in the 21st Century*, (Berlin: Springer): 355-362.
32. Brauch, Hans Günter: *Environment and Human Security. Freedom from Hazard Impact*, InterSecTions, 2/2005 (Bonn: UNU-EHS); at: < <http://www.ehs.unu.edu/file/get/4031>>.

Programme, 25 October 2013

Part 1: 13.00-14.00: Discussion of Texts

- Presentation by New Ni Win Kyaw (Myanmar)
- Discussion of the reflection papers

Part 2: 14.00-15.00: Lecture 7 and discussion

- Evolution of Environmental Security Debate (1989ff)
- Human Security approach to Environm. Security

Part 3: 15.00-16.00: Discussion country case

- Maura Cusack (Ireland)

Goal

- What is environmental security and how has this widening of security evolved in the scientific debate since 1983 and in the policy debate since 1987?
- What have been the different focuses, the 2 stages, 4 phases of the analysis of the linkage of environment & security?
- What have been the referent objects of the environmental security policy debate and of the scientific discourse?
- What does a human security approach to environmental security in the Anthropocene refer to?
- Are new approaches of peace ecology aiming at sustainable peace relevant for a human security approach to environmental security in the Anthropocene?

25 October, Part 1: 9-10.00:

Discussion of the Lecture & Texts

- **Ni Win Kyaw (Myanmar) Presentation of the texts and discussion of the reflection papers**

Text 27: Dalby, Simon; Brauch, Hans Günter; Oswald Spring, Úrsula, 2009: “Environmental Security Concepts Revisited During the First Three Phases (1983-2006)”

- What are the 3 phases of the environmental security debate?
- What was the referent object of the first debate in the USA and USSR?
- What were the two research groups of the second phase?
- What has changed with the 3rd phase of scientific research?
- What have been the major lessons learned?
- What is the relevance of the four pillars of human security in addressing environmental security dangers & concerns?
- What have been major critiques of the work of Homer-Dixon et al. And of the environmental security debate?
- Did this scientific discourse affect the policy debate and change policy outcomes, especially in SE Asia?

Text 28: Barnett, Jon, 2009: “Environmental Security in the Asia-Pacific Region: Contrasting Problems, Places, and Prospects“

- What have been key problems of environmental insecurity in the Asia-Pacific Region, in SE Asia and in your country?
- What have been the key indicators that affect the environmental security in this region, e.g. of demand and supply side?
- What are the key problems of environmental insecurity in SE Asia and in your country?
- What are key ES challenges for small island states and for China?
- What are major causes and solutions?

Text 29: Oswald Spring, Úrsula; Brauch, Hans Günter; Dalby, Simon, 2009: “Linking Anthropocene, HUGE and HESP: Fourth Phase of Environmental Security Research”,

- What is the major shift for the fourth phase on ES?
- What are the three new conceptual components the authors proposed for the fourth phase of the ES discourse & debate?
- What is Earth Systems Research or Science about?
- What are the six substantive issues for the fourth phase the authors suggest with regards to the methodological approach and issues to be studied?
- What does Anthropocene ethics refer to?
- Are these proposals relevant for SE Asia and my country?
- Have any of these proposals been implemented in SE Asia and my country?

Text 30: Karen O'Brien; Sygna, Linda; Wolf, Johanna, 2013: "A Changing Environment for Human Security",

- What does IHDP and GECHS stand for?
- How did the authors conceptualize human security?
- How has the context for HS changed?
- What are the key themes that are addressed in this book?

Content: Environmental Security

- 1. Emergence of Global Environmental Issues and Global Environmental and Climate Change**
- 2. Widening of Security: Environmental Security – Reference objects from state to humankind**
- 3. Two Stages of Environmental Security: 1983-2013**
- 4. First Phase: Agenda-Setting in USA, USSR (since 1983)**
- 5. Second Phase: Empirical & Theoretical Research**
- 6. Third Phase: New Developments: Focus & Approaches**
- 7. Proposals for Fourth Phase of Environmental Security**
- 8. Human Security Approach to Environmental Security**
- 9. New Developments: Peace Ecology, Sustainable Peace**
- 10. Environmental & Human Security in the Anthropocene**

1. Emergence of Global Environmental Issues and Global Environmental and Climate Change

- UN Charter (1945) there is no reference to environment and development, main focus is on international peace & security
- Since late 19th century: interest in nature conservation & protection (birds, flora and fauna): citizens groups (no political parties), no object of analysis (except in biology, zoology)
- Consequences of human intervention into nature: impacts and accidents
- Rachel Carson (1963): Silent Spring: use of agrochemical affecting biodiversity (birds and animals died)
- USA: late 1960s Earth Movement & Earth Day (22 April each year): result: Environmental Protection agency (EPA)
- Late 1970s: Antinuclear movements (nucleus of green parties)
 - Europe (most influential), less in North America and in Asia?

1.1. Major Achievements: 1972-2012

- **UNCED or first Earth Summit in Rio in June 1992**
 - 1972: Stockholm put environment on UN agenda, UNEP
 - 1987: Brundtland Commission: sustainable development
 - 1992: UNCED launched global environment governance with three major global environment regimes
- **UNFCCC (1992): Process of Conference of Parties**
 - COP 1 (1995): Berlin Mandate for a Protocol
 - **COP 3 (1997): Kyoto Protocol**, with QELROs for Annex B countries (OECD and former Comecon countries of -5% by 2012)
 - **COP 15 (2009): Copenhagen failure to agree on Post KP-Regime**
 - COP 16 (2010): Cancun Accords: voluntary commitments
 - **COP 17 (2011): Durban: nonbinding goal for new regime by 2020**
 - **COP 18 (2012): Doha under way: outcome uncertain!**
- **UNCBD**
 - **Cartagena Protocol on Biosafety (2000, entered into force 2003)**
 - **Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (2010, not yet in force)**
- **UNCCD: no legally binding protocol so far.**

1.2. From Rio 1 (1992) to Rio 2 (2012): Performance Gap & Failure

- **After end of Cold War, first ‘earth summit’ in Rio de Janeiro indicated a significant shift in global political priorities from military security to global environmental challenges that required new multil. cooperation.**
 - As only superpower, US demonstrated at Rio 1992 its leadership on GE policies.
 - This position was attacked in Clinton Administration by Republican controlled US Congress successfully blocked internat.l commitments with support of lobbies.
 - With 9-11, George W. Bush re-established the dominance of the military agenda downgrading the urgency of GEC issues and climate change.
- **Growing domestic opposition in the USA**
 - **UNCBD: signed 4 June 1993, never ratified it**
 - Cartagena Protocol: never signed & ratified
 - Nagoya Protocol: never signed & ratified
 - **UNFCCC: signed 12.6.1992 & ratified 15.10.1992**
 - Kyoto Protocol: US reduction goal: -7% (Clinton signed KP in 12.11.1998)
 - Failed to ratify KP due to Republican opposition in the US congress (Senate)
- **USA became an env. laggard since 1993 (UNCBD), 1998 (KP,UNFCCC)**
- **Since 2009: paralysis, Rio +20 (June 2012): failed, no legal agreement, no followup to KP (1997), aimed for 2015, to enter into force by 2020!**

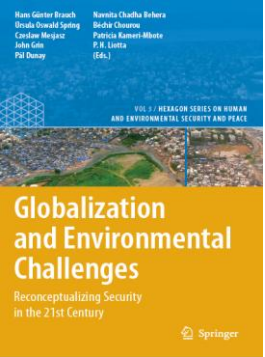
2. From International to Environmental Security

- **International Peace & Security:** League of Nations (1919): “high contracting parties”; UN Charter (1945): “*We the peoples of the United Nations*”
- **National Security:** new U.S. concept World War II, post WW II: National Security Act (1947), before: goal defence, means: Army (War Dep.), & Navy Dept.
- **Alliance Security:** NATO (1949-), WP (1955-2001)
- **Common Security** (Palme Report 1982)
- **Environmental Security** (Brundtland 1987, Gorbachev 1988)
 - **1989/1990:** Widening (Buzan), Deepening, Sectorialization
 - **From a policy to a scientific debate**
- **Cooperative Security:** Brookings Institution (1990’s)
- **Human Security:** UNDP (1994): 4 pillars of Human Security
- **Human Security Approach to Environmental Security**
- **Climate Security: Climate Change as a Threat multiplier in the context of international, national & human security (lecture 9)**

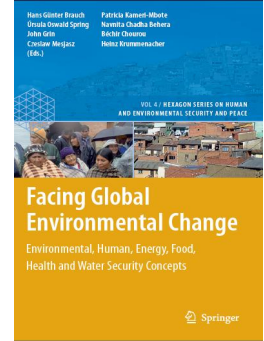
2.1. Emergence of Environmental Issues

Global Environmental Change

- **Emergence of Environmental Policy Issues**
 - Environmental damage (accidents) and pollution
 - Environmental scarcity, degradation & stress (env. Security focus)
- **Global Environmental Change (after Rio. 92)**
 - global climate change, transformation of cause of security dangers: **We are the threat & victim but both are not equal! Challenge for global equity!**
- **Globalization: New actors and processes**
 - Global & regional impact of environmental dangers and concerns
 - Non-state actors: terrorists, organized crime (trafficking of drugs, weapons, humans, women, children, organs)
 - Uncontrolled financial flows and speculation (Asian Crisis 1995, 2008/2009: Global Financial and Economic Crisis)
 - **Shrinking and penetration of national sovereignty**



2.2. Buzan: Widening, Deepening and Sectorialization of Security Threats, Challenges, Vulnerabilities & Risks



Security dimension ▶ Level of interaction ▼	Military	Political	Economic	Environmental ▼	Societal
Human ▶				Securing soil, water, food, health, livelihood and energy for human beings combining all levels of analysis & interaction	
Village/Community/Society				▼▲	
National	Security dilemma of states			Social, energy, food, health, livelihood and soil threats may pose a survival dilemma in areas with high vulnerability	
International/Regional/Global	Security of the territory			▼▲	

2.3. Environmental & Human Security

Label	Reference object	Value at risk	Source(s) of threat
National security	The State	Territ. integrity	State, substate actors
Societal security	Societal groups	National identity	Nations, migrants
Human security	Individual, humankind	Survival	Nature, state, globalization
Environmental security	Ecosystem	Sustainability	Humankind We are the threat!
Gender security (Oswald Spring)	Gender relations, indigenous people, minorities	Equality, identity, solidarity	Patriarchy, totalitarian institutions (governments, churches, elites) intolerance

2.4. Sectorialization of Security

Concepts have been used by international organizations by upgrading the political urgency and requiring extraordinary policy responses for coping with these challenges.

- **Energy security:** since oil shocks of 1973: Creation of International Energy Agency (IEA): supply security (for consumers) but also demand security (for producers)
- **Water Security:** Hague Declaration on Water Security (2000)
- **Soil Security:** UNCCD (Brauch/Oswald Spring 2009)
- **Food Security:** since 1970s developed by FAO (Rome): right to the access of sufficient and healthy food (supply security) but also food sovereignty (by social movements, Via Campesina)
- **Health Security:** by WHO (with regard to pandemics): SARS, Swine Flu etc. with different referent objects (international, national and human security)

3. Triple Focus & 2 Stages of the Debate

- **Twofold link between environment & conflict**
 - Conflicts, wars as a cause of environmental damage
 - Global Environmental Change as a cause of conflicts
- **1st Focus: Environmental Impact of War**
 - Pioneering work of Arthur H. Westing (1970-today)
 - Trigger: Agent Orange (Vietnam, Cambodia, Laos)
 - UNEP project (pioneering role of SIPRI, PRIO)
 - UNEP Unit (Haavisto)
 - Protection of the environment in wars & conflicts
- **2nd Focus: Environment as a Cause of War**
 - 1st stage: focus on environmental conflict due to scarcity, degradation & stress as a cause of conflict
 - 2nd stage: Global Environmental Change (water, soil, biodiversity, climate change) as triggers, causes, intensifiers of conflict (force/threat multiplier)
- **3rd Focus: Environmental Peacemaking (Conca) -> Peace Ecology (Kyrou)**

3.1. Link: Environment & Conflict

war > environment environment > crises/conflicts

Vietnam: Impact of Agent Orange



Climate Change Impacts: Hazards



Burning oil fields in Kuwait (1991)



Drought and Forest Fires



Oil spills at Lebanon Coast (2006)

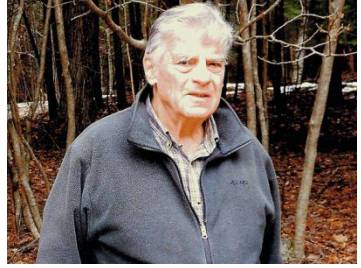


-Flash Floods in Spain (2007)



3.2. 1st Focus: Environmental War Impacts

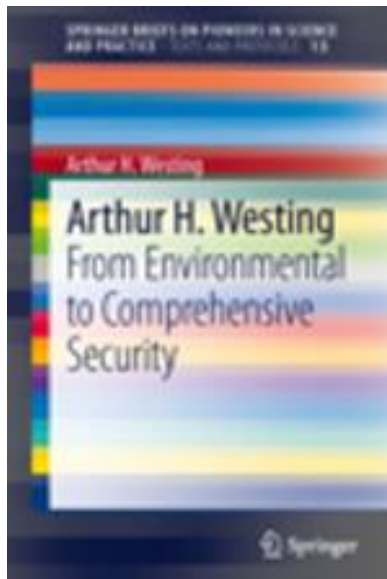
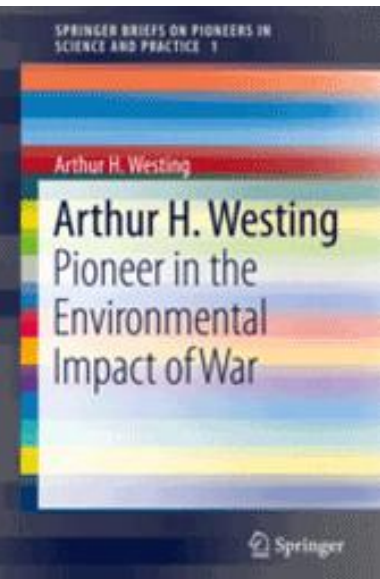
- **Pioneer of Env. War Impact Research: Arthur H. Westing**
- **Environmental conflict impact research**
 - Kadry Said: Impacts of land mines, unexploded ordnance of WW II in North Africa: El Alamein: victims in Egypt
 - SIPRI/Westing: impacts of herbicides in Vietnam war
 - Westing: Impacts of burning oil fields in Kuwait (1991)
 - Impact of oil spill in Lebanon after bombing of a plant
 - Environmental impact of Israeli-Palestinian conflict (UNEP)
 - Environmental impacts of wars in Balkans, Afghanistan & Iraq
- **Policies on limiting impacts of wars on environment**
 - Biological Weapon Convention (1972),
 - Environmental Modification Convention (ENMOD, 1977),
 - Geneva Protocol [I] on the Protection of Victims of International Armed Conflicts (1977)
- **UNEP: Post-Conflict Assessment Unit**



3.3. Work of Arthur H. Westing (85)

- Forester: work on defoliants (agent orange) in SE Asia (Vietnam, Camb.)
- 1976-1990 (SIPRI, PRIO)
 - funded by UNEP
- 1990ff (in US)
 - Gulf War (1991)

Contents: Part I: War and the Environment: Chap. 1: The Environmental Impact of War: A Personal Retrospective; Chap. 2: What next? A Search for Security in War and Peace; Chap. 3: The Author's Relevant Papers: A Selective Listing – Part II: Benchmark Papers by the Author: A Selection: Chap. 4: The Second Indochina War of 1961–1975: Its Environmental Impact; Chap. 5: The Gulf War of 1991: Its Environmental Impact; Chap. 6: Environmental War: Hostile Manipulations of the Environment; Chap. 7: Nuclear War: Its Environmental Impact; Chap. 8: Protecting the Environment in War: Legal Constraints; Chap. 9: Protecting the Environment in War: Military Guidelines.



National and International Security: An Evolving Concept.- The Author's Relevant Papers: A Selective Listing.- From Environmental Security to Comprehensive Security: A Necessary.- Regional Security: An Ecological Necessity.- Regional Security: Maritime Issues.- Regional Security: Transfrontier Cooperation.- Regional Security: The Case of the Korean Demilitarized Zone (DMZ).- The Question of Globalization.- Environmental Refugees: A Stark Reminder.- Population: Perhaps the Basic Issue

3.4. Second Focus: Environment -> Conflict

- **Policy Debate: Agenda Setting: Action**
 - Brundtland Report (1987): international
 - Gorbachev (1988, UN GA speech): UN
 - Myers, Mathews: US, NATO agenda
 - NATO CCS Study (1995-1999)
- **Scientific Research: Empirical, Theoretical**
 - Canada (Homer Dixon, 1994-1998)
 - Switzerland (Bächler/Spillmann; ENCOP project)
 - IHDP, GECHS (1999-2009)

3.5. 3rd Focus: Environmental Peacemaking (Conca) -> Peace Ecology (Kyrou)

Environmental Peacemaking

- Conca (1994) suggested an “environmental agenda for peace studies” and a discussion on whether “ecologically desirable futures include concerns for peace and justice” arguing that it is not enough “to place ‘sustainable development’ & ‘ecological security’ alongside peace or social justice as ‘world-order values’”.

Peace Ecology

- Kyrou (2007) introduced ‘peace ecology’ as an “integrative, multi-contextual, and case sensitive approach in identifying resources for conflict and violence transformation” with the goal “to include issues of conflict analysis and peacebuilding” into environmental studies”.

3.6. Two Stages of Debate on Environment & Security (1983-2013)

- First Stage: Debate on Environmental Security
 - Pioneers of scientific debate:
 - Ullman (1983)
 - Take of of policy debate: 1987/1989
 - Brundtland (1987); Gorbachev (1988), Matthews (1989),
 - Norman Myers (1989)
- Second Stage: Debate on climate change as a security risk (threat multiplier) [**Lecture 5 Nov.**]
 - Policy driven debate (since 20o2)
 - Scientific debate
 - (Scheffran et al. 2012), Gleditsch (2012)

3.7. First Stage: 3 Phases of Research on Environmental Security (1983 - 2006)

- ❖ **First conceptual phase (1983-1990):**
 - ❖ Impacts of wars on environment (Westing), 2001: UNEP-PCAU
 - ❖ debate on environmental security as a national security issue (Ullman, 1983; Mathews, 1989, N. Myers, 1989)
- ❖ **Second empirical phase (1991-2000):** case studies on environmental scarcity, degradation as causes of environmental stress & conflicts and environmental cooperation
 - ❖ Canadian (Th. Homer-Dixon)
 - ❖ Swiss (ENCOP, Bächler): (ENCOP)
- ❖ **Third Phase:** methodological diversity (1995-?): many directions, little synthesis
 - ❖ GECHS, state failure project (1999-2009)
 - ❖ Swiss project: mitigating syndroms of global change
 - ❖ Collier, Bannon, World Bank studies: abundance as conflict cause
 - ❖ PRIO: Civil War research

3.8. Second Stage: Security Risk Climate Change: 3 Security Discourses

Climate change & internat. security discourse

- **UN (17 April 2007):** FM M. Beckett, UK presidency
- **EU (2008):** EC & Council Study & roadmap process
- UN GA (June 2009) Res., Report by Sec. General

Climate change & national security discourse:

- **US studies:** CNA, CSIS, NIC (CIA), NSS 2010

Climate change & human security discourse

- IHDP (GECHS): Lonergan & Brklacich (chairmen)
 - 2005: conference in Norway on Climate change and human security
- HSN (Canada was a co-founder & a major sponsor)
- 2007/2008: Greek HSN presidency

- **2011-2014: IPCC, WG II, chapter on human security**

3.9. Neomalthusian & Cornucopian

Approach to Environmental Security

Nils-Petter Gleditsch, PRIO, Norway (2003)

Malthus ->Neomalthusian

- **Rev. T.R. Malthus** (1798) warned in *An Essay on the Principle of Population* of unchecked population growth (1→2→4→8) while the growth of the food supply was arithmetical (1→2→3→4). He believed in "preventive" checks (abstinence, delayed marriage), & in "positive checks" ('premature' death: disease, starvation, war, resulting in Malthusian catastrophe)
- **Neomalthusians**: Resource Scarcity (proponents of population control)

Cornucopian (horn of plenty)

- A **cornucopian** believes that continued progress and provision of good for humankind can be met by advances in technology. There is enough matter and energy on the Earth to provide for the ever-rising population of the world.
- Abundance of matter & energy in space give humanity almost unlimited room for growth.
- The term comes from the cornucopia, the "horn of plenty" of Greek mythology, which magically supplied its owners with endless food and drink.

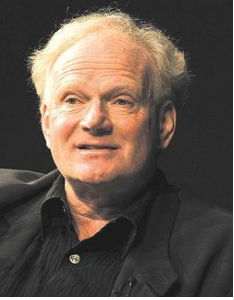
3.10. Ideal Type Worldviews on Security and Standpoints on Environment

Worldview/Tradition on security (→) Standpoints on environmental issues (↓)	Machiavelli, Hobbes, Morgenthau, Waltz (pessimist, realist school)	Grotius, pragmatist <i>Cooperation is needed, matters</i>	Kant, neoliberal institutionalist (optimist) <i>International law matters and prevails (Democratic peace)</i>
Neomalthusian <i>Resource scarcity (pessimist)</i>	I George W. Bush-Administration ?	II ←	III ↙
Reformer, Multilateral cooperation solves challenges (pragmatist)	IV	V UN system most EU states (my position)	VI
Cornucopian <i>Technological ingenuity solves issues (neoliberal optimist)</i>	VII George W. Bush-Administration ?	VIII Bill J. Clinton Administration ?	IX Wilsonian liberal optimism

3.11. Conceptual Innovations:

Paul J. Crutzen and Ulrich Beck

- **Ulrich Beck (German Sociologist, 69):**
 - 1986 year of nuclear accident in Chernobyl: Risk societies (English 1992), and in 2007 (World Risk Society)
 - A leading theorist of cosmopolitan society
- **Paul J. Crutzen (Dutch Chemist, 79)**
 - Nobel Laureate (1995, for Ozone Layer Depletion)
 - 1980 triggered the debate on Nuclear Winter
 - 2000 coined and propagated the term Anthropocene
 - 2003/2005: called for a new global scientific revolution towards sustainability & new global contract for sustainability



3.12. Beck's Thesis of a (Global) Risk Society (Preface Essay, 2011)

- We don't know what it is we don't know - but from these dangers arise, which threaten mankind!
- The irony of risk is that rationality, that is, the experience of the past, encourages anticipation of the wrong kind of risk, the one we believe we can calculate and control, whereas the disaster arises from what we don't know and cannot calculate. [Example: **Fukushima nuclear disaster**]
- To the extent that risk is experienced as omnipresent, there are only three possible reactions: **Denial, apathy, or transformation**. The first is largely inscribed in modern culture, the second resembles post-modern nihilism, and the third is the 'cosmopolitan moment' of world risk society.
- First, I would like to demonstrate that here in **three steps** (drawing on empirical research findings of the Munich Research Centre on '**Reflexive Modernization**'):
 - 1. **Old dangers - new risks**: What is new about world risk society?
 - 2. **Ruse of history**: To what extent are global risks a global force in present and future world history, controllable by no one, but which also open up new opportunities of action for states, civil society actors etc.?
 - 3. **Consequences and perspectives**: In order to understand the manufactured uncertainty, lack of safety and insecurity of world risk society is there a need for a paradigm shift in the social sciences?

3.13. Old Dangers - New Risks: What is New About World Risk Society?

- **Modern society** has become a risk society in the sense that it is increasingly occupied with **debating, preventing and managing risks that it itself has produced.**
- **Risk** means the anticipation of catastrophe. Risks exist in a permanent state of virtuality, and only become 'topical' to the extent that they are anticipated.
- **Theory of 'world risk society'** maintains that modern societies are shaped by new kinds of risks, that their foundations are shaken by the global anticipation of global catastrophes. Such perceptions of global risk are characterized by three features:
 1. **De-localization:** Its causes and consequences are not limited to one geographical location or space, they are in principle omnipresent.
 2. **Incalculableness:** Its consequences are in principle incalculable; at bottom it's a matter of 'hypothetical' risks, which, not least, are based on science-induced not-knowing and normative dissent.
 3. **Non-compensatibility:** The security dream of first modernity was based on the scientific utopia of making the unsafe consequences and dangers of decisions ever more controllable; accidents could occur, as long and because they were considered compensatable. **If the climate has changed irreversibly, if progress in human genetics makes irreversible interventions in human existence possible, if terrorist groups already have weapons of mass destruction available to them, then it's too late.**

3.14. De-localization of incalculable interdependency risks takes place at three levels

The de-localization of incalculable interdependency risks takes place at three levels:

- 1. Spatial:** The new risks (e.g. climate change) do not respect nation state or any other borders;
- 2. Temporal:** The new risks have a long latency period (e.g. nuclear waste), so that their effect over time cannot be reliably determined and limited.
- 3. Social:** Thanks to the complexity of the problems and the length of chains of effect, assignment of causes & consequences is no longer possible with any degree of reliability (e.g. financial crises).

The crucial point, however, is not only the discovery of the importance of non-knowing, but that simultaneously the knowledge, control and security claim of state and society was, indeed had to be, renewed, deepened, and expanded.

3.15. Global Risk is an Unpredictable and Impersonal Force in the Contemporary World

- Global risk has the power to tear away the facades of organized irresponsibility.
- Risk is the involuntary, unintended compulsory medium of communication in a world of irreconcilable differences.
- Risks cut through the self-absorption of cultures, languages, religions and systems as well as the national and international agenda of politics, they overturn their priorities and create contexts for action between camps, parties and quarrelling nations, which ignore and oppose one another.
- I propose that a clear distinction be made between the philosophical and normative ideas of cosmopolitanism on the one hand and the 'impure' actual cosmopolitanization in the sociological sense on the other.
- Cosmopolitanism in world risk society opens our eyes to the uncontrollable liabilities, to something that happens to us, befalls us, but at the same time stimulates us to make border-transcending new beginnings.
- To what extent does the threat and shock of world risk society open up the horizon to historic alternatives of political action?

3.16. Beck's Cosmopolitan Vision

- Two premises: (1) World risk society brings a new, historic key logic to the fore: No nation can cope with its problems alone. (2) A realistic political alternative in the global age is possible, which counteracts the loss to globalized capital of the commanding power of state politics.
- Strategies of action, which global risks open up, overthrow the order of power, which has formed in the neo-liberal capital-state coalition: global risks empower states & civil society movements, because they reveal new sources of legitimation and options for action for these groups of actors; they disempower globalized capital on the other hand, because the consequences of investment decisions and externalizing risks in financial markets contribute to creating global risks, destabilizing markets, globally operating banks, and activating the power of the state as well as of that sleeping giant the consumer.
- The neo-liberal agenda surrounds itself with an aura of self-regulation and self-legitimation. Civil society's agenda, on the other hand, surrounds itself with the aura of human rights, global justice and struggles for a new grand narrative of radical-democratic globalization.

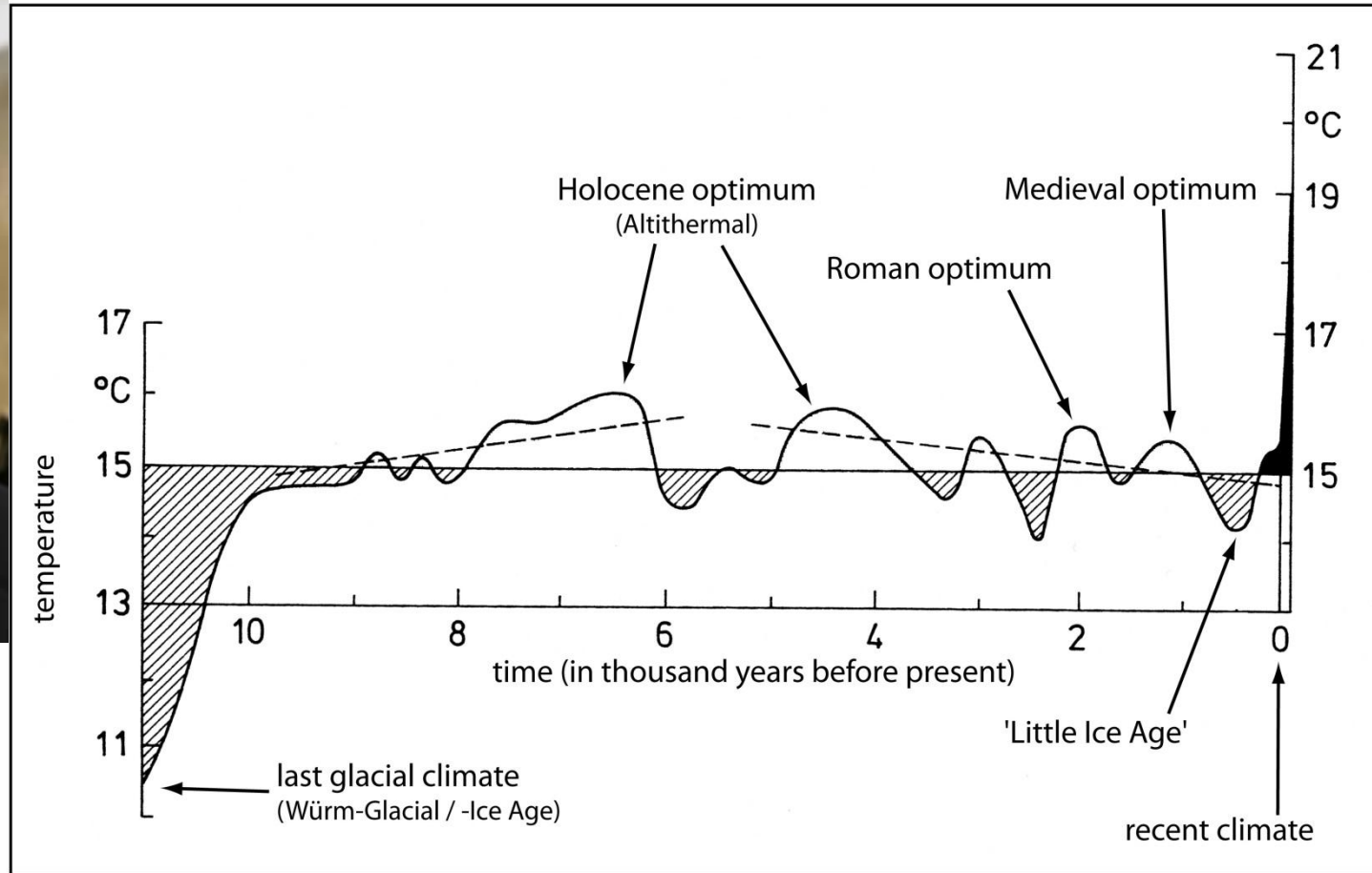
3.17. Beck's Conclusion

- Global risks are producing 'failed or bankrupt states' - even in the West. Its state-structure could be characterized in terms of both inefficiency and post-democratic authority. ... It is quite possible, that the end result could be the gloomy perspective, that we have totally ineffective and authoritarian state regimes. The irony here is this: **manufactured uncertainty (knowledge), insecurity (welfare state) and lack of safety (violence) undermine and reaffirm state power beyond democratic legitimacy.**
- Given the maddening conditions of world risk society, the older critical theory of Foucault is in danger of becoming simultaneously affirmative and antiquated.... It underestimates and castrates the communicative cosmopolitan logic and irony of global risks; consequently the historic question, where politics has lost its wallet, that is, the **question of an alternative modernity**, is analytically excluded by the vain searching in the cone of light of the nation state street light.
- **In cosmopolitan social sciences**, society and its institutions are incapable of adequately conceptualizing risks, because they are caught up in the concepts of first nation **state modernity, believing in scientific certainty and linear progress, which by now have become inappropriate.**
- How can non-Western risk societies be understood by a sociology, which so far has taken it for granted, that its object - Western modernity - is at once both historically unique and universally valid?

3.18. What has changed? Fernand Braudel's historical times

- a. **Geological times:** Holocene to the Anthropocene
- b. **Macrostructural (very long-term):** Impact of 1st & 2nd industrial revolution (on **strategy & warfare**)
 - First: Neolithic-agricultural revolution (4.000 years)
 - **Second: Industrial revolution (1780-1920) (140 years)**
 - **Third: (2nd industrial revolution) energy, transportation, communication, IT (1920-today)**
 - Fourth: (3rd ind. revolution) **Sustainability revolution: great transformation**
- c. **Structural (long-term):** Political revolutions, change of **international order (context of security)**
- d. **Conjuncture (medium term):** Business cycles & presidencies (4-6 years)
- e. **Events (short-term)**
 - **Single events (without major contextual changes):**
 - **Structure or context changing events.**

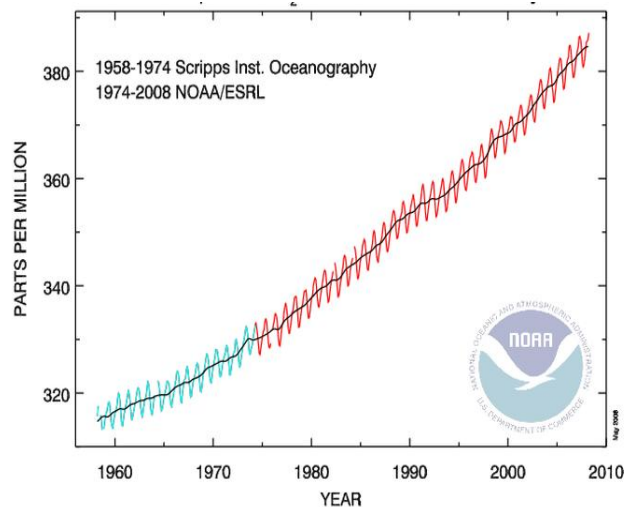
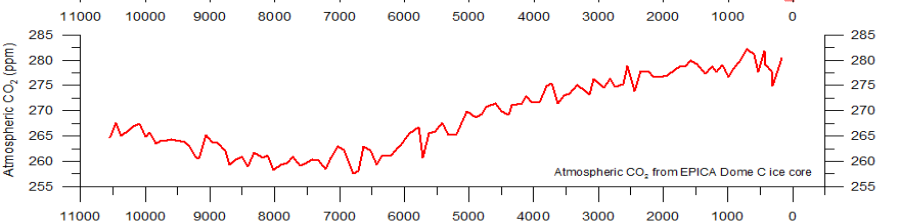
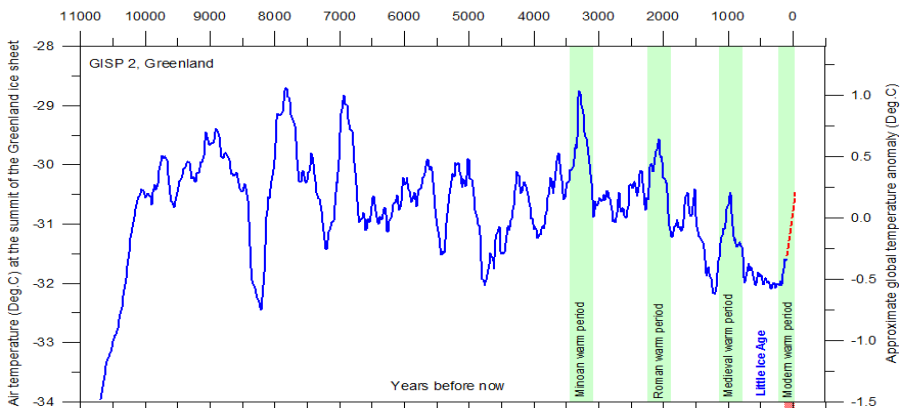
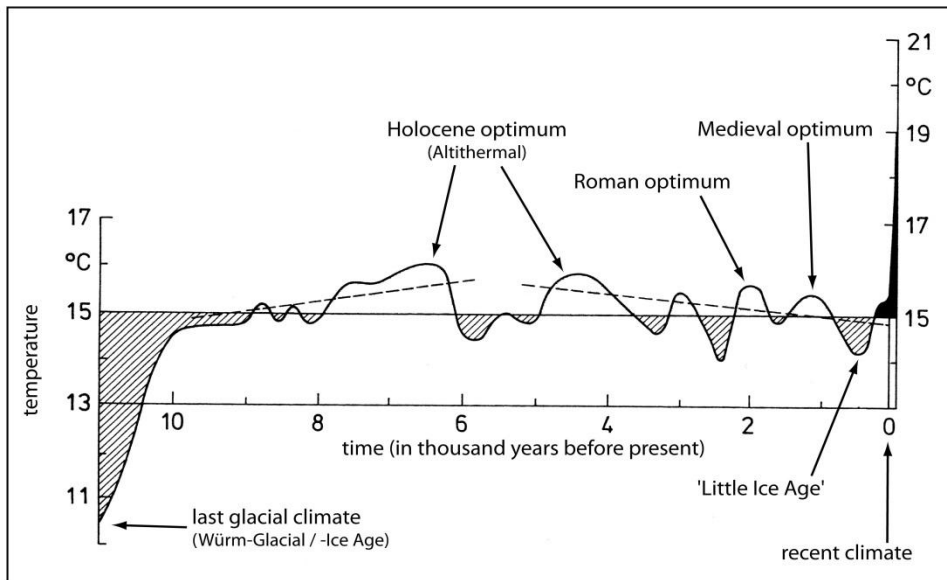
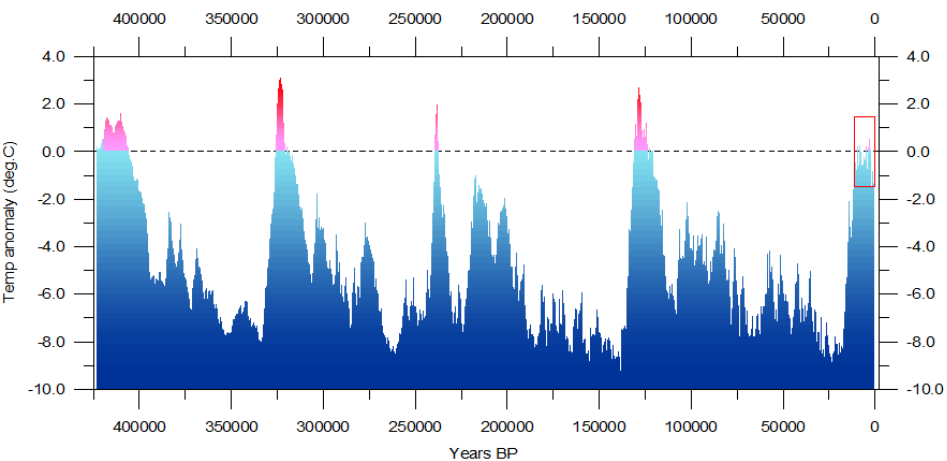
3.19. From the Holocene (12.000 years b.p.) to the Anthropocene (1784 AD)



*Paul Crutzen,
Nobel Laureate for
Chemistry (1995)*

In Geology/geography: **Holocene era** of earth history since end of glacial period (10-12.000 years ago, Anthropocene, since industrial revolution (1784, J. Watt's invention of steam engine: anthropogenic climate change: burning of coal. oil, gas → GHG increase

3.20. Climate Variability & Anthropog. Climate Change



- **GHG concentration in the atmosphere**
- **1750: 279 ppm, 1987: 387 ppm**
- **1/3: 1750-1958: 279 to 315 ppm**
- **208 years: 36ppm**
- **2/3: 1958-2012: 315 to 395 ppm**
- **54 years: +80ppm**
- **1.4.2012: 395.3**
- **1.4.2002: 374.5**
- **10 y.: +20.8ppm**
- **1 year: ca. 4ppm**

4. First Research Stage: Policy Agenda Setting: Threat to (inter)national security

- **International security:** Brundtland Report (1987)
 - New threats: environmental pollution, scarcity & degradation of resources: water, soil and food
 - Less climate change (evolving issue on policy agenda)
- **US national security:** discourse
 - New policy focus and allocation of financial resources
 - New military tasks and missions (during the Clinton Administration) Under Secretary of Defense for ES
- **State-centred:** State and international organizations as key referent and actor to respond!

4.1. Early Proposals: Brundtland (1987) & Gorbachev (1988)

- Gro Harlem Brundtland (1933: 189-194) pointed to the **new 'threats' to security**:
- These may be caused by social unrest caused by poverty and inequality, by environmental degradation, by internal conflicts leading to new flows of refugees. ...
- The pressure on the environment from a rapidly growing world population will increase the likelihood of such conflicts. **Climate change, desertification, deforestation, massive loss of species and biological diversity, depletion of freshwater resources and soil erosion are global trends that are not sustainable.** ...
- The most global, and potentially the most serious, of all the issues facing us today is how we should deal with the threats to the world's atmosphere.
- President Mikhail Gorbachev, at UN GA on 7 Dec. 1988:
- discussed **ecological dimension of international security** ...
- "The relationship between man and the **environment has become menacing.** ... The **threat from the sky is no longer missiles but global warming**".
- He called for defining "**the world ecological threat.**" Eduard Shevardnadze proposed the creation of an "**international regime of ecological security**" and a programme of its implementation.
- In his article "Reality and Guarantees for a Secure World," (September 1987) Mikhail Gorbachev stressed the **universal character of ecological security.**

5. Second Research Stage:

Empirical Case Studies: Toronto & Zuerich

- **Toronto group:** Homer-Dixon: 3 projects of case studies: linkage between environmental scarcity, stress and conflict
 - (Homer-Dixon 1991, 1994, 1996, 1999, 2000; Homer-Dixon/Blitt 1999).
- **Swiss group:** Bächler & Spillmann: environmental scarcity & degradation as causes of environmental conflict & of conflict resolution outcomes
 - (Bächler 1990, 1995, 1999a, 1999b, 1999c; Bächler/Spillmann 1996a, 1996b; Bächler/Böge/Klötzli/Libiszewski/Spillm. 1996).
- **Inductive & deductive studies:**
 - complex interaction among environmental inputs,
 - environmental-societal linkages
 - extreme outcomes

5.1. Second Research Stage: Homer-Dixon Sources & Consequences of Environmental Security (1994)

Sources of environmental scarcity

Social Effects

Decrease in quality
and quantity of
renewable resources

Population growth

Unequal resource
access

Increased
environmental
scarcity

Migration,
expulsion

Decreased
economic
productivity

Weakened states

Ethnic conflicts

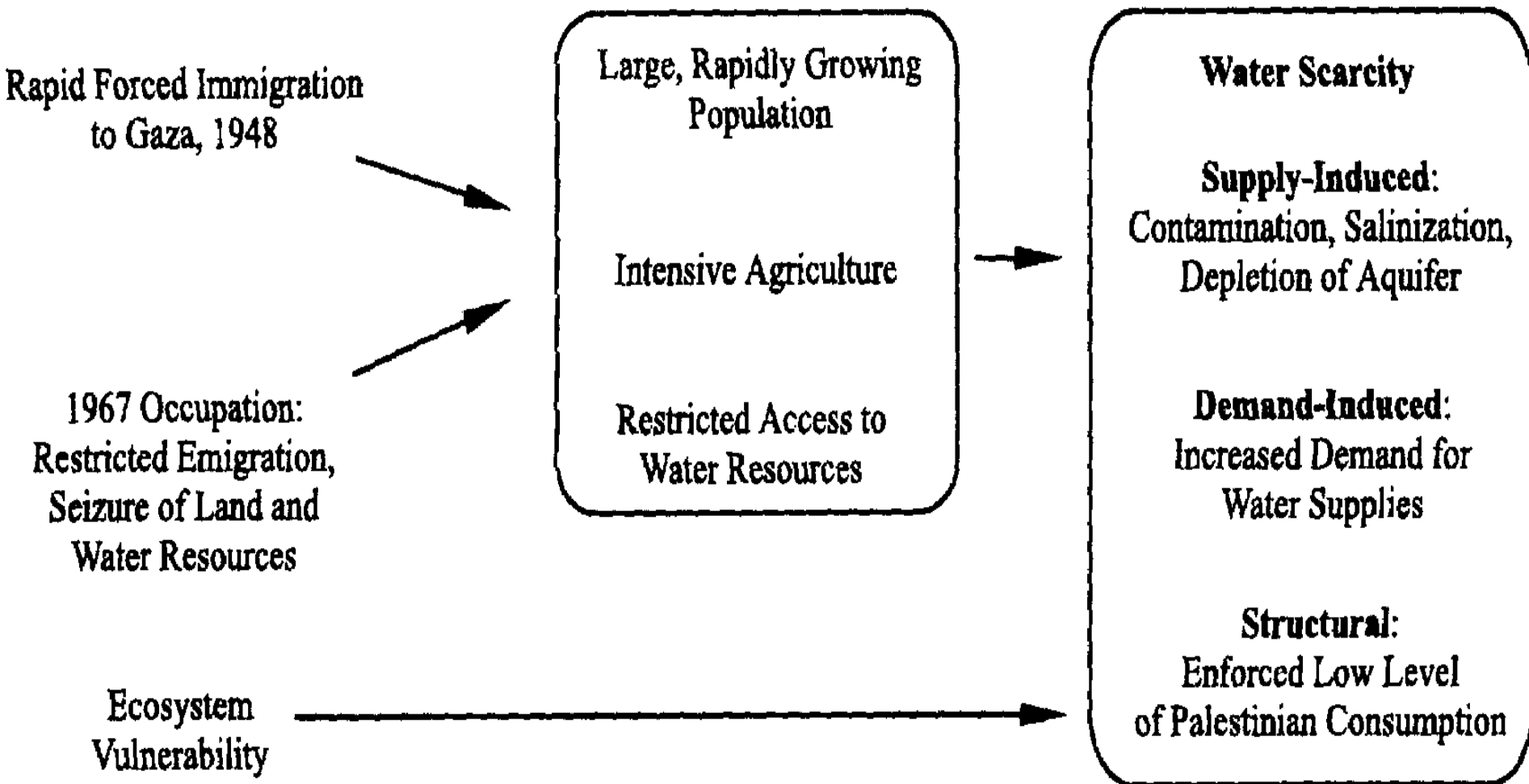
Coups d'état

Deprivation conflicts



5.2. Second Research Stage: Homer-Dixon

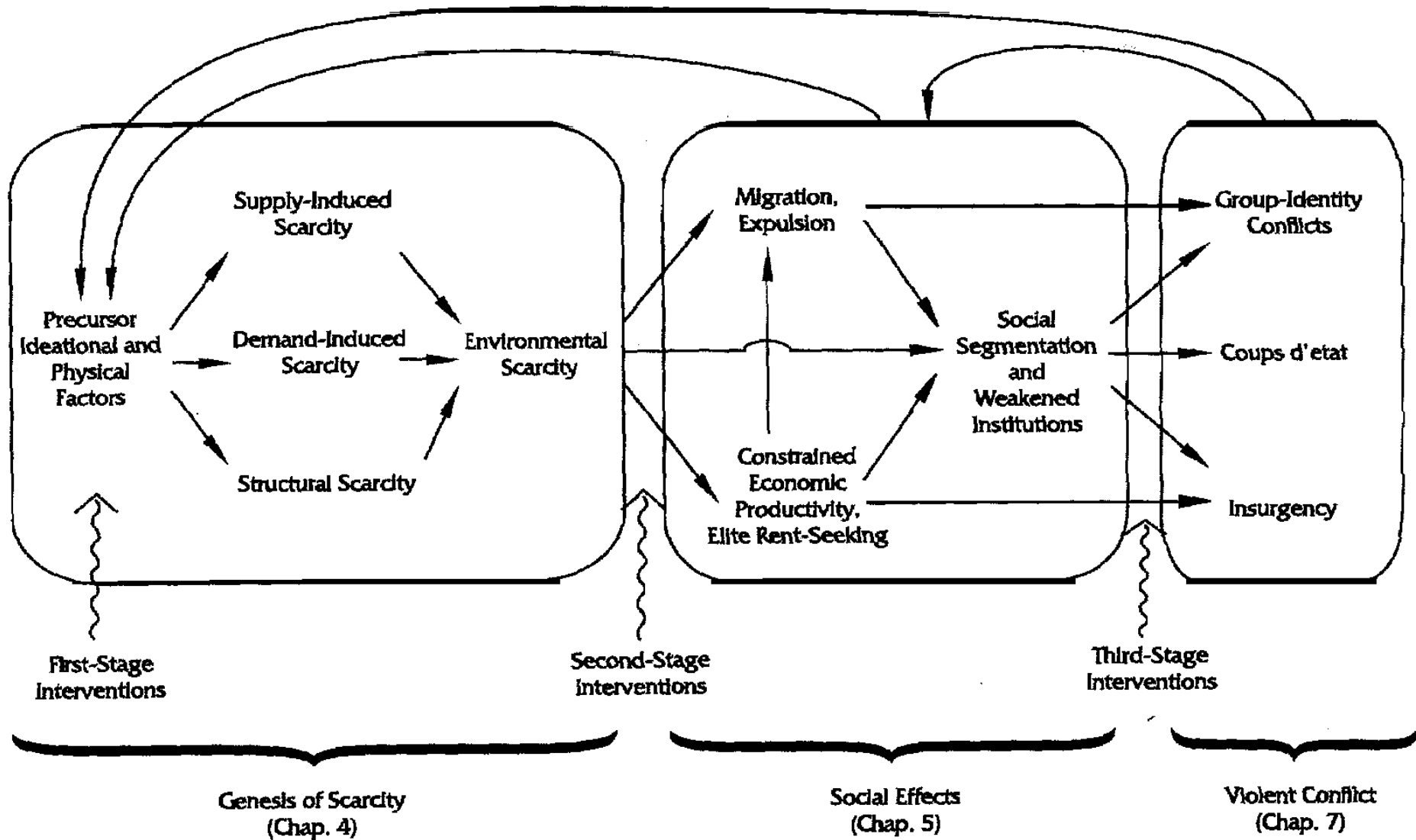
Water Scarcity in Gaza (Kelly/Homer-Dixon 1998: 74)



5.3. Second Research Stage: Homer-Dixon

Core model of causal links environmental scarcity and violence

(1999: 134)



5.4. Second Research Stage: ENCOP

- “Environmental conflicts manifest themselves as political, social, economic, ethnic, religious or territorial conflicts over resources or national interests, or any other type of conflict.
- Traditional conflicts *induced by environmental degradation*. Environmental conflicts are characterized by principal importance of degradation in one or more of the following fields:
 - overuse of renewable resources;
 - overstrain of environment’s sink capacity (pollution);
 - improvement of the space of living (Bächler 1998).

5.5. Second Research Stage: ENCOP

- ENCOP's analytical framework: analysis of environmental conflict followed four steps:
 - to describe the environmental situation on the background of human activities;
 - to deduce the social and economic effects of environmental transformation and degradation;
 - to analyse the political implications of these socio-economic effects and conflicts arising from them; and
 - to evaluate approaches to peaceful management and resolution on different levels of analysis.
- ENCOP concluded that besides resource degradation other contextual factors were decisive for conflicts.

5.6. Second Research Stage: ENCOP

Bächler (1998: 24) concluded

- Neither apocalyptic scenarios of env. catastrophes nor alarmist prognoses of world environmental wars tenable.
- Environmentally-caused conflicts escalate across the violence threshold only under certain conditions.
- Human-induced environmental change can be either a contributing or a necessary factor for both the emergence and/or the intensification of violent conflicts.
 - Violent conflicts triggered by environmental disruption are due in part to socio-economic and political developments.
 - Social and political maldevelopment, due in part to degradation of natural resources, is an international peace and security challenge.
- *Development and security dilemmas* are connected to a syndrome of problems which produces environmental ⁴⁸ conflicts of varying intensity and nature.

6. Third Research Stage: 1990s

- 2nd & 3rd phase: open: dependent variable - conflict vs. cooperation.
- Many research projects: some addressed scarcity problems, such as:
 - The **Global Environmental Change and Human Security (GECHS 1999-2009)** project within IHDP: a framework for research cooperation and coordination.
 - **ECOMAN, ECONILE and Environmental Change and Conflict Transformation** in Zürich and Bern continue case study approach, focus on peaceful & cooperative management of renewable resource use in the Horn of Africa, the Nile region
 - Part of Swiss project: '*Research Partnerships for Mitigating Syndromes of Global Change*'.
 - **Scientific Advisory Council on Global Environment Issues of the German government** focuses on the patterned interaction of symptoms of global change with socio-economic processes (WBGU 1996, 1997; Biermann/Petschel-Held/Rohloff 1999).
 - **The Transboundary Freshwater Dispute Database** at the Oregon State University
 - **Global Assessment of Environment and Security (GLASS)** at Kassel University.
 - Others (Peluso/Watts 2001) have analyzed causes and intensity of violent conflicts, but only few have focused on environment and conflict linkages.
- Debate was picked up by global peace research, security studies, environmental and development research communities.
- By geographers (Dalby, Bohle), social anthropologists (Elwert) and hydrologists (Biswas, Bogardi/Castelein) et al.

6.1. Results of Environmental Security Research

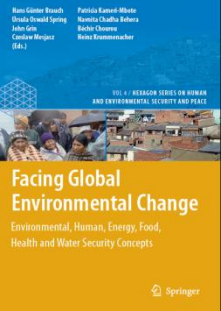
- Recognition that environmental change and resource scarcity and degradation was **less likely to lead to international war** than had been supposed in the first phase.
- While **national security** is important, and there are plausible arguments concerning threats of state collapse and internal conflict caused, triggered or intensified at least in part by environmental factors, the **focus is more on state capacity and the policy dilemmas of social and environmental change**.
- Research focused on **insecurity in many places** looking for policy initiatives that can **mitigate disruptions caused by environmental change**.
- The hazard community identified environmental & social vulnerabilities from natural hazards, storms and droughts. But only few studies discussed linkages between hazards, disasters and conflicts that occur in complex emergencies.⁵⁰

6.2 Critiques of Environmental Security

- **Diehl/Gleditsch (2001)** pointed to limitations & gaps in environmental security including insights without evidence (empirical and theoretical shortcomings), and on primary focus on environmental conflicts rather than cooperation.
- **Conca (2001)**: environmental cooperation may have benefits but does not “prevent or mitigate violent conflict” & more conflict management may be needed.
- Environmental scarcity was challenged from Cornucopian perspective (**Deudney 1991; Lomborg 2001**): human inventiveness, trade, substitution of raw materials, price increases encouraging technological change: answers.
- **Resource abundance** is more likely to lead to conflict while scarcity fosters cooperation (World Bank studies).
- **Peluso/Watts (2001)** rejected “automatic, simplistic linkages between ‘increased environmental scarcity’, ‘decreased economic activity’, and ‘migration’ that purportedly ‘weaken states’ and cause ‘conflicts and violence’”.
- They focus on “ways that **resource environments** (tropical forests) & **environmental processes** (deforestation, conservation, or resource amelioration) are constituted by, & constitute, the **political economy of access** to & control over resources.” They claim that both shortage and abundance and processes of environmental rehabilitation and amelioration are often associated with violence.
- **Conca/Dabelko (2002) suggested shifting focus of research & policy debate from ‘ecological security’ or from ‘violent outcomes’ of environmental stress to environmental peacemaking**

6.3. New Areas for Multilateral Cooperation: Environmental Conflict Prevention & Peacemaking

- **UNEP** (2004): “scientific assessments of link between environ-ment & conflict to promote conflict prevention/peace building”
- **UNEP Div. of Early Warning and Assessment (DEWA)** laun-ched an *Environment and Conflict Prevention* initiative
- Environmental security issues were put on policy agenda of many international organizations: **ASEAN, NAFTA, OAS, and African Union**
- **OSCE**: security risks from environmental stress in Central, Ea-stern, South-Eastern Europe, Caucasus, Central Asia from pollution, shortage of drinking water, disposal of radioactive waste, reduction of human losses in disasters & natural cata-strophes (**ENVSEC initiative** of OSCE, UNEP, UNDP, NATO)
- **Madrid Declaration on Environmental Security** (Nov. 2007)
- **European Union**: two strategies for ‘environmental security’:
 - integrating environmental goals into all sectoral policies (**Cardiff process**),
 - stressing conflict prevention and management in its activities in interna-tional organizations (UN, OSCE) and for specific regions.
 - **Barcelona European Council in March 2002**, a sustainable developm. strategy emphasized of environmental concerns into sectoral policies.
 - **European Council meeting in Thessaloniki** (2003) approved a ‘green strategy’



6.4. Environmental Security Concepts and Debates (15 chap.)

- 59 Environmental Security Concepts Revisited During the First Three Phases (1983-2006) by Simon Dalby, Hans Günter Brauch, Ursula Oswald Spring**
- 60 Environmental Security: Academic and Policy Debates in North America by *Richard A. Matthew and Bryan McDonald*
- 61 The Debate on Ecological Security in Russia, Belarus and Ukraine by *Alexander Sergunin*
- 62 Linking Knowledge Systems for Socio-ecological Security by *P.S. Ramakrishnan*
- 63 Environmental Security in Northeast Asia by *Miranda A. Schreurs*
- 64 Environmental Security in the Arab World by *Mohammad El-Sayed Selim*
- 65 In the Name of Security: In the Name of Peace – Environmental Schizophrenia and the Security Discourse in Israel / Palestine by *David Newman*
- 66 Security and Environment and the Israel-Palestine Conflict by *Robin Twite*
- 67 Conceptualization and Debate on Environmental and Human Security in Palestine by *Mohammed S. Dajani Daoudi*
- 68 Environmental Scarcity, Insecurity and Conflict: The Cases of Uganda, Rwanda, Ethiopia and Burundi by *Mersie Ejigu*
- 69 Environmental Security in Sub-Sahara Africa: Global and Regional Environmental Security Concepts and Debates Revisited by *Sam Moyo*
- 70 The Brazilian Amazon in an Environmental Security and Social Conflict Framework by *Alexander López*
- 71 Politics of Environment in the Caucasus Conflict Zone: From Nationalizing Politics to Conflict Resolution by *Vicken Cheterian*
- 72 Environmental Security in the Asia-Pacific Region: Contrasting Problems, Places, and Prospects by Jon Barnett**
- 73 Security at the Poles: The Arctic and Antarctic by *Gunhild Hoogensen*

7. Proposals for 4th Phase of Research on Environmental Security

Text : Oswald Spring/Brauch/Dalby: Linking Anthropocene, HUGE and HESP:
Fourth Phase of Environmental Security Research

- 1. Goals for Fourth Phase of ES Research**
- 2. Tasks for 4th Phase of Research on Env. & Security**
- 3. Broaden Research Stakeholders**
- 4. Broaden Empirical Focus on Causes of Global Change**
- 5. Focus on fatal outcomes (disaster, migration, crises, conflict) & efforts for resolution, prevention & avoidance**
- 6. Increase in Human Disasters & Conflicts**
- 7. Broaden Policy Constituency: Climate Change, Disaster & Early Warning & Conflict Prevention Community)**
- 8. From Research to Action: Enhancing Environmental & Human. Mainstreaming: Adaptation/Mitigation; Climate Change/Disaster**
- 10. Env. Conflict Avoidance: Addressing Causes & Fatal Outcomes**
- 11. Human & Environmental Security and Peace Project (HESP)⁵⁴**

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7.2. Tasks for a Fourth Phase of Research on Environment & Security

- ❖ Fourth Phase: My proposal: Human & Environmental Security and Peace (HESP): chapt. 2 and 51 (2003), in: Brauch: in: Security & Env. in the Mediterranean**
- 1. Broaden research stakeholders: Bring together those working on human & environmental security issues with the peace research, development, environmental research communities.**
- 2. Broaden empirical focus: on six causes of the Survival Hexagon & interactions (nat. sciences: simulation techniques, modelling).**
- 3. Focus on fatal outcomes & interactions: disaster, migration, crises, conflict & efforts for resolution, prevention & avoidance.**
- 4. Broaden policy constituency: climate change, disaster & early warning (disaster & conflict) & conflict prevention community.**
- 5. Support mainstreaming of policy initiatives: early warning, adaptation & mitigation & conflict prevention,**

Requires: Multidisciplinarity & horizontal cooperation

7.3. Goals for Fourth Research Phase

- ❖ A “**people-centred**” **human security perspective** from the individual to the global level to develop strategies for adaptation and mitigation to reduce both the likelihood and the impact of and the vulnerability to these outcomes by strengthening resilience .
- ❖ The **normative orientation** at the dual policy goals of sustainable development and sustainable peace requires the scientific development of complex **knowledge, a societal and political problem awareness, anticipatory learning and “ingenuity” in the framework of a “culture of prevention”**.
- ❖ **Practical purpose & policy relevance** of a 4th phase of research is to recognise **early-warning indicators**, to examine both the **environmental consequences of wars and the existing conflicts over scarce resources** that may lead to environmental stress to **prevent that they escalate into violence** and, last but not least, to **develop longer-term priorities for European countries, as well as for international organisations** to avoid environmental outcomes from occurring, to contribute to **regional environmental good governance**.

7.4. From Research to Action: Enhancing Environmental & Human Security Towards Environmental Conflict Avoidance

- **Primary Goal:** address fatal outcomes of GEC: hazards and disasters, migration, crises & conflicts that may have been caused, triggered, induced, influenced by: a) environmental stress and b) extreme weather events,
- **Enhance Environmental Security:** Address human behaviour that contributes to GEC via climate change, soil degradation, water pollution & scarcity: sustainable strategies
- **Enhance Human Security:** address factors of GEC that challenge survival of individuals, families, villages, ethnic groups
- **Avoid Environmentally-induced Conflicts:** address structural or causal factors (of Survival Hexagon), e.g. climate policy, combat desertification, cope with water stress.

7.5. Tasks for a Fourth Phase of Research on Environment & Security (2004)

My own proposal for a **Fourth Phase** of a **Human & Environmental Security and Peace (HESP)** project

- 1. Broaden research stakeholders:** Bring together those working on human & environmental security issues with the peace research, development, environmental research communities.
- 2. Broaden empirical focus:** on six causes of the Survival Hexagon & interactions (nat. sciences: simulation techniques, modelling).
- 3. Focus on extreme, fatal outcomes & interactions:** disaster, migration, crises, conflict & efforts for resolution, prevention & avoidance.
- 4. Broaden policy constituency:** climate change, disaster & early warning (disaster & conflict) & conflict prevention community.
- 5. Support mainstreaming of policy initiatives:** early warning, adaptation & mitigation & conflict prevention,
- 6. Make environmental security challenges also a human security concern** and introduce them into the human security discourse (HSN)

Requires: Multidisciplinarity & horizontal cooperation in governments, ministries, between DGs, often suboptimal

7.6. Broaden Research Stakeholders: Integrate Human & Environmental Security Concerns into a Peace Research Agenda

Environmental Security

- First phase: (Ullman, Matthew & Myers): make environmental security primarily as a **national security** concern.
- Fourth Phase: make **environmental security** challenges also a **human security** concern.

Human Security

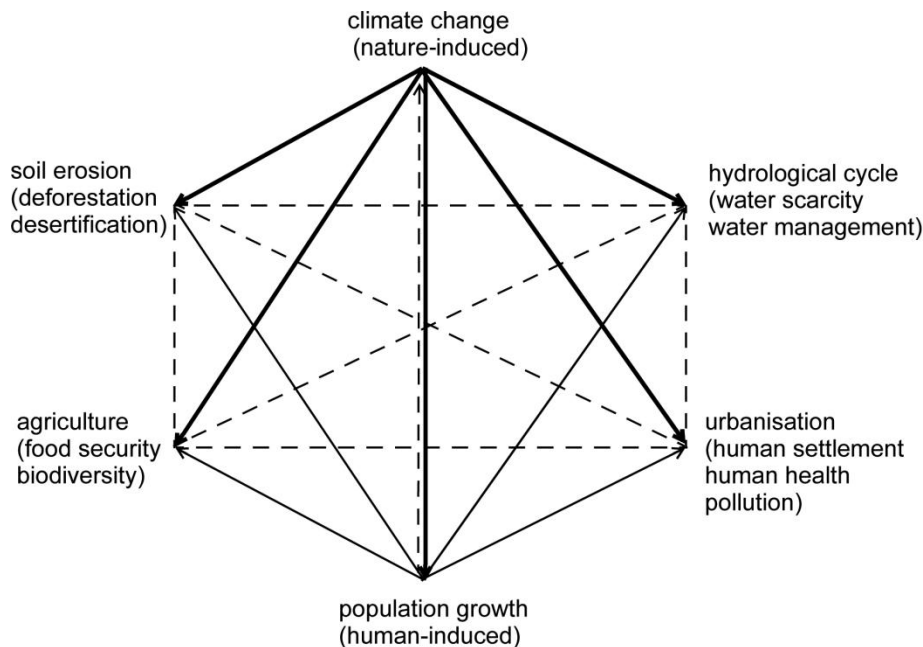
- Environmental security challenges were so far no human security concern (missing on agenda of **Human Security Network**, but also in HSC: **Human Security Now**).
- This changed HSN: Thai (2006) and Greek Presidency (2008)

Peace Research

- Authors from peace research have contributed to both debates and could rather build conceptual bridges than authors with an Hobbesian outlook from Inter(national) Security Studies.

7.7. Broaden Empirical Focus on Causes of Global Change: Survival Hexagon & Interactions

Survival Hexagon: 6 factors



- direct impact of nature-induced „root cause“: climate change on five factors
- direct impact of human-induced „root cause“: population on four factors
- - -> complex interaction among four structural factors: urbanisation, water scarcity, soil erosion and desertification and food scarcity and agricultural policy

Six key causes of GEC:

Nature & human-induced

- ❖ **Air:** Global climate change
- ❖ **Soil** degrad.,desertificat.
- ❖ **Water** scarcity, hydrologic cycle

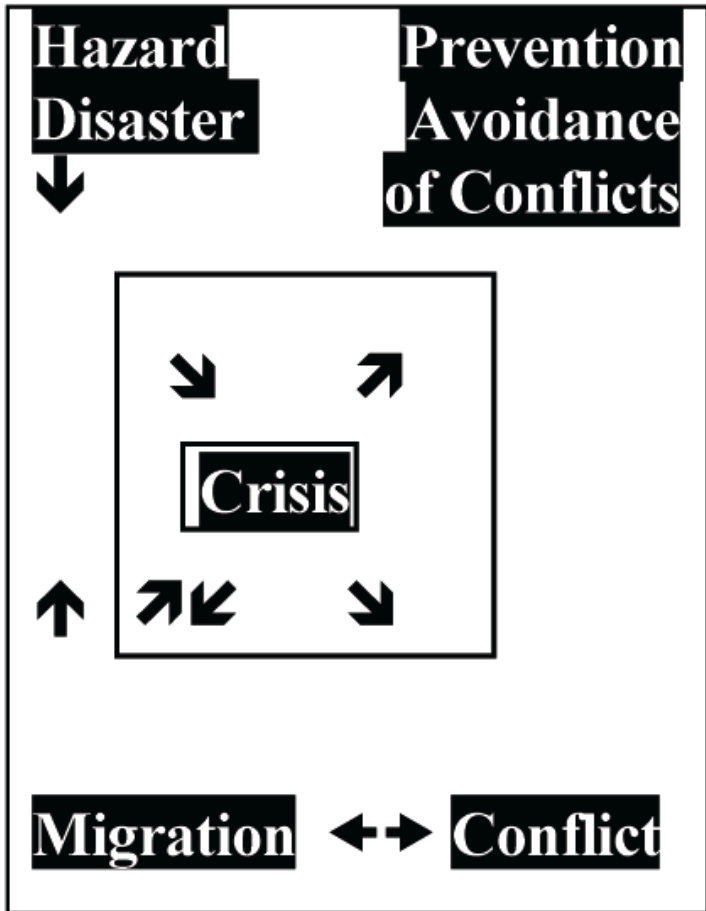
Human-induced factors

- ❖ **Population** growth
- ❖ **Urbanisation** (health, pollution)
- ❖ **Food** (Agriculture

Little knowledge on interaction of these 6 factors on the global, regional, national & local level.

Need for natural science research (modelling, simulation techniq.)

7.8. Focus on societal outcomes: interactions of disaster, migration, crises, conflict & efforts for resolution, prevention & avoidance



Lack of knowledge on linkages among **extreme or fatal outcomes**

- Disasters & disaster-ind. migration
- Famine & environm.-ind. migration
- Conflicts & conflict-induced migration

Lack of knowledge on **societal consequences**: crises/conflicts

- Domestic & internat. crises & conflicts
- Environmentally or war-induced migration as a cause or consequence of crises and conflicts

7.9. Increase in Human Disasters & Conflicts

Will these fatal outcomes of global environmental change (GEC) and climate change (CC) lead to conflicts?

Three Preliminary Working Hypotheses

- **Thesis 1:** Population growth, urbanisation & persistent high poverty will increase the societal vulnerability to hazards and disasters.
- **Thesis 2:** Extreme weather events will very likely increase environmental vulnerability to hydro-meteorological hazards (droughts, flash floods and storms).
- **Thesis 3:** Environmental stress and hazards may trigger distress migration and low level conflict potentials in societies and among states (with high vulnerability).

7.10. Broaden Policy Constituency: Climate Change, Disaster & Early Warning (disaster & conflict) & Conflict Prevention Community

Four constituencies without scientific & policy interaction

- ❖ **Early Warning communities (global, regional)**
 - of natural hazards and disasters (UNISDR, EWC)
 - of crises and conflicts
- ❖ **Adaptation and Mitigation efforts**
 - Against climate change (IPCC community)
 - Against natural hazards and disasters (UNISDR, GDIN, etc.)
 - 2 conferences in June 2002: by Dutch (Actor specific) & German (research specific) Foreign Ministries
- ❖ **Mainstreaming of these efforts is needed**
 - early warning of hazards, crises & conflicts (IPCC community)
 - Against natural hazards and disasters (UNISDR, GDIN, etc.)
- ❖ **Major Clients: EU-ECHO: funder & UN-OCHA: coordination**

7.11. From Research to Action: Enhancing Environmental & Human Security Towards Environmental Conflict Avoidance

- **Primary Goal:** address fatal outcomes of GEC: hazards and disasters, migration, crises & conflicts that may have been caused, triggered, induced, influenced by: environmental stress and extreme weather events,
- **Enhance Environmental Security:** Address human behaviour that contributes to GEC via climate change, soil degradation, water pollution & scarcity: sustainable strategies
- **Enhance Human Security:** address factors of GEC that challenge survival of individ., families, villages, ethnic groups
- **Avoid Environmentally-induced Conflicts:** address structural or causal factors (of survival hexagon, PRISOR Model): climate policy, combat desertification, cope with water stress⁶⁵.

7.12. Mainstreaming: Adaptation & Mitigation Against Climate Change & Disaster

Advantages of linking early warning: disasters & conflicts

- ❖ **Successful early warning of hazards will also mitigate conflicts**
- ❖ **Successful early warning of conflicts will reduce vulner. to hazards**

Need for three-fold mainstreaming of early warning efforts:

- Vertical:** global – regional – national – local, e.g. **UNISDR, EU**
- Horizontal:** disaster reduction and conflict prevention
 - **Technical (natural disasters) vs. political (conflicts)**
 - **Impediments: knowledge gap on linkages between fatal outcomes of global environmental change and their societal consequences**
 - **Learning from case studies both success and failure**
- Actors:** Political & scientific community: **time- & theory-driven efforts**

Who will benefit? Humanitarian organisations: **IFRC-RCS** et al.
and sponsors: **ECHO** (50% of humanitarian aid), **OCHA** et al.

7.13. Environmental Conflict Avoidance: Addressing Causes & Societal Outcomes

- Environmental and human security strategies: address the two values at risk a) **sustainability (environmental security)**; and b) **survival (human security)**;
- Deal with the different referent objects of security:
 - **ecosystem (environmental security)**; and
 - **individual & humankind (human security)**;
- Address different causes of threat, challenge, vulnerability and risk:
 - **humankind (environm. security)**;
 - **nature, state, globalisation (human security)**;
- We need **sustainable development strategies**
 - development, environment policies addressing GEC
- We need **survival strategies**
 - protection & empowerment).

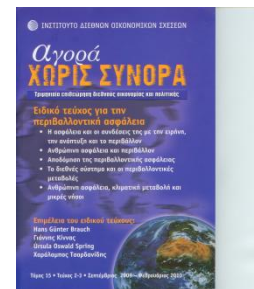
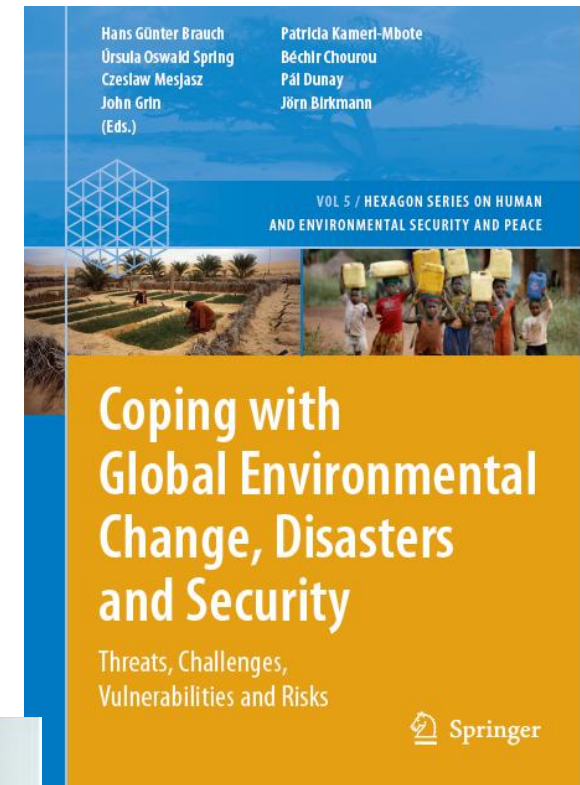
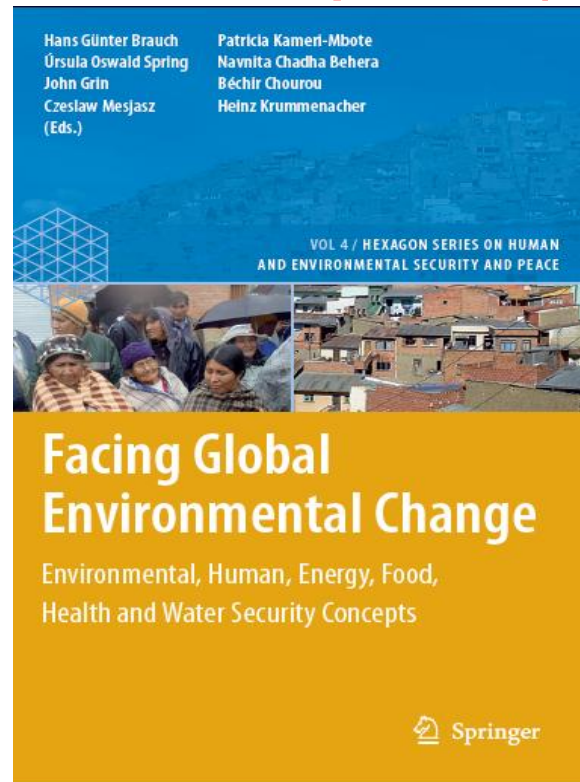
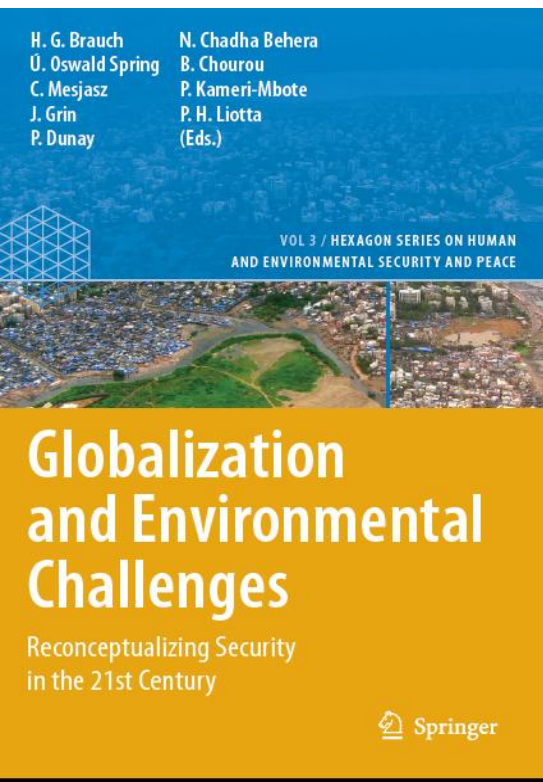
7.14. Human & Environmental Security and Peace Project (HESP)

- **Synthesis of four approaches: goal: develop environmental dimension of human security**
 - a) Environmental security debate (environm. dimension)
 - b) Human security (human being: cause & victim of GEC)
 - c) Grotian approach: multilateral, international law based
 - d) Proactive focus: conflict avoidance (structural factors)
- **AFES-PRESS contributions to 4th Research Phase on Environment and Security Linkages:**
 - HEXAGON Series on Human & Environmental Security and Peace Project (HESP) with Springer (Berlin – NY - London - Tokyo)
 - Environmental and Human Security Handbook for the Anthropocene (volumes III, IV, V)

7.15. Hexagon Series: Volumes III-V

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

Global Environmental and Human Security Handbook for the Anthropocene (GEHSHA)



9. Human Security Approach to Environmental Security

A Changing Environment for Human Security

Transformative Approaches to Research, Policy and Action



Edited by
LINDA SYGNA KAREN O'BRIEN JOHANNA WOLF

Environmental change presents a new context and new opportunities for transformational change. *This book* both supports and informs a call for new, transformative approaches to research, policy and action. It includes critical analyses, case studies and reflections on contemporary environmental and social challenges, with a strong emphasis on climate change. Human thoughts and actions have contributed to an environment of insecurity, manifested as multiple interacting threats that now represent a serious challenge to humanity. Yet humans also have the capacity to collectively transform the economic, political, social and cultural systems and structures that perpetuate human insecurities.

9. New Developments: Environmental Peacemaking, Peace Ecology, Sustainable Peace

- While both scientific peace and ecology concepts have significantly changed since 1989, the scientific exchange between peace research and ecological approaches has been limited.
- Conca (1994) suggested an “environmental agenda for peace studies” and a discussion on whether “ecologically desirable futures include concerns for peace and justice” arguing that it is not enough “to place ‘sustainable development’ and ‘ecological security’ alongside peace or social justice as ‘world-order values’”.
- Conca, Carius, Dabelko (2005: 150) argued that environmental peacemaking may help “forestall environmentally induced conflict,... soften group grievances that ... are worsened by ecological injustices”, which is also identified as ‘negative peace’, while a second approach “moves beyond conflicts with a specifically environmental component, seeking to build peace through cooperative responses to shared environmental challenges”, thus partly aiming at ‘positive peace’.

9.1. Towards Peace Ecology

- Kyrou (2007) introduced 'peace ecology' as an "integrative, multi-contextual, and case sensitive approach in identifying resources for conflict and violence transformation" with the goal "to include issues of conflict analysis and peacebuilding" into environmental studies". 'A shortcoming of environmental peacemaking is "the lack of a common worldview and of a shared philosophical space in relating ecology with peace"'.
• Kyrou argues that "peace ecology values the preservation and harmonious interaction of societies with the nature of peace; at the same time, it values a society striving to maintain positive peace as an ecological asset". Peace ecology links the value of biodiversity with that of cultural diversity and aims to protect the environment and to maintain the peace far into the future. Other elements of his peace ecology approach are bioregionalism, the 'do-no-harm' principle that aims at the "preservation of positive peace in society while maintaining ecological integrity". "Peace ecology places environmental peacemaking activities within the context of bio-regions and examines their impact on various forms of violence".

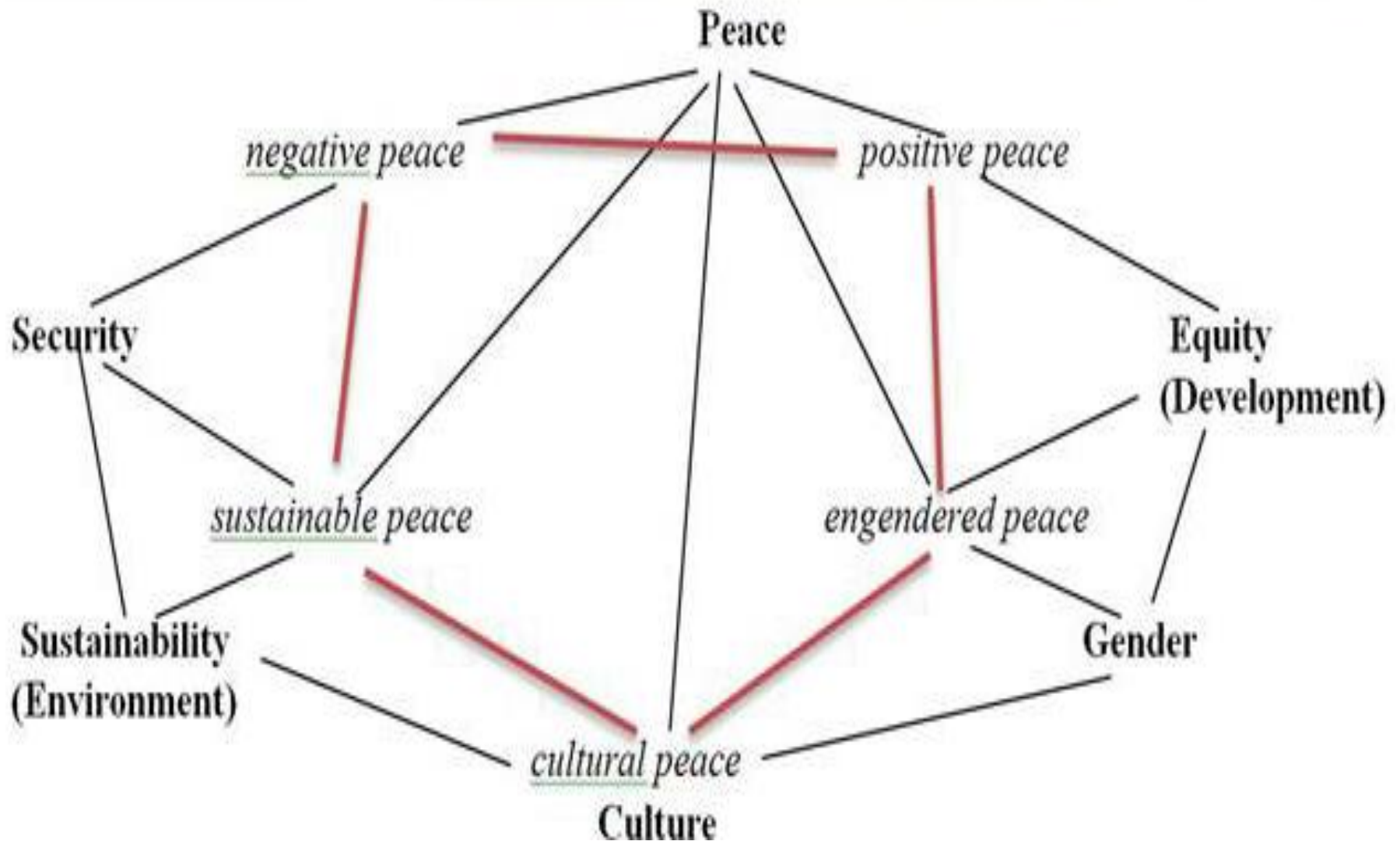
9.2. Expanding Peace Ecology

- Brauch, Dalby and Oswald Spring (2011) proposed to reconceptualize peace ecology by linking it to the political geology approach.
- Peace ecology calls for “peace with nature” that is increasingly being challenged by the manifold anthropogenic interventions into the earth system during the Anthropocene (Crutzen 2000): To achieve ‘peace with nature’ is a domestic and international task where human behaviour has to be brought in line with the holeness of nature.
- How human beings respond to these new dangers to the survival of the species but also of plants and animals through a declining biodiversity depends but on the worldview of the scientists but also on the mindset of the elites and on whether the carbon lobbies succeed.
- Business-as-usual prevails when the political, economic and military elites are unwilling or unable to act to address the root causes of global environmental and climate change. Many religious leaders, scientists, policymakers have called for an alternative vision aiming for a new scientific revolution, for a fundamentally different worldview shifting to an alternative paradigm of sustainable development and sustainable peace (Scheffran 2011; OECD 2011), where the ethical goal of ‘peace with nature’ can be achieved.

9.3. Conceptual Pillars of Peace Ecology

- Peace ecology in the Anthropocene may be conceptualized with 5 conceptual pillars consisting of peace, security, equity, sustainability & gender.
- To conceptualize the linkages between peace and security we refer to '**negative peace**' and for the relationship between peace and equity to '**positive peace**' concept, for interactions between peace, gender and environment '**cultural peace**' and for the relations between peace, equity and gender we propose the concept of an '**engendered peace**'.
- **Sustainable peace** refers to links among peace, security & environment, where humankind and the environment as 2 key parts of global Earth face the consequences of destruction, extraction and pollution.
- **Sustainable peace** includes also processes of recovering from environmental destruction, reducing the human footprint in nature through a less carbon-intensive - and in the long-term possibly carbon-free and increasingly dematerialized production processes that future generations may still be able to decide on their own resources and development strategies.

9.4. Five Pillars of Peace Ecology



10. Environmental & Human Security in the Anthropocene

- Humankind has entered a new era of earth 6 human history the Anthropocene & faces a global risk society.
- Anthropocene: human intervention into nature(unique)
- In the Anthropocene the causes for the impacts of global environmental change are anthropogenic.
- We are the threat (by our consumption of hydrocarbons), the victims and we must be the solution.
- Peace & security in the Anthropocene cannot be achieved with weapons but by addressing the causes.
- This requires a fundamental change in production & consumption patterns (sustainability transition)

10.1. New Peace & Security Agenda for the Anthropocene

For the transition to the Anthropocene Era of Earth History we need for the 21st century

- A Copernican Revolution in the thinking for sustainability
- A “Fourth” Sustainable Green Revolution
- A Strategy for a sustainability transition
- New Nonmilitary Environmental Security Agendas
- New realistic conceptual visions as guidelines for action
 - **Vision of a sustainability transition**
 - **Vision of a decarbonization of the economy**
 - **Vision of efficiency revolution**
 - **Vision of an energetic imperative**

10.2. Policy Vision & Perspective:

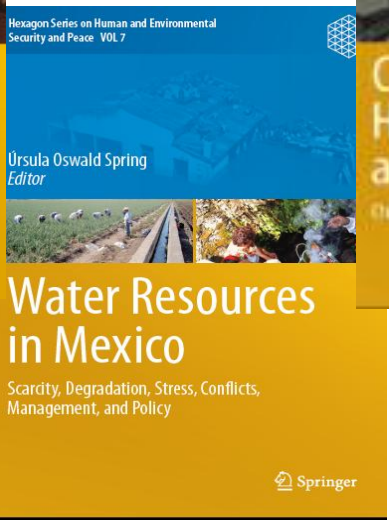
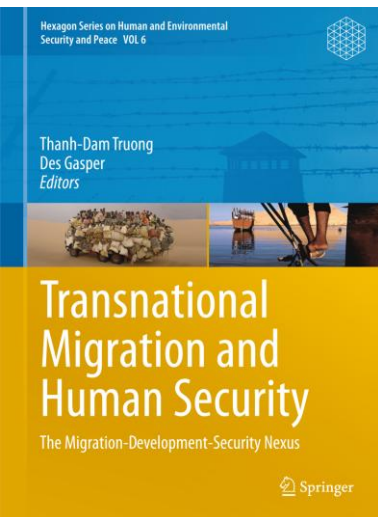
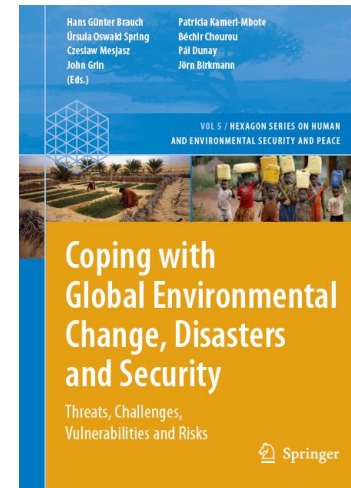
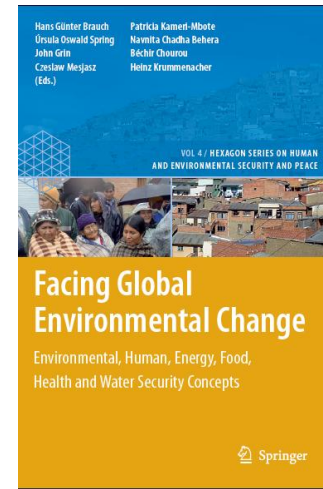
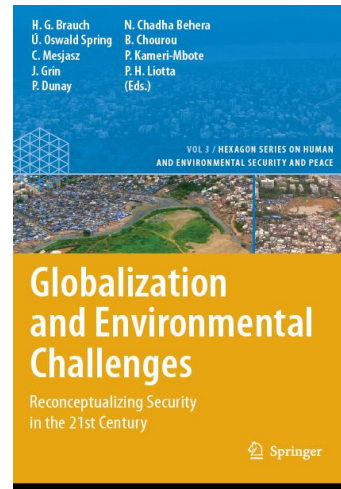
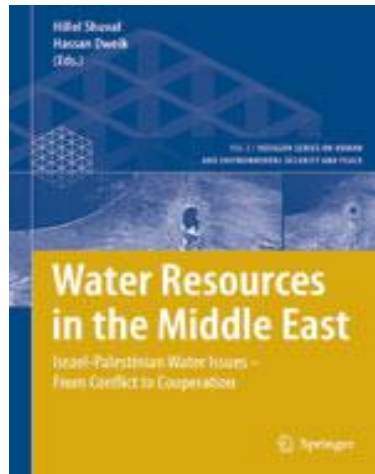
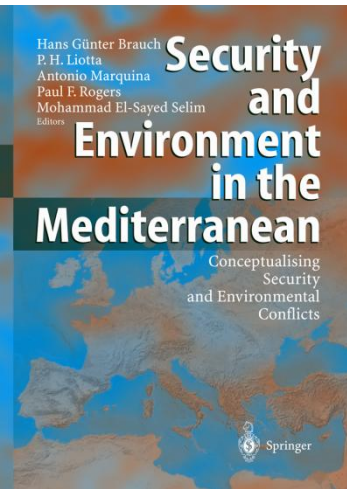
Towards Sustainable Peace & 4th Sustainability Revolution

- **Goal: stabilization of temperature increase at 2 C in global average temperature by 2100:**
 - -50% global reduction of GHG, or 80% for OECD countries
 - Requires major transformation & decarbonization of economy
- **Combination of sustainable development strategy & peace policy: sustainable peace to prevent that GEC issues pose a threat to international peace.**
- **Fundamental transformation of security is needed not a militarization of the environment!**
- **We are both the threat (burning of hydrocarbons) & we can jointly develop the solutions starting now**
 - Changes in production, energy efficiency, renewables⁷⁶

**Thank you so much
for your attention!**



Hexagon Series: Volumes I-VIII



Forthcoming Volumes

- Truong, Thanh-Dam; Bergh, S.I.; Gasper, Des; Handmaker, J. (Eds.): Migration, Gender and Social Justice - Perspectives on Human Security. Hexagon Series on Human and Environmental Security and Peace, vol. 9 (Heidelberg – Dordrecht – London – New York: Springer, 2012).
- Czeslaw Mesjasz: *Stability, Turbulence or Chaos? Systems Thinking and Theory and Policy of Security*. Hexagon Series on Human and Environmental Security and Peace, vol. 10 (Berlin et al. Springer-Verlag, 2013).