Global Change and Environmental Conflict Avoidance

Towards a Research and Policy Agenda

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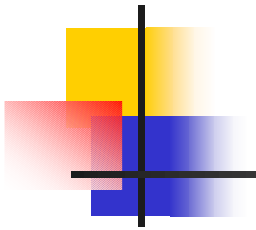

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EU Research Context: GMES & GMOSS Global Monitoring for Stability & Security

- **GMES:** Global Monitoring for Environment & Security
  - **Joint EU (25) & ESA (European Space Agency, 15 [incl. Norway, CH, Canada]) Initiative of 1998**
  - **1998-2003: discussion, 2004-2007: implementation, and after 2008: operational phase**
  - **G-8: global effort: Earth Observation Summit process**
- **GMOSS:** Global Monitoring for Stability & Security
  - **Network of Excellence on Security (NoE) in the context of the 6th EU Research Framework Programme**
  - **AFES-PRESS: is one of 25 GMOSS partners, Joint focus (with FOI): reconceptualising security (AFES-PRESS) & new threats (FOI), crises, coping with them & contribution of remote sensing**

2. Environment and Security Linkages

- **Conference Focus: environment & security linkages**
- **Environment:** ***Encyclopaedia Britannica*** **(1998) defined 'environment':**

  "the complex of physical, chemical, and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival".

- **Neo-Malthusian: Resource scarcity (Lester Brown, Norman Myers)**
- **Cornucopian: Abundance (B.Lomborg: Skeptical Environmentalist)**
- **Pragmatic multilteralist: cooperation in int. Organisations matters**
- **Arnold Wolfers (62): 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."

Subjective security perception depends on worldviews or traditions

- **Hobbessian pessimist: *power* is the key category (narrow concept)**
- **Kantian optimist: *international law* and *human rights* are crucial**
- **Grotian pragmatist: *co-operation* is vital (wide security concept)**

2.1. 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 *Cooperation is needed, matters*	Kant, neoliberal institutionalist (optimist) *International law matters and prevails (Democratic peace)*
Neomalthusian *Resource scarcity* (pessimist)	I George W. Bush-Administration ?	II ←	III ↙
Reformer, *Multilateral coope-ration solves chall.* (pragmatist)	IV	V UN system most EU states (my position)	VI
Cornucopian *Technological inge-nuity solves issues* (neoliberal optimist)	VII George W. Bush-Administration ?	VIII Bill J. Clinton Administration ?	IX Wilsonian liberal optimism

2.2. Widening of Security Concepts: Towards Environmental Security

4 trends in reconceptualisation of security since 1990:

- **Widening** (dimensions, sectors), **Deepening** (levels, actors)
- **Sectorialisation** (energy, food, health), **Shrinking** (WMD, terrorists)

Dimensions & Levels of a Wide Security Concept

Security dimension⇒ ⇓ Level of interaction	Mili-tary	Politi-cal	Economic	Environ-mental ⇓	Societal
Human individual ⇒			Food/health	Cause & Victim	Food/health
Societal/Community				↓↑	
National	Shrinking		Energy se.	↓↑	
Internat./Regional				↓↑	
Global/Planetary ⇒				GEC	

2.3. Environmental & Human Security

Expanded Concepts of Security (© Møller, 2003)

Label	Reference object	Value at risk	Source(s) of threat
National security	The State	Territ. integrity	State,substate actors
Societal security	Societal groups	Nation. identity	Nations, migrants
Human security	Individ., mankind	Survival	Nature, state, global.
Environmental sec.	Ecosystem	Sustainability	Humankind

Human security: Referent: individuals and humankind. [Human Security Network]

- Values at risk: survival of human beings and their quality of life.
- Major source of threat: nature (global environmental change), globalisation, nation state with its ability to cope with this dual challenge.

Environmental Security: Referent: Ecosystem; Value at risk is sustainability.

- Major challenges: global environmental change & humankind,
- Focus: Interactions between ecosystem & humankind, impact of global environmental change on environmental degradation, of increasing demand on environmental scarcity & environmental stress. [No Environment Security Network of States, & IGOs & NGOs]

2.4. Human Security Network Members

NATO	EU	Third World
Canada		Chile Jordan Mali Thailand South Africa (observer)
Greece Nether-lands	Austria Ireland Slovenia	
Norway	Switzerl	

Anti-pers. Landmines, Intern. Criminal Court, protection of children in armed conflict, control of small arms & light weapons, fight against transnat organized crime, human development, human rights educat., HIV/AIDS, implement. of intern. humanitarian & human rights law, conflict prevention

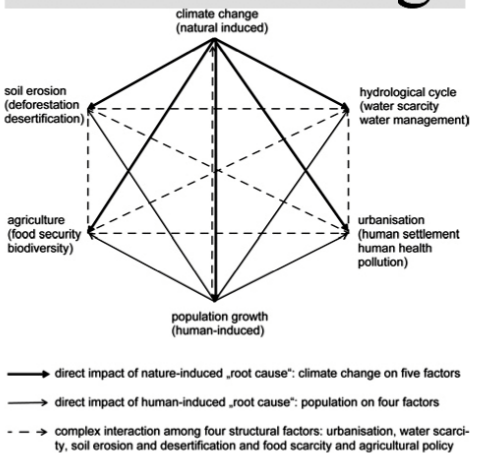
So far no environmental security issues on the agenda of this HS-Network.

The Network has an interregional & multiple agenda perspective, strong links to civil society & academia.

The Network emerged from landmines campaign at a Ministerial, Norway,1999.

Conferences at Foreign Ministers level in Bergen, Norway (1999), in Lucerne, Switzerland (2000), Petra, Jordan (2001) Santiago de Chile (2002), Graz (2003), Bamako, Mali (May 2004).

3. Model: Global Environmental Change, Environmental Stress & Fatal Outcomes

Causes (Hexagon)	Effect (Interaction)	Environmen-tal Stress	Probable Outcomes
↗→→→→Extreme Weather Events→→→↘			
Climate change 	environmental → **degradation** (soil, water) ↓↑→ → **scarcity** (water, food, housing)	global cond. ↓ Environ-mental stress ↑ nation. cond.	**disaster** conflict avoidance ↗↗ → **Crisis** ↘↘ **migration** **conflict**

4. Three Stages of Research on Environmental Security (1983 - 2004)

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

5. 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**
  - **Broaden research stakeholders: Bring together those working on human & environmental security issues with the peace research, development, environmental research communities.**
  - **Broaden empirical focus: on six causes of the Survival Hexagon & interactions (nat. sciences: simulation techniques, modelling).**
  - **Focus on fatal outcomes & interactions: disaster, migration, crises, conflict & efforts for resolution, prevention & avoidance.**
  - **Broaden policy constituency: climate change, disaster & early warning (disaster & conflict) & conflict prevention community.**
  - **Support mainstreaming of policy initiatives: early warning, adaptation & mitigation & conflict prevention,**
  - Requires: Multidisciplinarity & horizontal cooperation

5.1. 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

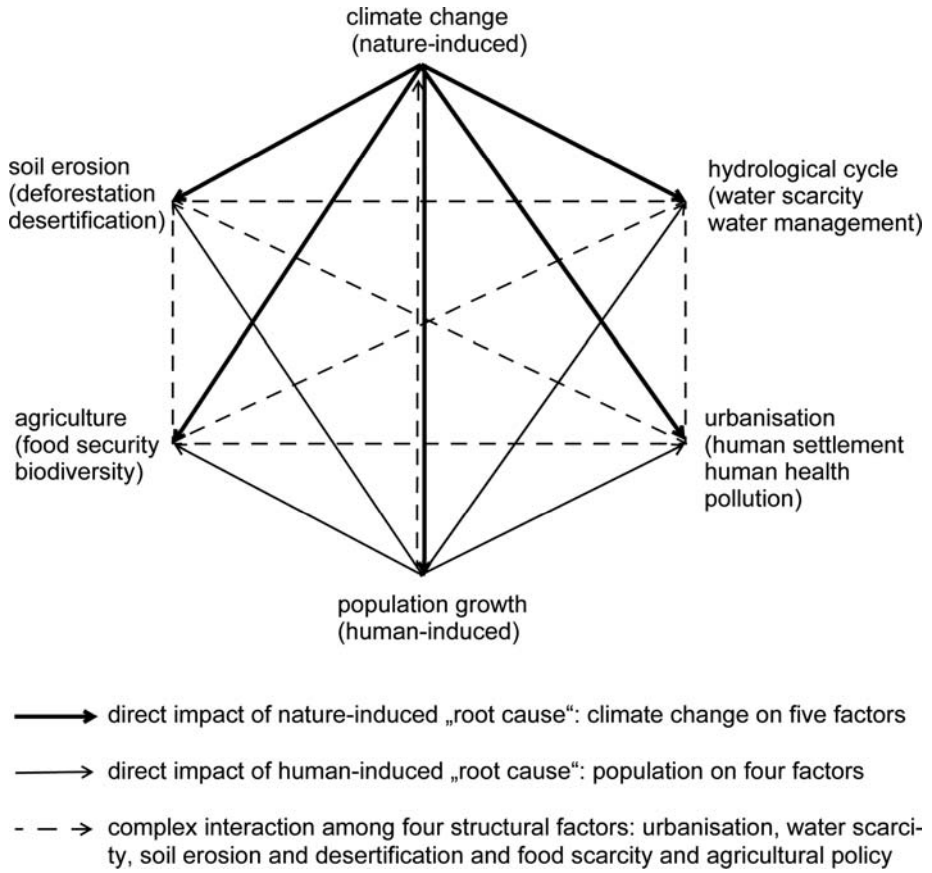
- Environmental security challenges were so far no human security concern (missing on agenda of Human Security Network, but also in HSC: Human Security Now).

Peace Research

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

5.2. Broaden Empirical Focus on Causes of Global Change: Survival Hexagon & Interactions (Simulation Techniques, Modelling)

Survival Hexagon: 6 factors



Six key causes of GEC:

Nature & human-induced

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

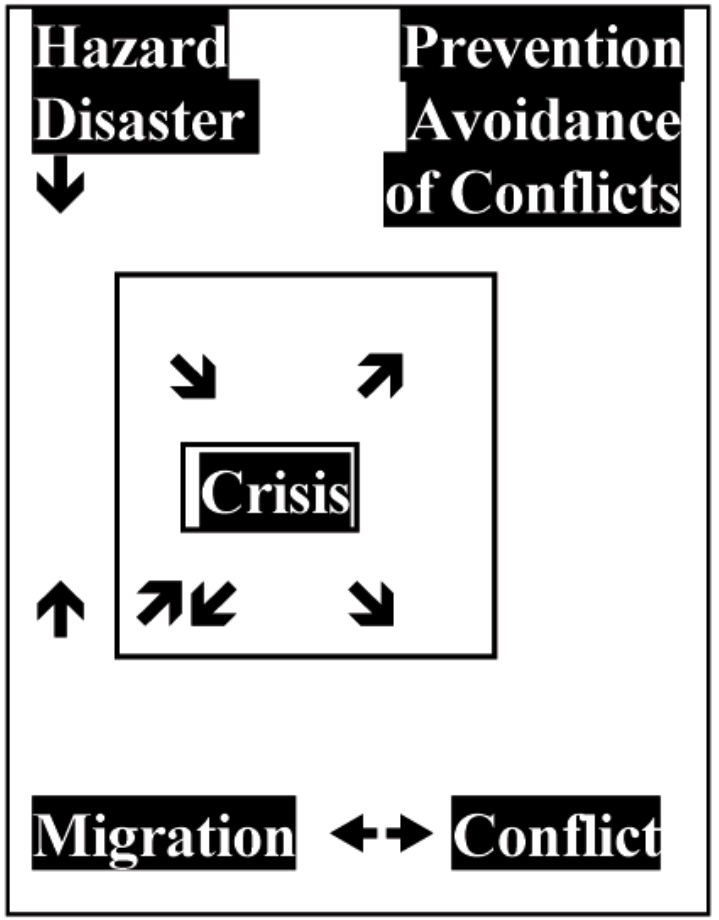
Human-induced factors

- **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.)

5.3. Focus on fatal outcomes & interactions of disaster, migration, crises, conflict & efforts for resolution, prevention & avoidance



Much knowledge on four factors:

- ✓ **Hazards, migration, crises, conflicts**

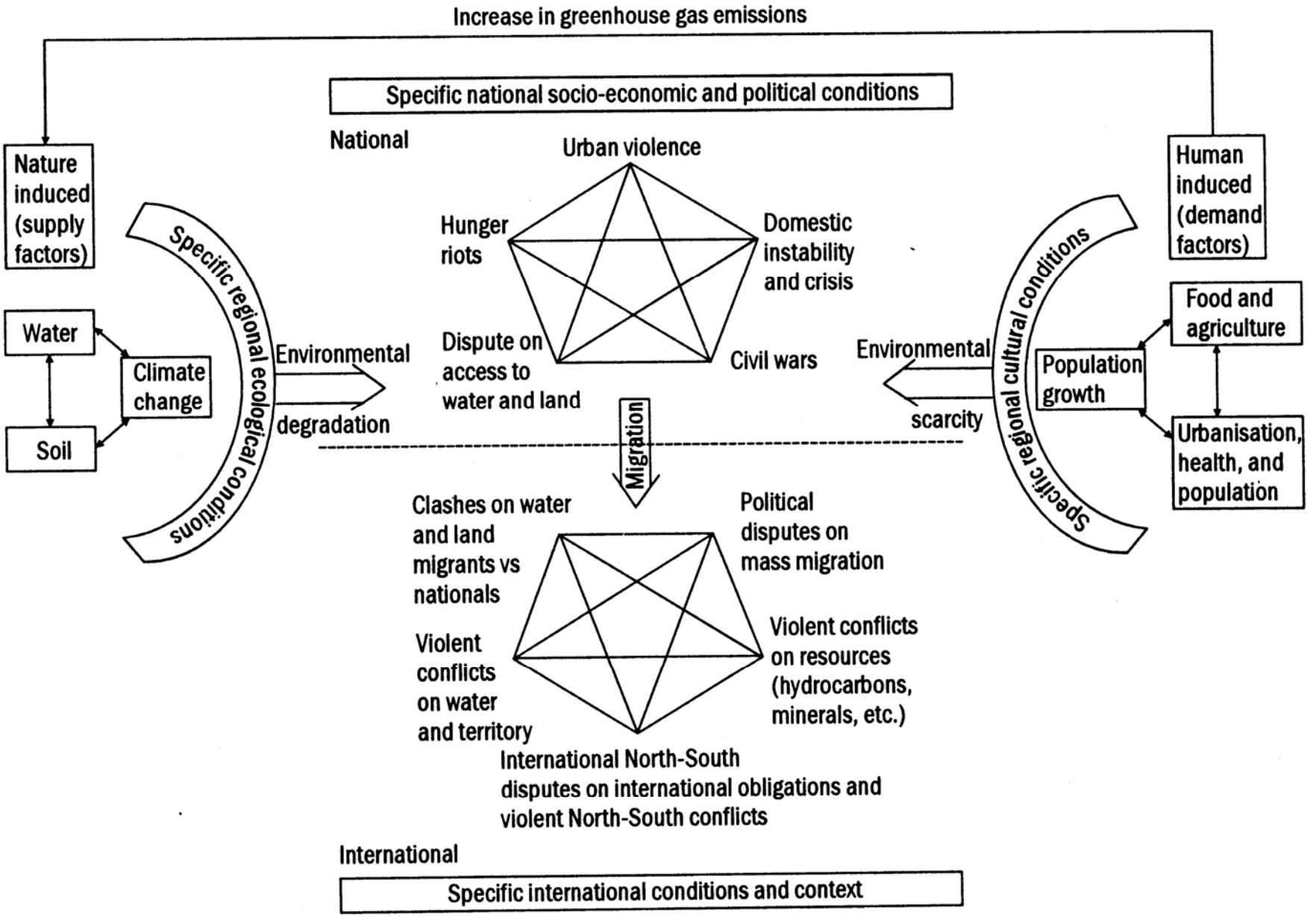
Lack of knowledge on linkages among fatal outcomes

- ➢ **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**

5.4. Types of Low-level Violence & Conflicts



5.5. Diagnosis: Co-occurence among Outcomes

Decision Tool Based : ECHO-Human Needs Index (GINA, 2002)

	Country Ranking		I		II		III		IV	
	Priority List of Humanitarian Needs	ODA Aver.	HDI	HPI	Natur disast	Con-flicts	Refu gees	IDP	Food need	Under 5
1	Burundi (Nile Basin)	2,857	3	x	2	3	3	3	3	3
2	Somalia	2,833	x	x	3	3	2	3	3	3
3	Ethiopia (Nile Basin)	2,625	3	3	3	2	3	1	3	3
4	Sudan (Nile Basin)	2,625	3	2	3	3	3	3	2	2
5	Angola	2,571	3	x	1	3	2	3	3	3
6	Afghanistan	2,500	x	x	3	3	1	2	3	3
7	Liberia	2,500	x	x	1	3	3	2	3	3
8	Rwanda (Nile Basin)	2,500	3	3	2	3	3	0	3	3
9	Bangladesh	2,375	3	3	3	2	2	2	2	2

5.6. Increase in Human Disasters and 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 vulnerabilty).

5.7. 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 Minístries**
- **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: coordin.**

6. Goals for the 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 occur-ring, to contribute to **regional environmental good governance.**

7. 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.

8. Goals of Two Early Warning Efforts of Hazards/Disasters and Conflicts

Threat	of hazards and disasters	of crises and conflicts
Types	**Earthquake, volcanic eruption, tsunami, hurricane, flood, drought, fire, disease, epidemic**	**Social & economic, ethno-religious crisis, urban violence, disputes on access to water & food, hunger riots, civil wars, disputes on mass migration & scarce resources**
Goal	**J.C. Scott** (1999): "to empower **individuals and communities**, threatened by natural or similar hazards, to act in **sufficient time** and in an appropriate manner so as to **reduce** the possibility of **personal injury, loss of life and damage to property, or to fragile environments**"	**Swisspeace (FAST):** "to recognize crucial political developments in the countries monitored in **a timely manner**, thus enabling decision makers to take measures to **prevent violent escalation of conflicts or at least to attenuate their consequences**. … to provide a database [on] the political situation, conflict and cooperation … to forecast … developments.
Tool	**Technical systems**	**Political procedures & processes**

8.1. Institutional Efforts to Improve Early Warning of Disasters and Conflicts

Level	of hazards and disasters	of crises and conflicts
Global	UN-ISDR, IATF 2 UNDP & UNEP	UN-SC, ORCI (1987-92), DPA, (HEWS), DPKO, OCHA; ECPS
Activity	EWC (1998), EWC2 (2003) Earth observation, hazard analysis, commun. technol.	SG: K. Annan Report 2002 UNHCR, IOM, UNICEF, FAO, WHO. World Bank
Regional (EU-15)	DG Environment Cardiff Process: integration of environment into other sectoral policies	DG Relex Göteborg Process: integration of conflict prevention into regional EU policies
EU-Main-streaming Tools	Thessaloniki European Council, June 2003: Green Diplomacy Major Tool: Remote sensing in the framework of the EU-ESA initiative: Global Monitoring for Environment and Security	

Diagnosis: Hardly any interaction both in research & action between both early warning communities: Search for synergies needed.

9. 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:

a) Vertical: global – regional – national – local, e.g. UNISDR, EU

b) 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**

c) 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.

10. Environmental Conflict Avoidance: Addressing Causes & Fatal 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: a) ecosystem (environmental security); and b) individual & mankind (human security);**
- **Address the different causes of threat, challenge, vulnerability and risk: a) mankind (environm. security); and b) nature, state, globalisation (human securirty);**
- **We need sustainable development strategies (development, environment policies addressing 6 GEC-factors).**
- **We need survival strategies** (protection & empowerment).

10.1. The Human & Environmental Security and Peace Project (HESP)

- **Synthesis of four approaches:**

  a) environmental security debate (environmental 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:**

  a) HEXAGON Series on Human & Environmental Security and Peace Project (HESP) with Springer (Berlin – NY - London - Tokyo)
  - **vol. 1: Environment & Security in the Mediterranean (2001-2003)**
  - **vol. 2: Reconceptualisation of Security in 21st Century (2004-2006)**
  - **vol. 3: Global Environmental Change and Env. Conflict Avoidance (?)**
  - **vol. 4: Redefining Security Interests and Structures (2006-2008)**

  b) Context: GMOSS contributing to GMES (2008 operational)

10.2. Towards a New Transatlantic Debate on Security Concepts and Challenges

- **Transatlantic debate on objective & subjective security: on weapons of mass destruction & perception thereof**
- **Differences in mindsets & worldviews on perception of security threats, challenges, vulnerabilities and risks**
- **Different securitisation efforts, legitimation strategies & policy agendas by different policy & IR communities**
  - **Hard security agenda: weapons of mass destructions, rogue states and non-state actors: terrorists and criminal networks**
  - **Soft security agenda: environmental & human security debate**
- **New NATO CCMS & US-EPA Initiative (Valencia): *Desertification as a Security Issue: Dec. 2003***
- **Proposal: CCMS Study: *Environmental and Human Security Challenges & Environmental Conflict Avoidance***

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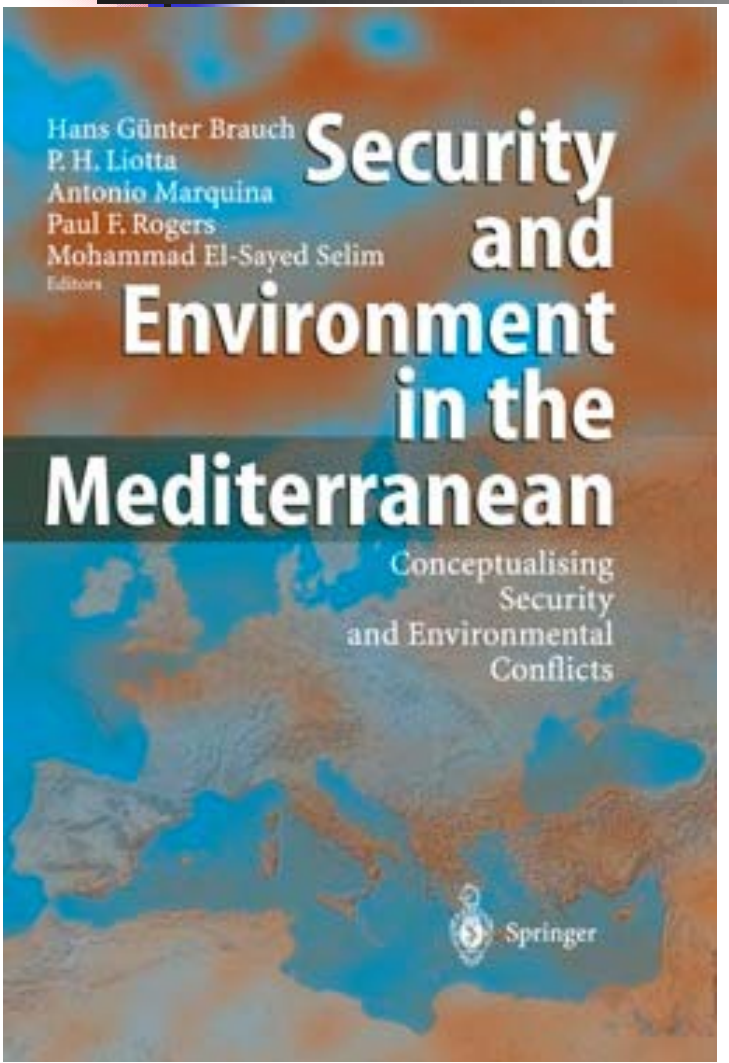

- **Brauch: *Climate Change and Conflics* (Berlin: BMU 2002) (http://www.bmu.de/en/800/js/download/b_climges/)**
- **Brauch-Liotta-Marquina-Rogers-Selim (Eds.): *Security and Environment in the Mediterranean* (Berlin – New York – Paris – London -Milan: Springer 2003) (http://www.afes-press.de/_html/_bk_book_of_year.html)**
- **Next workshop: The Hague,9-11 Sept. 2004: Reconceptualising Security in an Era of Globalisation (5th Paneuro-pean Conference on Int. Relations)**

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