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

9th Session, part 2, Tuesday 5 November 2013

Climate Change and Human Security

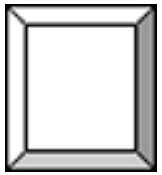
Hans Günter Brauch

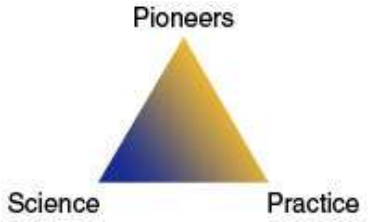
Adj. Prof., Free University of Berlin (Germany) ret.
Chairman, Peace Research and European security Studies (AFES-PRESS)

Hexagon Series on Human, Environmental Security and Peace

Springer Briefs in Environment, Security, Development & Peace

SpringerBriefs on Pioneers in Science & Practice





Reading Texts (5 November 2013)

39. **Brauch, Hans Günter, 2009: "Securitzing Global Environmental Change", in: Brauch, Hans Günter et al. (Eds.): *Facing Global Environ-mental Change: Environmental, Human, Energy, Food, Health and Water Security Con-cepts* (Berlin: Sprin-ger: 65-102.**
40. **Saroar, Md. Mustafa; Routray, Jayant K., 2012: "Climate Awareness and Adaptation Efficacy for Livelihood Security against Sea Level Rise in Coastal Bangladesh", in: Scheffran, Jürgen; et al. (Eds.): *Climate Change, Human Security and Violent Conflict: Challenges for Societal Stability* (Berlin: Springer): 575-594.**
41. United Nations, 2009: *Report of the Secretary General: Climate Change and Security* (New York: UN, 11 September 2009)
42. Brauch, Hans Günter; Scheffran, Jürgen, 2012: "Introduction", in: Scheffran, Jürgen; et al. (Eds.): *Climate Change, Human Security and Violent Conflict: Challenges for Societal Stability* (Berlin: Springer): 3-40.

Optional Additional Texts

39. WBGU, 2008: *World in Transition – Climate Change as a Security Risk* (London: Earthscan); at: <http://www.wbgu.de/wbgu_jg2007_engl.html >.
40. IPCC, 2013: *Fifth Assessment Report – Synthesis Report* (Geneva. IPCC; 27 September).

Goal

- What is the IPCC that was set up in December 1988?
- What have been the results of its five Assessment Reports, their policy relevance & impact?
- What is the status of the peer-reviewed scientific licterature on climate change WG 1 of AR5 of September 2013?
- How has global climate change been securitized and what have been the three distinct debates?
- What are potential climate change impacts for SE Asia and their security relevance for human security?

Programme, 5 November 2013

Part 1: 9.00-10.00: Discussion of Texts

- Presentation by Maura Cusack (Ireland)
- Zar Ni Maung (Myanmar)

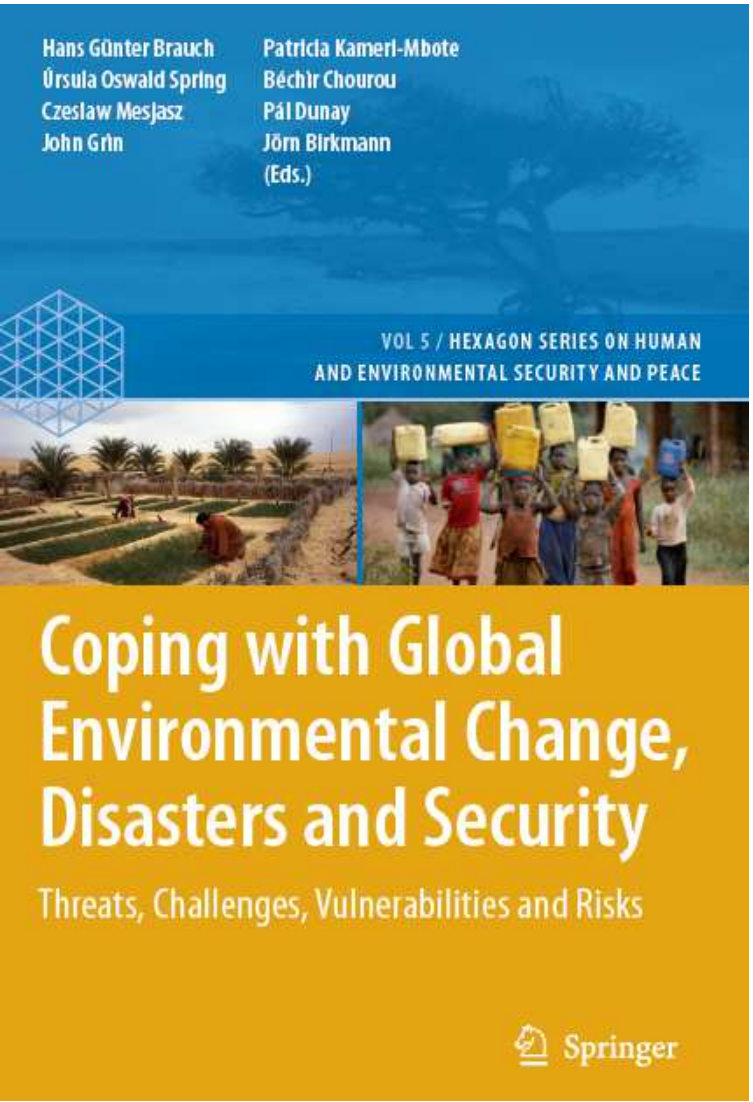
Part 2: 10.00-11.00: Lecture 9 and discussion

- Ursula Oswald Spring
- Hans Günter Brauch

Part 3: 11.00-12.00: Discussion country case

- Rebecca Carden (United Kingdom)

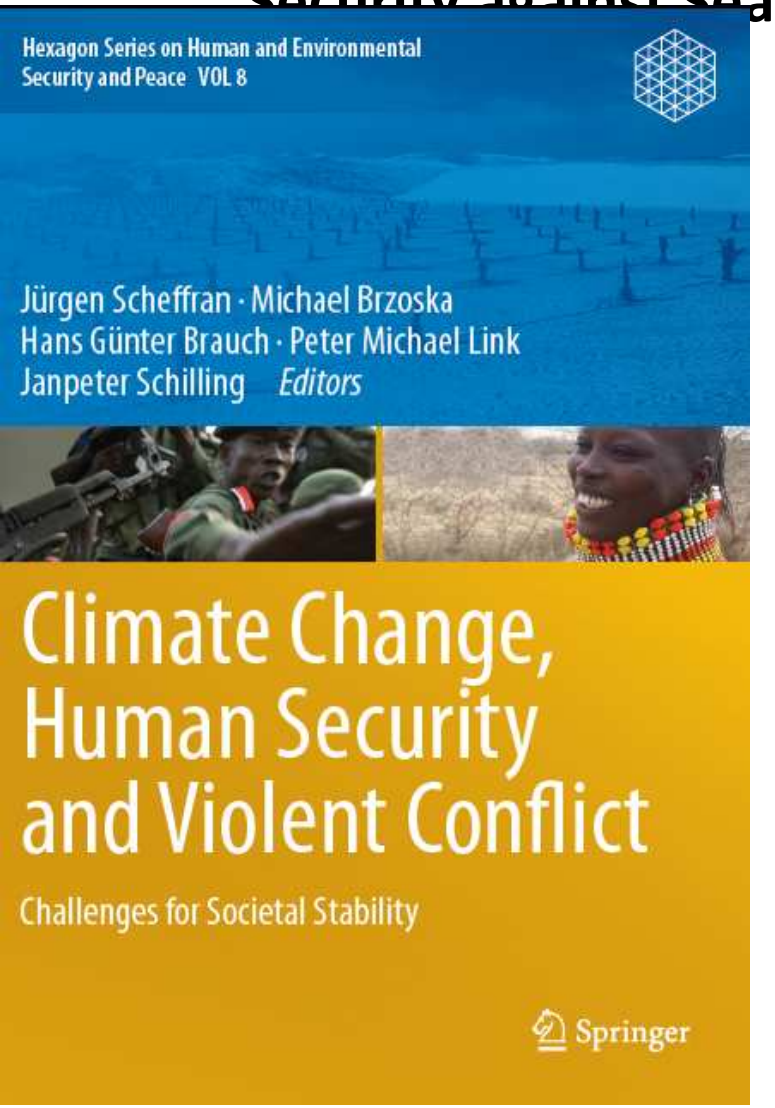
Text 39: Brauch, Hans Günter, 2009: "Securitzing Global Environmental Change",



- What is the thesis of this chapter?
- The PEISOR Model
- Securitization of Soc. Outcomes
- Securitizing GEC
- Epistemic Community (IPCC) as a securitizing actor?
- Securitizing GEC
  - Water, climate change, desertification
  - GCC as an international, national and human security danger/concern

Text 40: Saroar, Md. Mustafa; Routray, Jayant K., 2012:

"Climate Awareness and Adaptation Efficacy for Livelihood Security against Sea Level Rise in Coastal Bangladesh"



- Sea-level rise in Bangladesh?
- Study hyothesis
- Study design
- Framing the Sample
- Local perception analysis
  - SL Rise & impact of disasters
- Policy implications

Text 41: United Nations, 2009: *Report of the Secretary General: Climate Change and Security*

United Nations A/64/350

General Assembly

Distr.: General
11 September 2009

Original: English

Sixty-fourth session
Item 114 of the provisional agenda*
Follow-up to the outcome of the Millennium Summit

Climate change and its possible security implications

Report of the Secretary-General**

Summary

Both governmental views and relevant research on the security implications of climate change, by and large, approach the question from a perspective of interdependence between human vulnerability and national security. They identify five channels through which climate change could affect security:

(a) **Vulnerability**: climate change threatens food security and human health, and increases human exposure to extreme events;

(b) **Development**: if climate change results in slowing down or reversing the development process, this will exacerbate vulnerability and could undermine the capacity of States to maintain stability;

(c) **Coping and security**: migration, competition over natural resources and other coping responses of households and communities faced with climate-related threats could increase the risk of domestic conflict as well as have international repercussions;

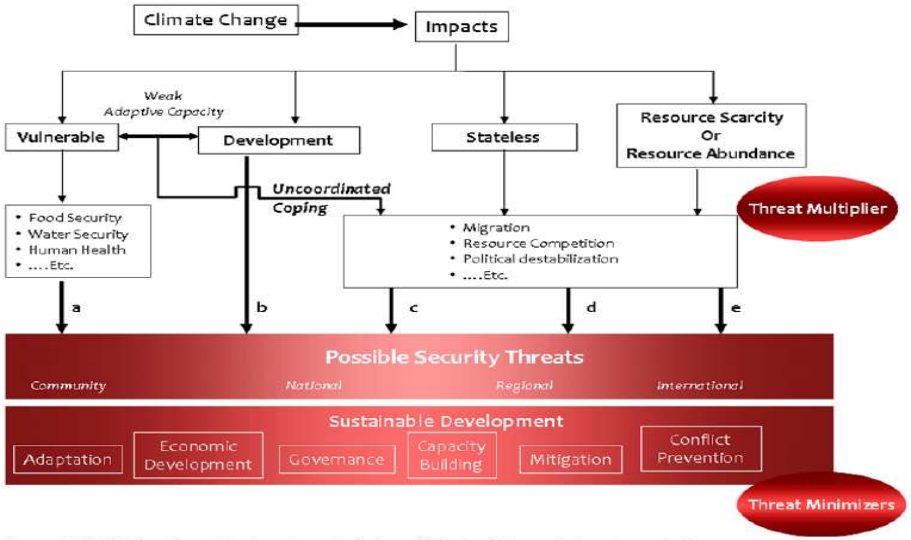
(d) **Statelessness**: there are implications for rights, security, and sovereignty of the loss of statehood because of the disappearance of territory;

(e) **International conflict**: there may be implications for international cooperation from climate change's impact on shared or undemarcated international resources.

* A/64/150 and Corr.1.

** The delay in the submission of the present report was due to extensive gathering of views of Member States and United Nations organizations on which the report is based in a short period of time between the adoption of the resolution mandating the report (3 June 2009) and the submission date.

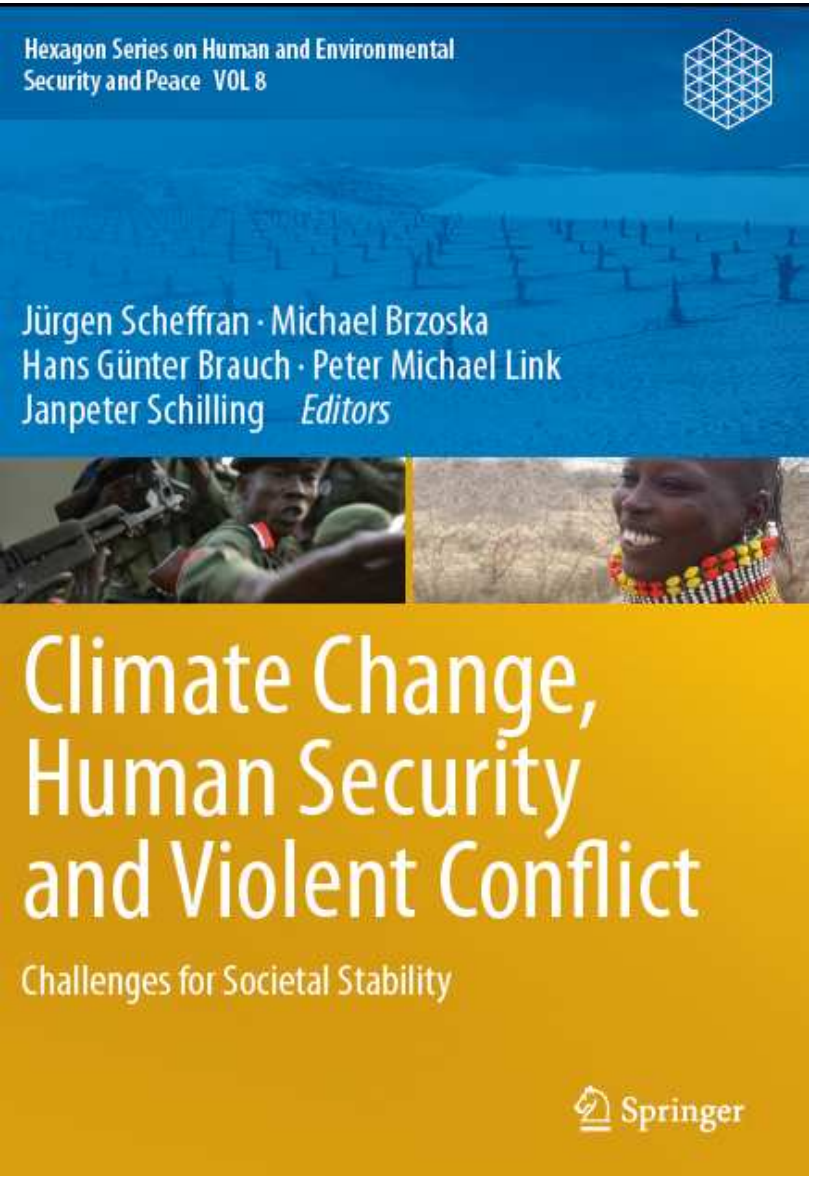
Threat multipliers and threat minimizers: the five channels



Source: United Nations Secretariat, based on submissions of Member States and relevant organizations.

Text 42: Brauch, Hans Günter; Scheffran, Jürgen, 2012:

"Introduction", in: Scheffran, Jürgen; et al. (Eds.): Climate Change, Human Security and Violent Conflict: Challenges for Societal Stability (Berlin: Springer): 3-40.



1.2. Discourse on CC, HS & Violent conflict

1.3 CC and national security

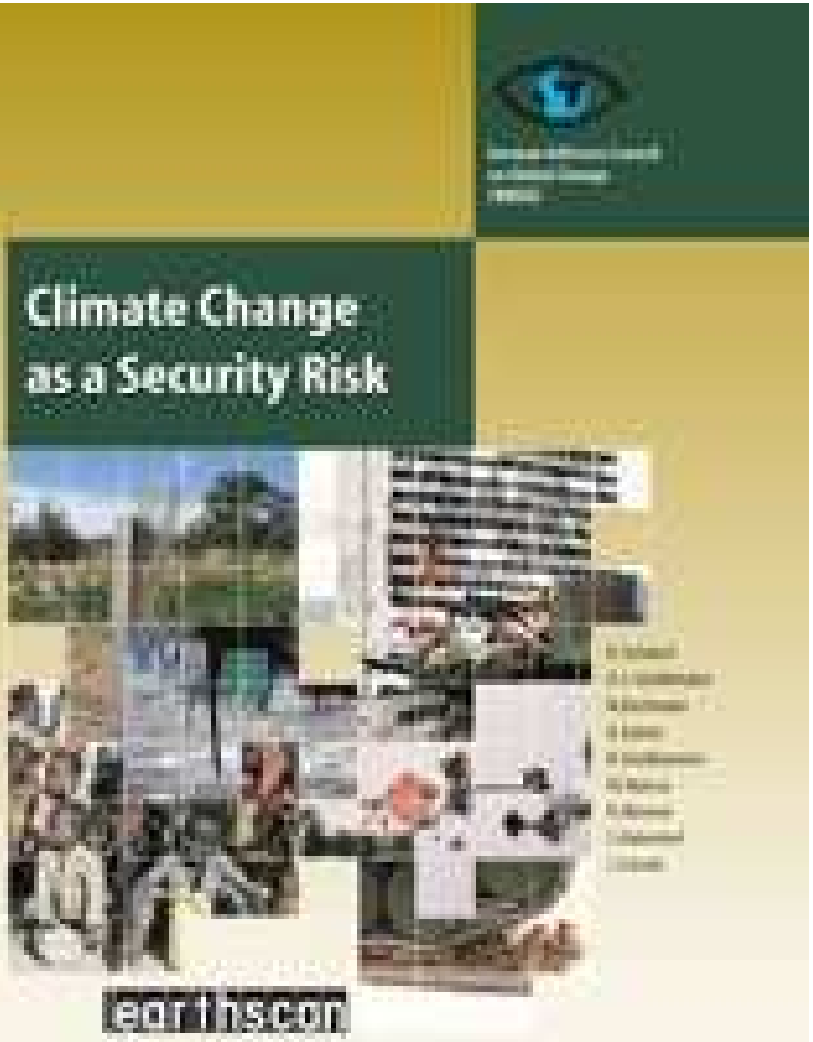
- CC and international security
- Human security discourses
- 1.5 Environm. dimension of HS

1.4.Concepts & approaches of climate security

- Risk society & causal linkage

1.5. Structure of the book

Text 43: WBGU, 2008: *World in Transition – Climate Change as a Security Risk* (London: Earthscan).



- Context: German dual presidency of EU & G8
- Scientific advisory council on global change, June 2007
- Taken up by EU
- EU Com. & Council. 3/2008
- Interregional discussion with ASEAN (Laos, Brussels)
- 4 conflict constellations
  - 1 water, 2 food
  - 3 hazards, 4 migration

Text 44: IPCC, 2013: *Fifth Assessment Report – Synthesis Report* (Geneva. IPCC; 27 September).

- WG 1: adopted in September 2013
- The whole 2500 page report may be downloaded at:
- http://www.ipcc.ch/
  - http://www.ipcc-wg1.ch/
  - http://www.ipcc-wg2.gov/
  - http://www.ipcc-wg3.de/

Contents

1. Introduction:
Two Discourses & Research Questions

- Objectively Global Environmental Change (GEC) & Climate Change has been a challenge for humankind since eternity
- Since the 1970s Global Environmental Change & Climate Change is perceived as a scientific, political & security problem
- GEC was discussed as a security issue since 1988 & 2002
- Since 2007 it was addressed in the UN‘s security council (2007, 2011), in the UN General Assembly (2009) and in a report of the Secretary General on **CC & Security** of 11 Sept. 2009
- This report referred to two discourses CC as a threat maximizer (security) and a threat minimizer (sustainable development)
- This talk will review both discourses and review the global policy and scientific debates on CC and international, national & human security (IPCC, 5th Assessment Report, II, 12 (2014)

2. Stages of Emergence of Global Environmental & Climate Change: Scientization, Politicization & Securitization

- Since 1970/80s: '*global environmental change*' (GEC) a new topic in natural and social sciences **(scientization)**
- Since late 1980s & 1990s policy efforts on **(politicization):**
  - Climate Change: 1988: issue of G7; 1990: UN GA mandate; 1992: Rio summit: UNFCC (1992) and Kyoto Protocol (1997)
  - Desertification: UNCCD (1994), water (WWF, GWP, WWW)
- Since 2000: GEC as security issues (securitization)
  - Since 2002: climate change seen as a security threat/risk
  - Valencia: 2003: NATO Conference: Desertification as a security issue in the Mediterranean
- Since 2007: two debates on climate change & security
  - **UN & EU Debates: climate change and international security**
  - **US debate on climate change: new threats for US national security**

2.1. Scientization: Climate Change as a Scientific Problem

- ***Anthropogenic Climate Change as* a research question**: from hypothesis to scientific mainstream
  - **Tyndall (1860s): Projection of greenhouse gases in atmosphere**
  - **Svante Arrhenius** (1896) Theory: Linkage between burning of hydrocarbons and increase of greenhouse gases in at.
  - **Since 1971** scientific climate conferences
  - **1979: 1st** world climate conference,
  - **1988:** Initiation: climate research & assessment
    - World Climate Research programme was formed
    - IPCC was established by UN General Assembly
  - **1992:** UN Framework Convention on Clim. Change
  - **2009: 3rd** world climate conference

2.2. Politicization: Climate Change as a Political Problem

- **Environment: Stockholm 1972: Start of environment as pol. issue**
  - **UNEP was set up in Nairobi**
  - **Rich countries problems (?) debate on additionality**
- **1992: Rio de Janeiro: UN Conference on Environment and Development in**
  - **UNFCC: United Nations Framework convention on Climate Change**
  - **UN CBD: United Nations Convention on Biological Diversity**
  - **Mandate for UNCCD: UN Convention to Combat Desertification**
- **2000: Millennium Development Goals**
- **2002: Johannesburg: UNSSD: UN Summit on Sustainable Developm.**
- **As political Task** (1988-2009):
  - **1988: US Reagan Administration: climate change on G-7 Agenda**
  - **UN-GA Mandate for IPCC & negotiations for UNFCCC (1992) that was signed at Earth summit in Rio de Janeiro**
  - **Berliner Mandate (COP 1) for negotiation of the Kyoto Protocol (1997)**
  - **Kyoto Protocol of 1997 was only partly implemented**
  - **COP 15 (December 2009) in Copenhagen: post 2012 CC regime**

2.3. Securitization: Climate Change as a Security Danger

Securitization: declaring something as an issue of utmost importance that requires extraordinary measures

Who is the securitizing actor?

- **scientific study? media? government (policy maker)**
- **audience: we must be convinced**

Scientific debate started in 1989 (Brown, Gleick), 2000

2007 became a turning point

- ***Intergovernmental Panel on Climate Change*** **(IPCC)** released its *Fourth Assessment Report* (AR4) in 2007: 4 reports
- April 2007: UN Security Council: UK: Foreign Minister Beckett
- WBGU-Report: June 2007: German dual presidency: G-7 and of the EU
- EU-Council, Solana and commission tasked to study this issue
- October-Dec. 2007, Nobel Peace prize to IPCCC (Pachauri), Al Gore
- 2008: EU Paper and European Security Strategy
- June 2009. UN General Assembly: Pacifoc Small Island Developing States
- September 2009: Report of Sec. Gen. Ban-Ki Moon

3 PEISOR Model: Linking Global Environmenta Change with Environmental Effects, Impacts, Societal Outcomes and Policy Responses

PEISOR: Result of pressure and response models and of debates on environmental security and on natural hazards.

The PEISOR model combines five stages:

- ***P* (*pressure*)** refers to 6-8 drivers of global environmental change
- ***E* to the *effects*** of the linear, non-linear or chaotic interactions within the 'hexagon' on environmental scarcity, degradation, and stress;
- ***I* to extreme or fatal *impacts*** of human-induced and climate-related natural hazards (storms, flash floods, flooding, landslides, drought);
- ***SO* to *societal outcomes***: internal displacement, migration, urbanization, crises, conflicts, state failure, and
- **R to *response* by society**, business community, state where both traditional & modern technological knowledge can make a difference.

Hazards cannot be prevented, their **impact** in terms of deaths, affected people, economic & insured damages can be reduced by policies & measures that link protection with empowerment of the people to become more resilient.

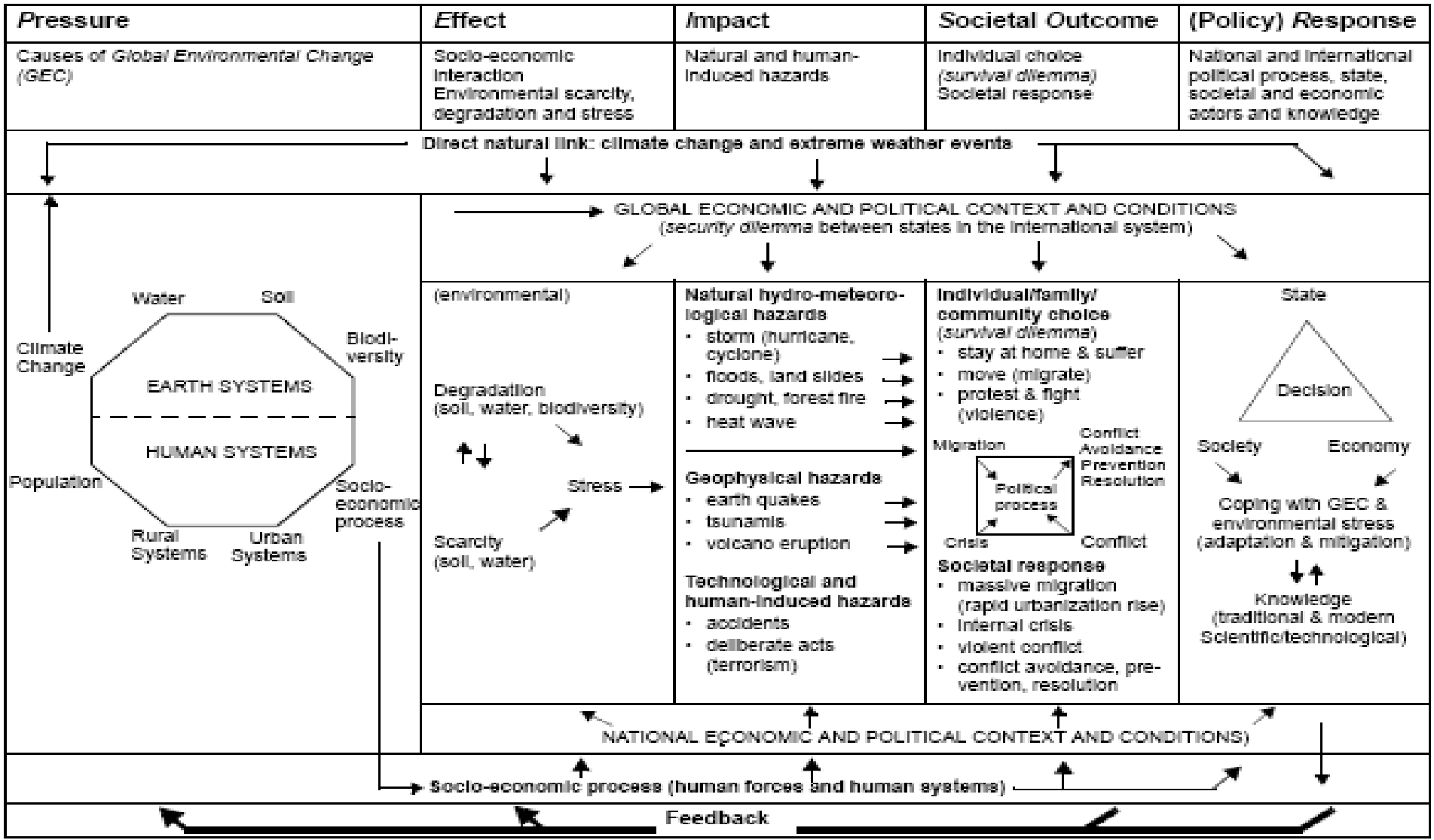
Workshop: P: Urban Climate Change; R: Community Resilience

3.1. PEISOR Model on Climate Change: Geophysical Effects & Societal Outcomes

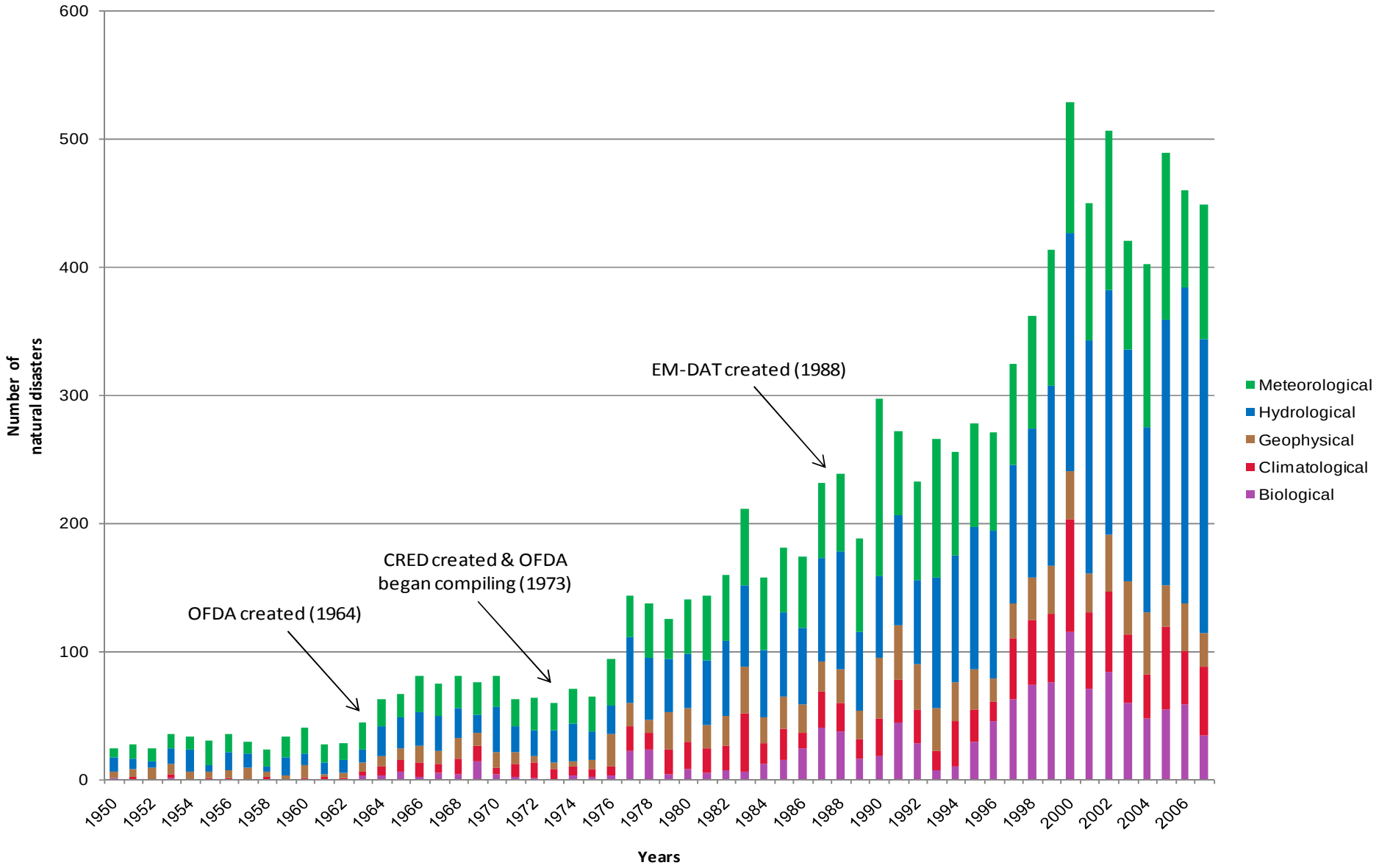
- **4 geophysical effects will most likely increase**
  - Temperature change (2°C stabilization goal by 2100??)
  - Sea-level Rise much higher and longer lasting (threat)
  - Precipiation change (impact on drought, food security)
  - Increase in hydro-meteorological, climatological hazards

  Likelihood of crossing tipping points in climate system may rise
- **2°C world increasingly unlikely, 4°-6°C world more probable: dangerous,catastrophic Climate Change**
  - People‘s movement (displacement, distress migration)
  - Domestic, regional crisis & violent conflicts may increase
- **How to analyse these changes: models?**

3.2 Global Environmental Change & Impacts: PEISOR Model

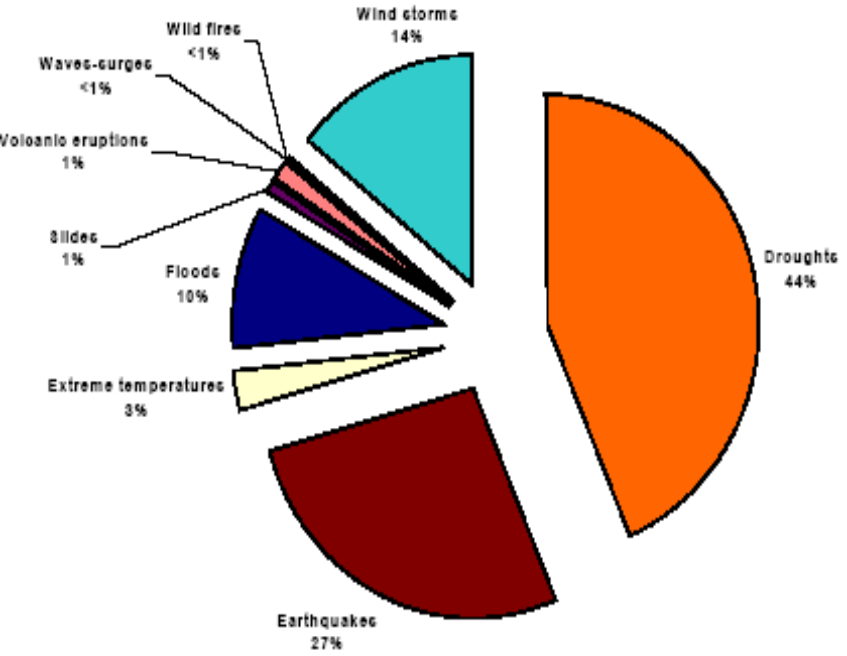


3.3. Change in Hydro-meteorological Hazards. Source: Guha-Sapir (2010)



3.4. Impacts of Hazards (1974-2003)

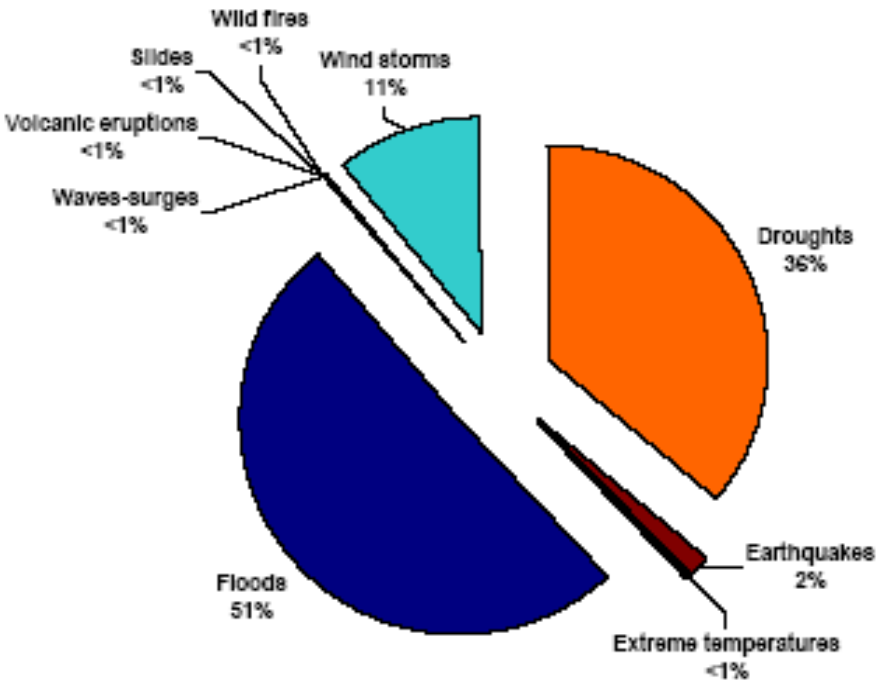
Reported death of natural hazards globally: 2.066.273 persons



Source: Hoyois/Guha-Sapir (2004)

- **Affected persons of natural hazards:**

  5 076 494 541 persons

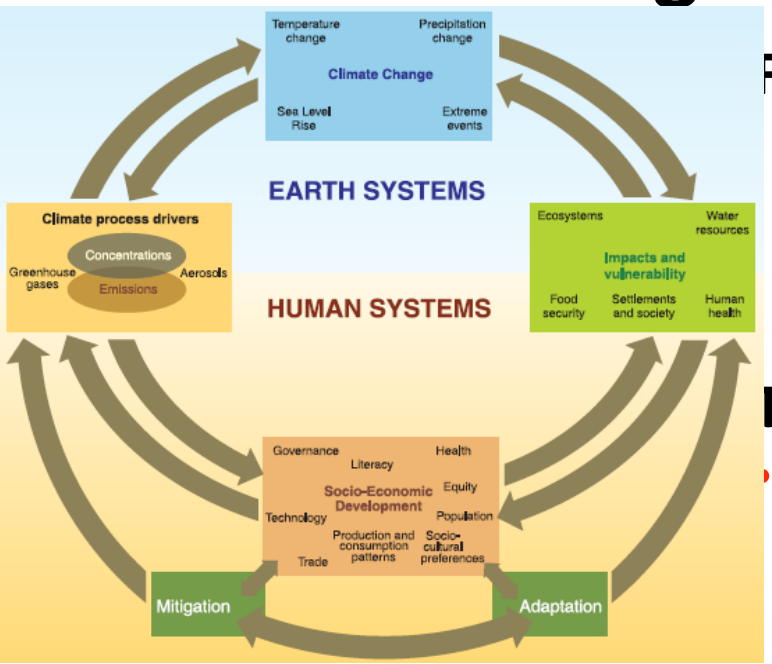


(1) injured + homeless + affected

3.4. R Policy Response to Security Dangers posed by Global Environmental Change: Object

- **How? Responsive vs. proactive action**
  - **Response:** cost of non-action (Stern Report)
  - **Proactive:** anticipatory knowledge, learning, action
- **What? Addressing causes (Pressure)**
  - **Earth system:** environmental quartett
  - **Human:** productive/consumptive behaviour
- **Responding to Effects & Impacts**
  - **Environmental stress**
  - **Climate-related natural hazards**
- **Addressing Societal Outcomes:** Migration/Conflicts

4. Addressing Linkages of Global Climate Change and Security



Objects of Security Analysis (Securitization)

- Physical Effects: e.g. temp, rise
- Impacts: Sectors & Regions
- Societal Effects (migration, crises, conflicts

Whether they pose:

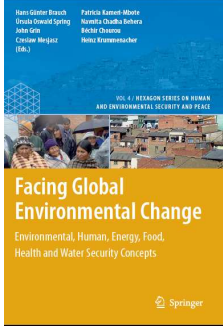
- **Objective Security Dangers**
- **Subjective Security Concerns**

Four Schools

- Dramatizers: Climate wars
- Sceptics: lack of research (PRIO)
- **Empiricists: PEISOR Model & linkages**
- Trend & future scenarios

Two Approaches

- **Causal analysis**
  - Natural phenomena -> migration, crises, conflicts (violence)
    - 2nd phase: Homer-Dixon, Bächler
    - 4th phase: Oswald – Brauch - Dalby
- **Discourse analysis:** climate change (chapter 4 of this volume)
  - International security
  - National security
  - Environmental security
  - Human security



4.1. First Discourse: Securitization of Climate Change - Three Security Policy Debates

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:

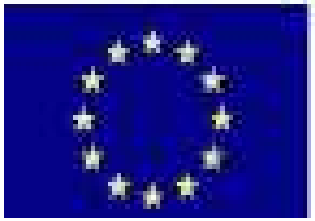
- **US studies:** CNA, CSIS, NIC (CIA), NSS 2010

Climate change & human security discourse

- IHDP (GECHS): Lonergan & Brklacich (chairnen)
  - 2005: conference in Norway on Cliamte 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**

4.2. EU Paper: Climate Change & International Security (3/2008)



- **Climate change … as a threat multiplier of existing trends, tensions and Instability, that overburdens fragile and conflict prone states and regions**
- **Seven international security threats from climate change**:
  - 1) Resource conflicts (Water, soil, food);
  - 2) Economic damage and risks for coastal cities;
  - 3) Loss of territory and border conflicts;
  - 4) Environmentally-induced migration;
  - 5) Situations of fragility and radicalization
  - 6) Tensions on energy supply
  - 7) Pressure on international politics
- **Regions, where these threats become manifest**
  - Africa, Middle East, South Asia; Central Asia, Latin America, Arctic.
- **Central challenge: Environmental Migration**
- **December 2008: Implementation paper of ESS (2003)**
- **Roadmap Process: DG External Relations not DG Environment**

5. Regional Relevance for ASEAN Region

What are possible security impacts of 4 physical effects for ASEAN?

- Temperature
- Sea level rise
- Precipitation
- Natural hazards

What are likely conflict constel-lations?

What should be done jointly to avoid/prevent security threats for the region, 10 states, people and human beings?

5.1. ASEAN REGIONAL FORUM

Seminar on International Security Implications of Climate Change

Brussels, 18-19 November 2010

Session 2.1: Challenges, Threats, Risks related to Climate Change

Session 3.2: The Way Forward: A View From Civil Society

10. Potential Societal Impacts of the Physical Effects of Climate Change

Hans Günter Brauch

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Freie Universität Berlin

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5.2. Population Change in SE Asia (1950-2050)
Source: UN Populations Division (2009)

Countries	1950	2010	2030	2050
Brunei	48,000	407,000	547,000	658,000
Cambodia	4,346,000	15,053,000	20,100,000	23,795,000
Indonesia	77,152,000	232,517,000	271,485,000	288,110,000
Laos	1,666,000	6,436,000	8,854,000	10,744,000
Malaysia	6,110,000	27,914,000	35,275,000	39,664,000
Myanmar	17,158,000	50,496,000	59,353,000	63,373,000
Philippines	19,996,000	93,617,000	124,384,000	146,156,000
Singapore	1,022,000	4,837,000	5,460,000	5,221,000
Thailand	20,607,000	68,139,000	73,462,000	73,361,000
Vietnam	27,367,000	89,0029,000	105,447,000	111,666,000
SE Asia	175,905,000	589,615,000	706,492,000	765,966,000

5.3. National Communications on Climate Change of ASEAN countries (2010)

Countries	First (1-4)	UN-SG R.	IPCC,2001	IPCC,2007
Brunei	None		WG I & II: There are only very general references on tropical Asia but none on ASEAN and its two subregions **North:** Mekong River countries: Myanmar, Thailand, Laos, Cambodia, Vietnam **South:** Malaysia, Singapore, Indonesia, Brunei, Philippines	
Cambodia	8.10.2002			
Indonesia	27.10.1999	CCIS, 2009		
Laos	2.11.2000			
Malaysia	22.8.2000			
Myanmar	None			
Philippines	19.5.2000			
Singapore	21.8.2000			
Thailand	13.11.2000			
Vietnam	3.12.2003			

5.4. IPCC: Temperature Increase & Precipitation Change TAR (2001) AR4 (2007)

TAR (2001) Temperature Change (℃), p. 546

2020s			2050s			2080s			The values are below the averages for Asia & South Asia
Annual	Winter	Summer	Annual	Winter	Summer	Annual	Winter	Summer	
1.05	1.12	1.01	2.15	2.28	2.01	3.03	3.23	2.82	

TAR (2001) Precipitation Change (%), p. 546

2020s			2050s			2080s			The values are below the averages for Asia & South Asia
Annual	Winter	Summer	Annual	Winter	Summer	Annual	Winter	Summer	
2.4	1.7	2.1	4.6	3.5	3.4	8,5	7.3	6.1	

AR4 (2007) Change in Temperature & Precipitation,p. 480

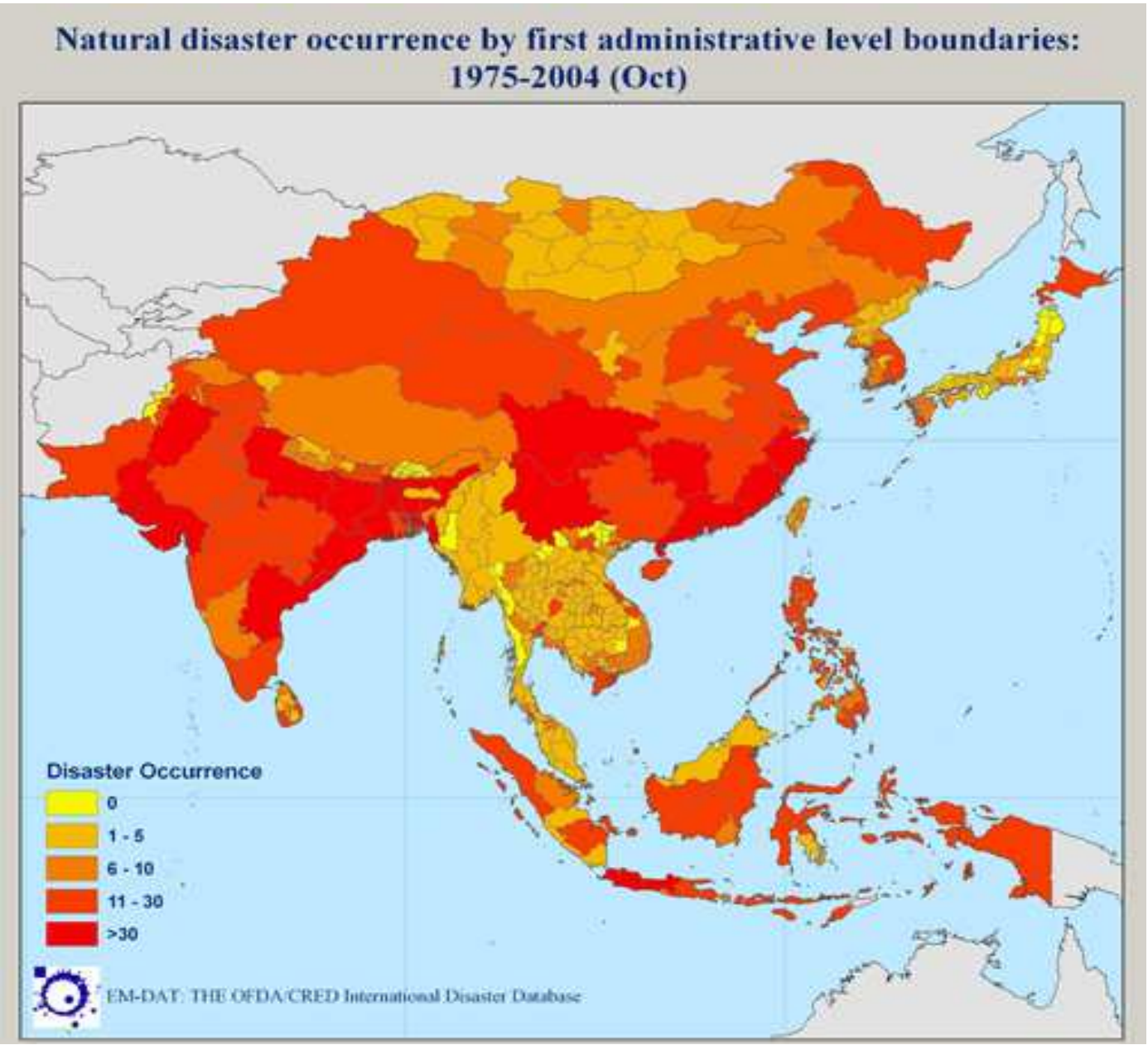
2010-2039				2040-2069				2070-2099			
Temperature		Precipitation		Temperature		Precipitation		Temperature		Precipitation	
A1FI	B1	A1FI	B1	A1FI	B1	A1FI	B1	A1FI	B1	A1FI	B1
0.86	0.72	-1	1	2.25	1.32	2	4	3.92	2.02	6	4

5.5. Sea Level Rise as a Security Threat? TAR (2001: p. 569)

Country	SLR (cm)	Potential land loss		Population exposed	
		km^2	%	million	%
Bangladesh	45	15,668	10.9	5.5	5.0
		29,846	20.7	14.8	13.5
India	100	5,763	0.4	7.1	0.8
Indonesia	60	34,000	1.9	2.0	1.1
Japan	50	1,412	0.4	2.9	2.3
Malaysia	100	7,000	2.1	>0.05	>0.3
Pakistan	20	1.700	0.2	n.a.	n.a.
Vietnam	100	40,000	12.1	17.1	23.1

Vietnam is the most vulnerable country to climate change due to sea-level rise in South East Asia. In South-East Asia food & fibre, biodiversity, coastal ecosystems, human health and land degradation are highly vulnerable to climate change while water resources and human settlements are moderately vulnerable.

5.96. Natural Disasters in Asia (EMDAT)

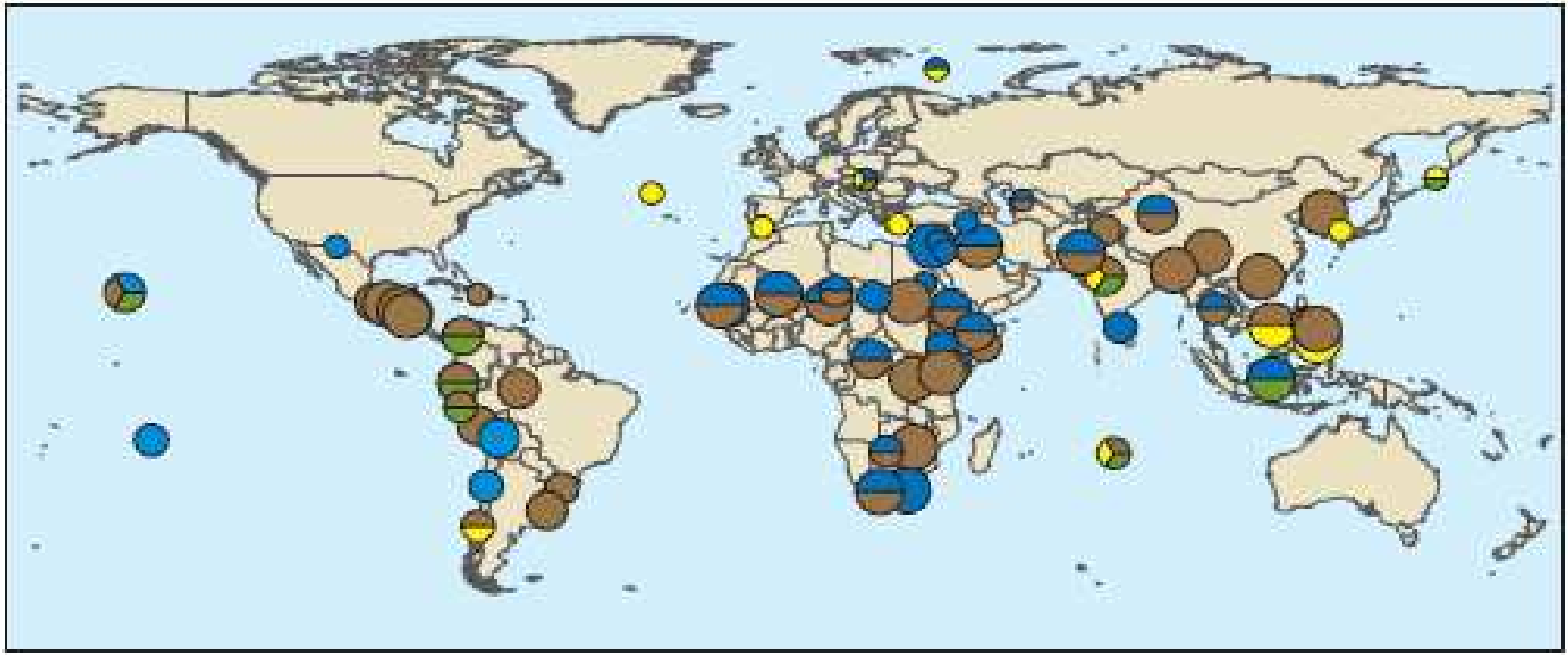


- SE Asia is not as highly affec-ted by disasters than South & East Asia.
- But the ASEAN countries have been affected by many severe storms, floods but also by droughts & by a projected decline in crop yields.

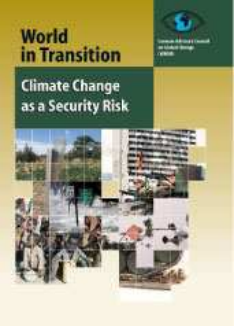
6. Potential Future Societal Impacts

- **Types of likely societal impacts:** migration, crises & conflicts and as a result: increased human insecurity
- While **structural trends (e.g. demography) can be projected** and climate impacts can be modelled, as **singular events both societal outcomes and political response cannot be predicted,**
- **Therefore conflict constellations may be construc-ted with some probability (Scientific Advisory Council on Global Change of the German Government [WBGU approach])**
- **Pathways to conflict may be assumed (Report of UN Secretary General, 11 September 2009)**

6.1. Environmental Conflicts: Water and Soil (1980-2006)

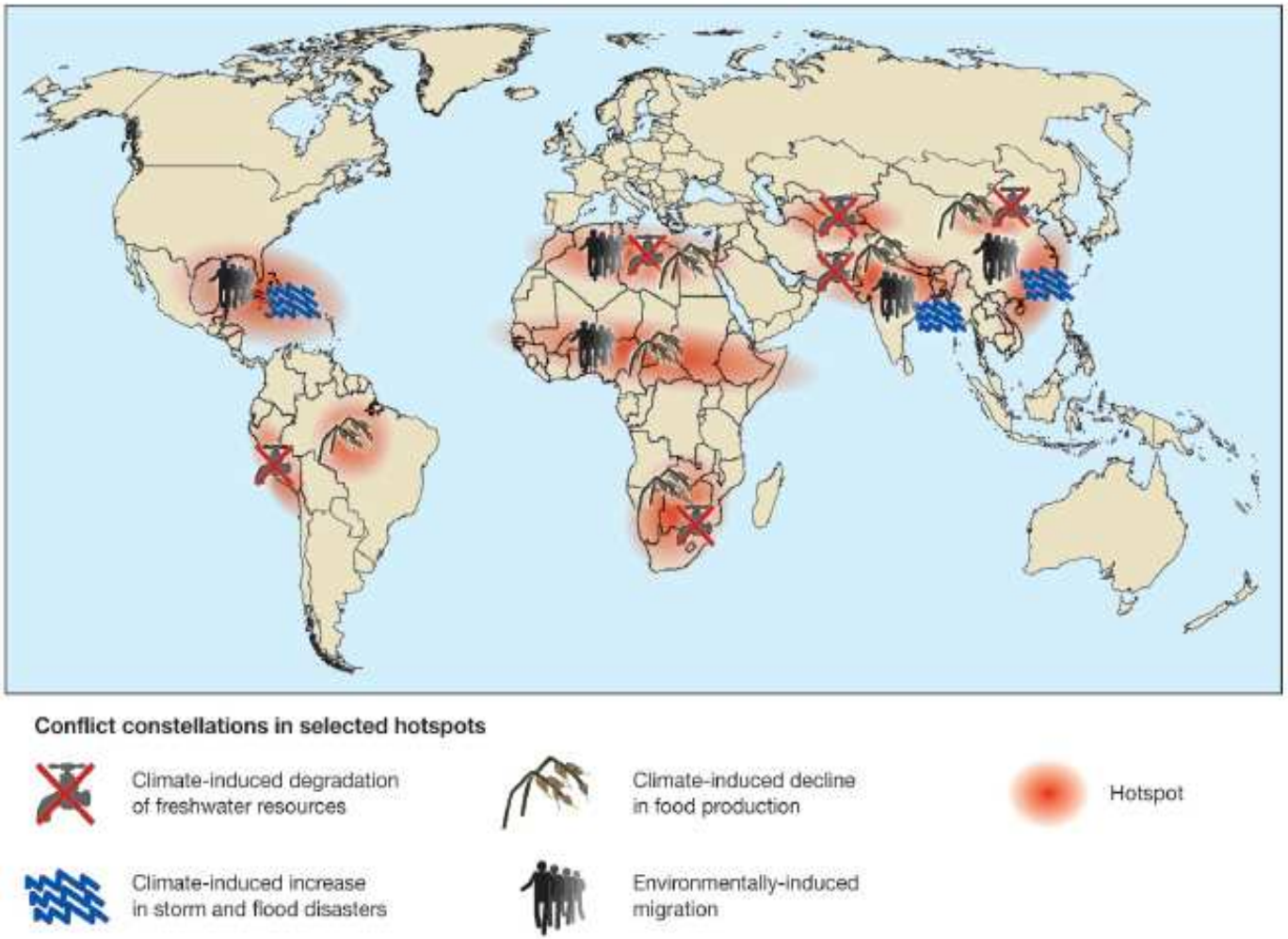


Source: WBGU (2008: 32)



6.2. WBGU-Study: Climate Hotspots: 4 Conflict Scenarios

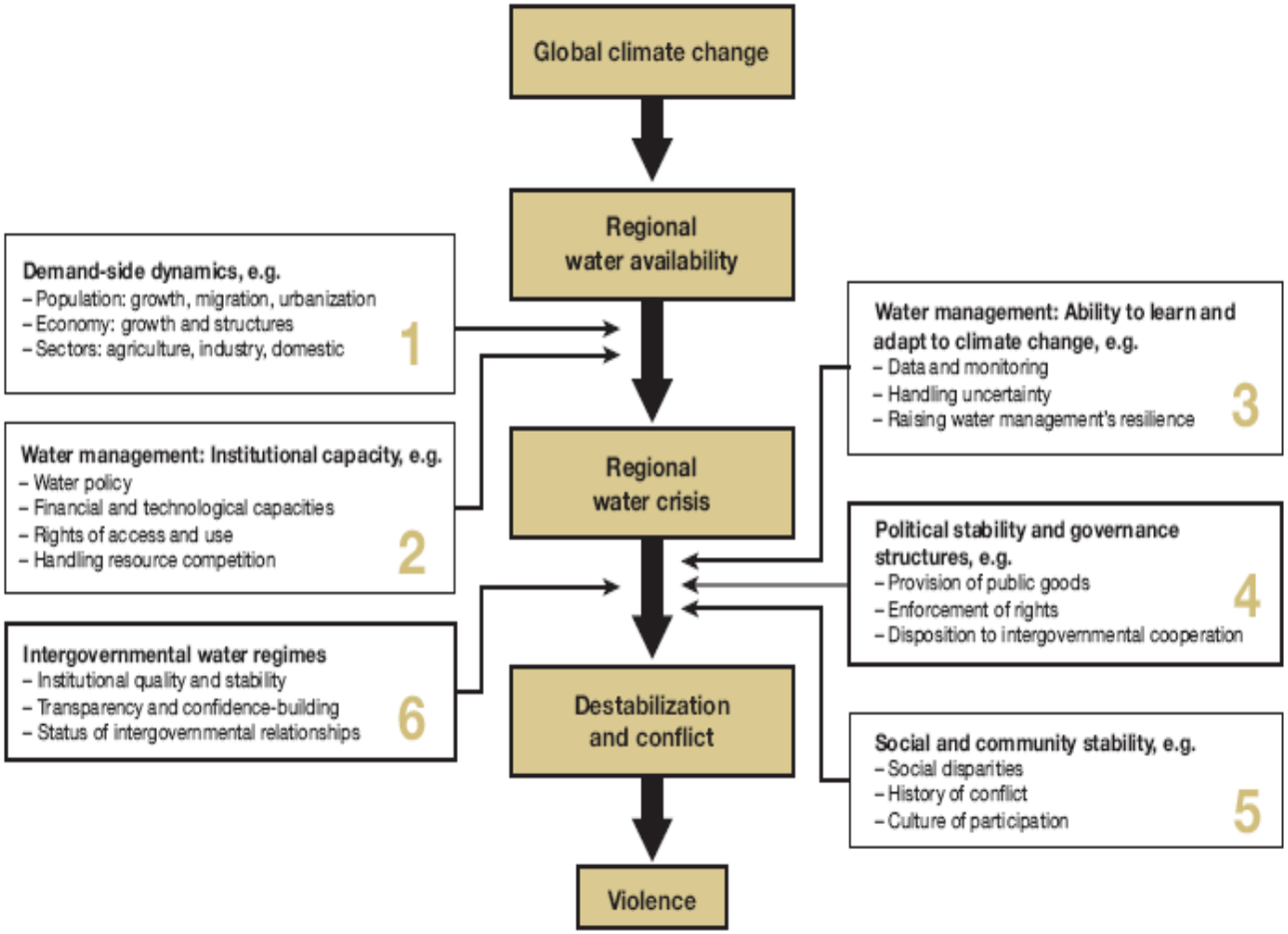
Figure 4.7: Regional hotspots and security risks associated with climate change. **Source**: WBGU (2008: 4). Reprinted with permission.



4 conflict constellations

1. Climate-induced freshwater resources
2. Climate-induced decline in food production
3. **Climate-induced increase in storm & flood disasters**
4. Environmentally-& climate induced migration

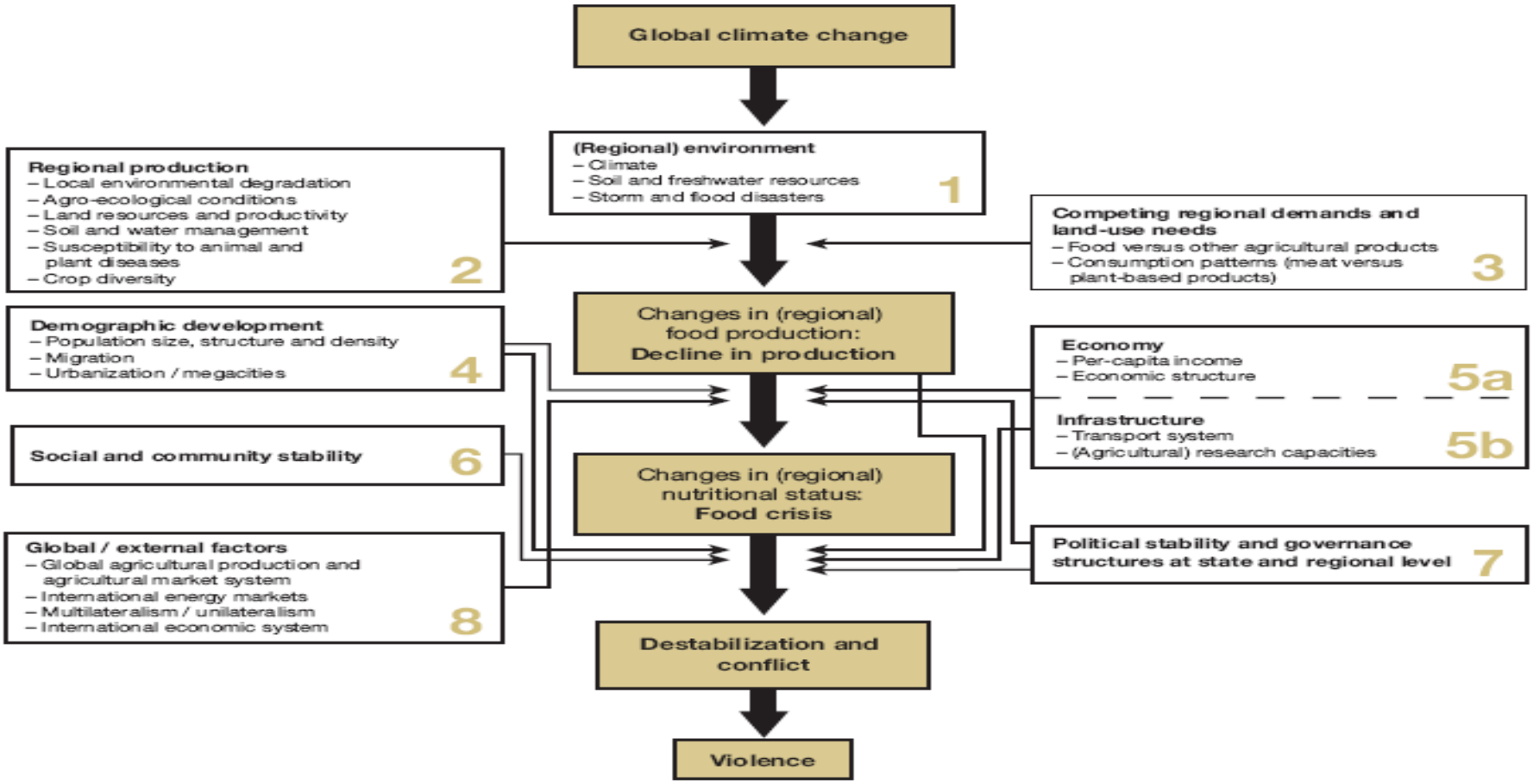
6.2. Conflict Constellation Climate-induced Degradation of Freshwater Resources



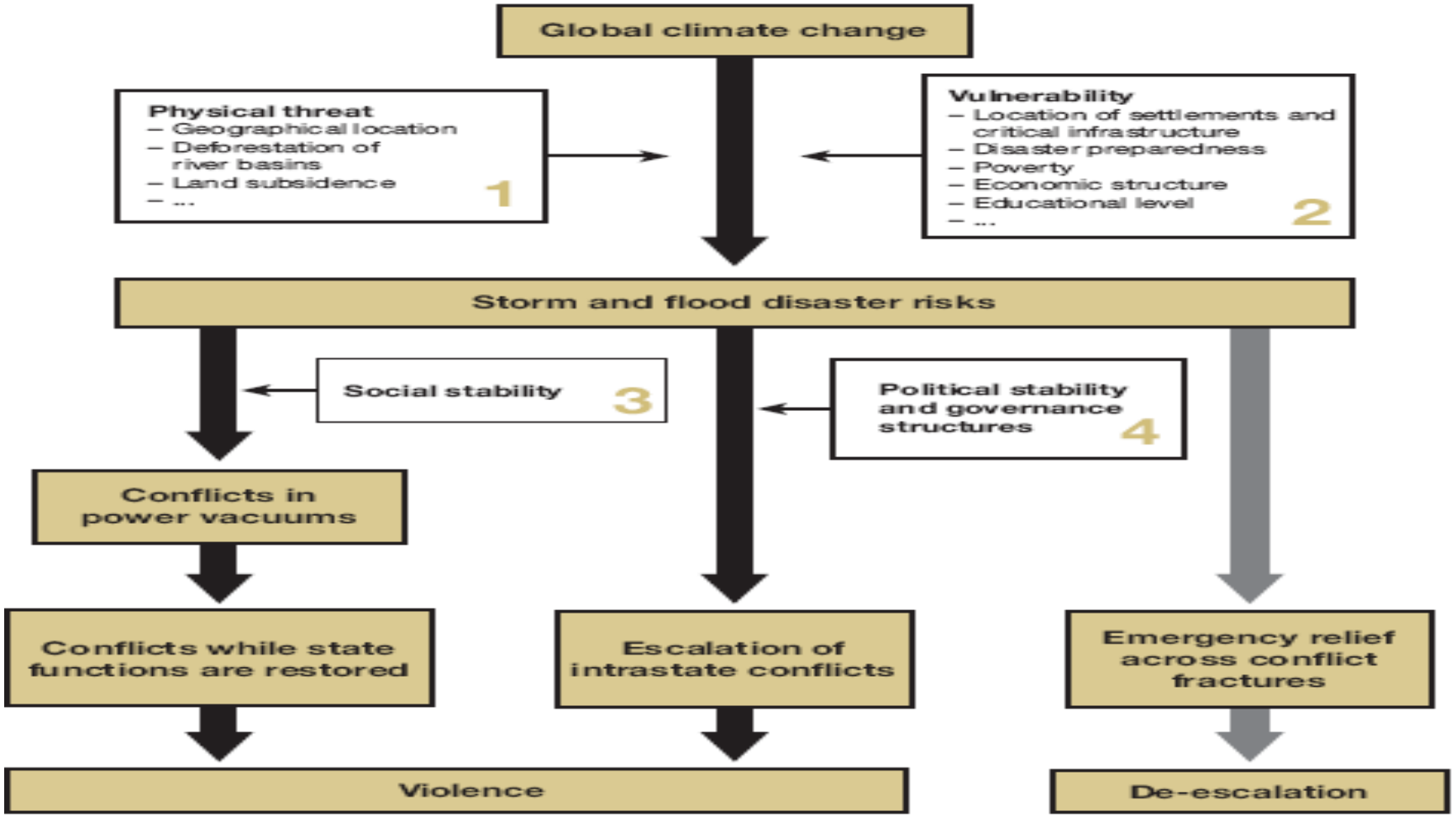
Relevant for states in Mekong River, especially for Laos, Cambodia, Vietnam

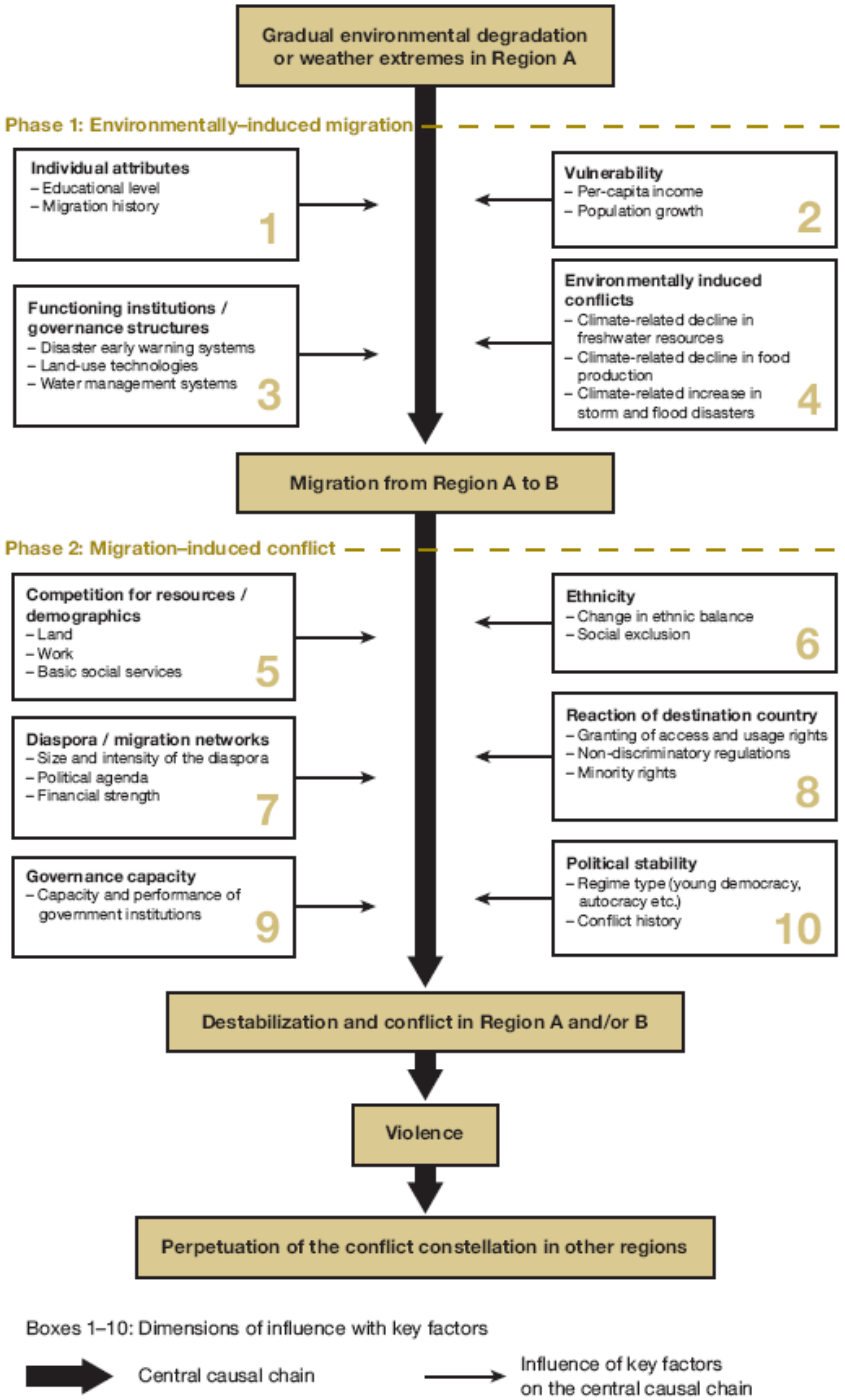
Myanmar, Thailand

6.3. Conflict Constellation Climate-induced Decline in Food Production



6.4. Conflict Constellation Climate-induced Increase in Storm & Flood Disasters





6.5. Conflict Constellation "Environmentally-induced migration"

- IOM (2007): Environmental migrants are persons or groups of persons who, for compelling reasons of sud-den or progressive chan-ges in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.
- Migrants as a cause of conflict: if? Where? How?

7. Discourse 2: Climate Change & National Security: USA

Climate changes as a threat for US national security ➔Reactive search for military answers and for new miligary missions of the Pentagon

- 2001 Bush opposes the Kyoto Protocol, to accept mandatory limits of GHG-Emissions
- **Pentagon study** of Schwartz/Randall: (October 2003, February 2004)
- **Gilman, Randall, Schwartz:** Effects of cliamte change: System vulnerabiltiy of possible effects up to 2050 medium scenario of temperature increase
- **March 2007: Strategic Studies Institute:** Colloquium on "global cliamte change: National Implications for Security"
- **March 2007:** Senators Durbin (D-IL)/Hagel (R-NE): Law on intelligence assesments on cliamte change impacts on national security
- **April 2007: CNA:** *National Security & the Threat of Climate Change* (April 2007): climate change as a threat multiplier in vulnerable regions for US security
- **November 2007,** *Center for Strategic and Intern. Studies* (CSIS); *Centre for a New American Security* (CNAS): *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change*
- 2007 Military establishment begin to perceive CC as national security issue
- **2009 President Obama takes office and declares CC as „a matter of urgency and of national security"**
- **2010: QDR (February) and National Security Strategy (May 2010)**

7.1 Main securitizing Actors

- Administration: Clinton, Bush, Obama
- Senate/Congress
- Department of Defense (DoD)
- Central Intelligence Agency (CIA)
- For U.S. The national security is the main reference:
  - How do different conditions induced by CC represent security risks for U.S.?
  - How do they affect U.S. security interests?
  - What actions could/should be launched?

7.2. General Debate & US Congress

- Growing debate about widening security since 2007. At first on dependencies on foreign energy resources (growing support for renewables).
- Discussion on energy safety and consequences for the national economy
- Debate on military security for U.S. posed by food/water scarcity in vulnerable regions (growing risks of armed conflicts)
- Direct risk by extreme weather events
- Indirect risk for U.S. interests in strategically important countries (migration, humanitarian crisis, armed conflict)

U.S. Senate and Congress

- Studies of 2007: CSIS, CNAS, CFR on CC & US security pushed debate
- **Senators Durbin (D-IL) and Hagel (R-NE)** introduced **„Global CC Security Oversight Act" requesting national intelligence estimate**
- Similar approach by **Congressman Markey** (D-MA)
- **None was adopted**

7.3. Obama Administration: CIA & DoD

- **CIA** Ignored 2004 CC as a security threat in itsprojetion of the world in 2020
- Growing work on identifying regions with risks regarding likelihood of wars
- Feb 2009 announcement to open Center on CC and National Security
- Issues: rising sea level, desertification and pop. shifts as nat. security issues
- **CIA has ignored CC as an international security threat until 2007**
- CIA should pinpoint regions with high risk levels and the likelihood of wars
- **2011: Republicans in US Congress cut funding for Center on CC/National Security**

Pentagon and the Military

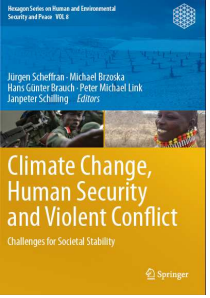
- **DoD should determine how CC affects US security (extreme weather events, new armed conflicts with US-military)**
- **Up to 2007 two main actors in the administration on climate policy**
  - Head of the White House Council on Environmental Quality
  - State Department, Bureau of Oceans and International Environmental and Scientific Affairs
- DoD: undersecretary dealing with security concerns posed by natural hazards
- DoD included a climate section in the Quadrennial Defense Review (Feb 2010)
- Adaptation on CC for soldiers/military bases abroad (extreme heat, rising sea level), Issue of environmental footprint of military
- **30-31 March 2011 Major Conference**

7.4. US National Security Strategy (May 2010)

- **The danger from climate change is real, urgent, and severe**. The change wrought by a warming planet will lead to new conflicts over refugees and resources; **new suffering from drought and famine; catastrophic natural disasters**; and the **degradation of land across the globe**. The United States will therefore confront climate change based upon clear guidance from the science, and in cooperation with all **nations—for there is no effective solution to climate change that does not depend upon all nations taking responsibility for their own actions and for the planet we will leave behind.**
- ***Home*:** Our effort begins with the steps that we are taking at home. We will stimulate our energy economy at home, reinvigorate the U.S. domestic nuclear industry, increase our efficiency standards, invest in renewable energy, and provide the incentives that make clean energy the profitable kind of energy. This will allow us to make deep cuts in emissions—in the range of 17 percent by 2020 and more than 80 percent by 2050. This will depend in part upon comprehen-sive legislation and its effective implementation.
- ***Abroad*:** Regionally, we will build on efforts in Asia, the Americas, and Africa to forge new **clean energy partnerships.** Globally, we will seek to implement and build on the Copenhagen Accord, and ensure a response to climate change that draws upon decisive action by all nations**. Our goal is an effective, international effort in which all major economies commit to ambitious national action to reduce their emissions**, nations meet their commitments in a transparent manner, and the **necessary financing is mobilized so that developing countries can adapt to climate change, mitigate its impacts, conserve forests, and invest in clean energy technologies**. We will pursue this global cooperation through multiple avenues, with a focus on advancing cooperation that works. We accept the principle of common but differentiated responses and respective capabilities, but will insist that any approach draws upon each nation taking responsibility for its own actions.

8. Discourse 3: Climate Change & Human Security

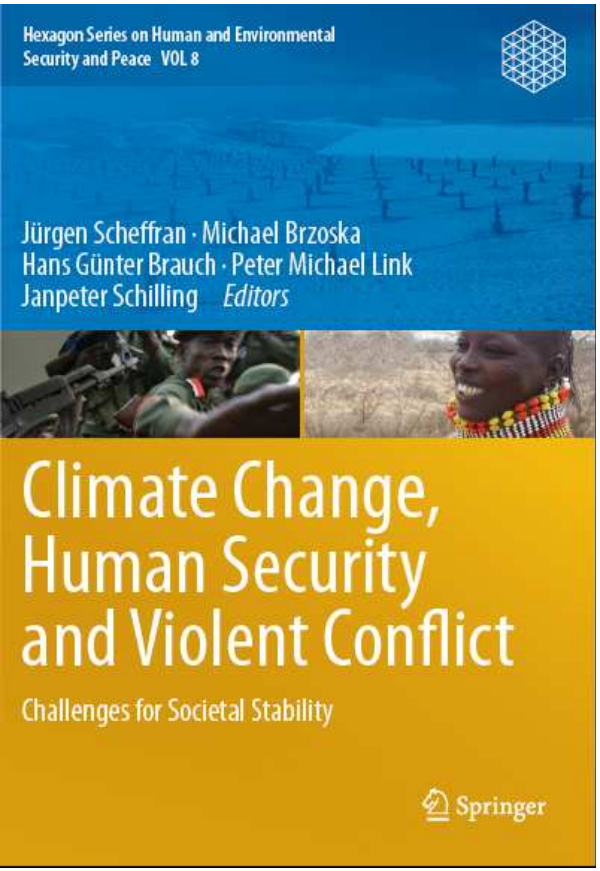
- **IHDP-GECHS** (Global env. change & human security)
  - **Symposium: climate change & human security (2005)**
  - **Synthesis conference: Research (1999-2009) in Oslo**
- **Greek Presidency of the HSN (2007/2008)**
  - **Conference in May 2008 in Athens: Final declaration**
  - Impact of climate change on vulnerable groups: women, children, environmental migrants in developing countries
  - Policy paper: Climate change, human security and development
  - **3rd pillar of human security: "freedom from hazard impact"**
- **Policy Memorandum 15 April 2007: for UN SC debate**
  - Wisner, Brauch, Oswald Spring u.a.
- **Debate in UN General Assembly**
  - **May 2007:** human security: climate change as a threat
  - **June 2009:** Resolution on climate migration: intern. peace & security



9. Scientific Discourses in Europe

- **Securitizing of Climate Change: Copenhagen, 03- 2009**
  - Olaf Cory: Securtisation and Risifikation of CC: **Millennium**,1/2012
- **PRIO: Climate Change and Conflicts; June 2010: Trondheim conf,**
  - **Special Issue of Journal of Peace Research, 49/1, Janaury 2012**
  - **Guest Editor: Nils Petter Gleditsch, PRIO**
  - Quantative, macro-sociological approach
  - Ignores qualiative and policy-oriented debates
- **CLISEC (Hamburg Conf., November 2009):** Research Group Climate Change & Security conducts multidisciplinary research & education on potential security risks, social instabilities & conflicts induced by climate change & on strategies for international cooperation, conflict management & sustainable peace..
  - Scheffran, Jürgen; Brzoska, Michael; Brauch, Hans Günter; Link, Peter Michael; Schilling, Janpeter (Eds.): **Climate Change,Human Security and Violent Conflict: Challenges for Societal Stability** Hexagon Series on Human and Environmental Security and Peace, vol. 8 (Heidelberg – Dordrecht – London – New York: Springer, 30 April 2012). 900 pages

9.1. Climate Change, Human Security & Violent Conflict: Challenges for Societal Stability



Contents:

- Part 1: Introduction. –
- Part II: Climate Change, Human Security, Societal Stability, and Violent Conflict: Empirical and Theoretical Linkages. –
- Part III: Climate Change and the Securitization Discourse. –
- Part IV: Climate Change and Migration. – Part V: Climate Change and Security in the Middle East. –
- Part VI: Climate Change and Security in Africa. –
- Part VII: Climate Change and Security in Asia and the Pacific. –
- Part VIII: Improving Climate Security: Cooperative Policies and Capacity-Building
- Part IX: Conclusions and Outlook

10. Two Alternative Visions: Hobbesian Business-as Usual vs. Sustainability Revolution & Decarbonizat.

- Humankind at **turning point of earth history**: in **Anthropocene** human interventions into earth system contributed to **anthropogenic global environmental** (soil, water, biodiversity) and **climate change**
  - **Linear projections of physical effects of GCC** (temperature, precipitation, SLR, natural hazards) may trigger societal impacts:migration, crises & conflicts
  - **Nonlinear (chaotic) tipping points** in the climate system are possible that may have significant impacts.
- **Two different visions & strategies:**
  - Business as usual (economic, political, military): old mindset
  - Alternative vision & strategy: change in worldview, mindset, culture and govenance

10.1 Alternative perspectives & visions: Business-as-usual vs. Sustainability Transition

Oswald Spring and Brauch (2011) argued that:

- **Vision of business-as-usual with minimal reactive adaptation & mitigation strategies** will most likely increase the probability of a 'dangerous climate change' or catastrophic GEC with linear and chaotic changes in the climate system & socio-political consequences that represent a high-risk approach.
- To avoid these consequences the **alternative vision and sustainability perspective requires a change in culture** (thinking on the human-nature interface), **worldviews** (thinking on the systems of rule, e.g. democracy vs. autocracy and on domestic priorities and policies as well as on interstate relations in the world), **mindsets** (strategic perspectives of policy-makers) and new forms of **national and global governance**.
- Alternative vision of a **new fourth 'sustainability revolution'**: radical change in culture, worldview, mindset and participative governance in the thinking and action on sustainability laying out an alternative development path with a total transformation of productive and consumptive processes aiming at equity, social justice, and solidarity with the most vulnerable and marginal people and the poorest countries.

10.2. Two Alternative Strategies

Both visions refer to different coping strategies :

- Vision of ***business-as-usual*** suggests primarily techni-cal fixes (such as geo-engineering, increase in energy efficiency or renewables), defence of economic, strate-gic and national interests with adaptation strategies that are in the interest of and affordable for the ‘top billion’ of OECD countries.
- Alternative vision of **comprehensive transformation** a ***sustainable perspective*** has to be developed and implemented into effective new strategies and policies with different goals and means based on global equity and social justice.

10.3. Business-as-Usual: Hobbesian World

- *Business-as-usual* in a **Hobbesian world** where economic and strategic interests and behaviour prevail leading to a major crisis of humankind, in inter-state relations and destroying the Earth as the habitat for humans and ecosystems putting the survival of the vulnerable at risk.
- ***Cornucopian perspectives*** prevail that suggest primarily technical fixes (geo-engineering, increase in energy efficiency or renewables), defence of economic, strategic and national interests with adaptation strategies that are in the interest of and affordable for the 'top billion' of OECD countries in a new geopolitical framework, possibly based on a condominium of a few major countries.
- This vision with minimal reactive adaptation and mitigation strategies will increase the probability of a '**dangerous climate** the climate system & socio-political consequences what is a high-risk approach.

10.4. Coping Strategies: Business-as-Usual

- **Instant Response: Discredit the message & attack the messenger: 2009: Attack on IPCC**
- **Coping with Climate Change Impacts:**
  - **Market will provide means** for coping with physical climate change effects: **Washington neoliberal consens.**
  - **Military Protection:** Adjust military strategies, mis-sions and tools to be able to operate under conditions of dangerous climate change („militarization"): **Hobbesian**
  - **Develop the technologies:** Geo-engineering schemes, strategy of energy independence: **Cornucopian**
- ***Business-as-usual*** in a **Hobbesian world** where economic and strategic interests and behaviour prevail leading to a major crisis of humankind, in inter-state relations and destroying the Earth as the habitat for humans and ecosystems putting the survival of the vulnerable at risk.
- **No Need for a Sustainability Revolution**

10.5. Fourth Sustainability Revolution

- 2nd vision for a *transformation* of global cultural, environmental, economic (productive and consumptive patterns) and political (with regard to human & interstate) relations
- In the alternative vision of a comprehensive transformation a *sustainable perspective* has to be developed and implemented into effective new strategies and policies with different goals and means based on global equity and social justice.

10.6. Policy Response – Four Actors: State, Society, Economic Sector, Knowledge

- Key actors for development and implementation are:
  - **States:** initiate, fund and implement strategies, policies & measures for a fourth sustainability revolution
  - **Society** (parties, interest & pressure groups, NGOs, lobbyists): public awareness, discourse, social movements for sustainability transformation
  - **Economic sector & business community:** develops and offers technical and economic solutions
  - **Knowledge** (generation & education): source for innovation

10.7. Evolution of debate on sustainability transition: Climate Change as a Trigger

- The emerging scientific debate on ‘sustainability transition’ addresses the many scientific, societal, economic, political, and cultural needs to reduce GHG emissions.
- These cannot be achieved simply by legally binding *quantitative emission limitation and reduction obligations* (QELROs), as in the framework of the Kyoto Protocol (1997).
- These have failed to achieve their proclaimed stated aims during the past two decades because of a lack of political will and capability to implement these legal obligations and policy declarations.
- A continuation of the prevailing world view and ‘business-as-usual’ mindset may lead to ‘dangerous’ (+4□°C world) or even ‘catastrophic’ (4-6° world) climate changes and major human catastrophes during this century if the global temperature should rises by 4-6□°C above the pre-industrial average by end of the 21st century.

10.8. Discourse on Sustainability Transition: Four Hypotheses

- We are in the midst of a **global transition in earth history** from the '**Holocene', to the 'Anthropocene'** that began with human interventions into the **earth system** and that has resulted in a rapid increase in GHG emissions in the atmosphere.
- The **impacts of the grand transformations** of the first and second industrial revolution have resulted in a complex global environmental change and in anthropogenically-induced climate change, besides as well as the increasing destruction of the biodiversity. natural climatic variations. This has resulted in an exponentially growing accumulation of GHG in the atmosphere this has also affected almost all environmental services.
- The **societal impacts** of four physical effects of 'anthropogenic global climate change' and of biodiversity loss may result in **major international, national, and human security dangers**.
- **Since 2005 an alternative discourse on 'sustainability transitions' or on 'transitions to sustainable and resilient development' has begun to evolve**. It addresses new directions in the 'study of long-term transformative change' that also needs to focus on resilient societies.

10.9. Two parallel discourses

- The parallel discourse on ‘sustainability transition’ addresses both the causes and impacts of GEC and GCC by facing & coping with both and avoiding the projected societal conse-quences of dangerous or catastrophic climate change and of possible tipping points in the climate system.
- From this perspective the goal of ‘sustainable development’ and the perspective on **‘sustainability transition’ refer to a much wider research agenda than the relatively narrow focus on environmental and technological innovations that is a primary focus of many researchers in the STRN.**
- The process of ‘transition’ refers to multiple long-term evolutio-nary and revolutionary transformative changes that point to five different historical times, with different transformative results
- These must be distinguished since they have different transformative results. We may address them with four hypotheses:

10.10. Climate Change & Sustainability Transition

- The emerging scientific debate on ‘sustainability transition’ addresses the many scientific, societal, economic, political, and cultural needs to reduce GHG emissions.
- These cannot be achieved simply by legally binding *quantitative emission limitation and reduction obligations* (QELROs), as in the framework of the Kyoto Protocol (1997).
- These have so far failed to achieve their proclaimed stated aims during the past two decades because of a lack of political will and capability to implement these legal obligations and policy declarations.
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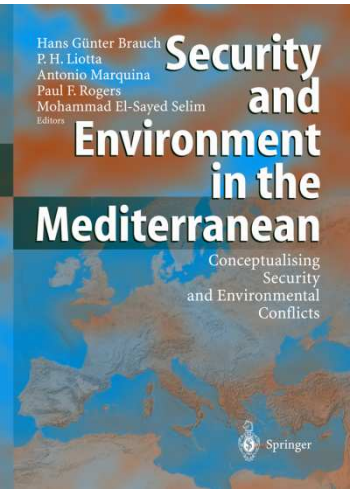
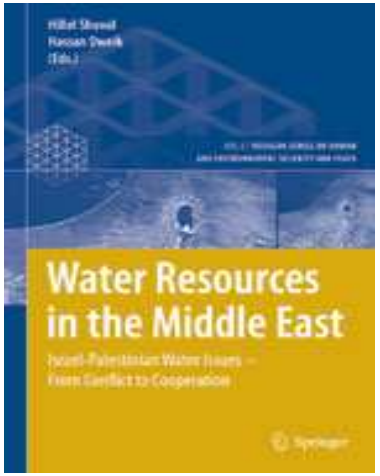
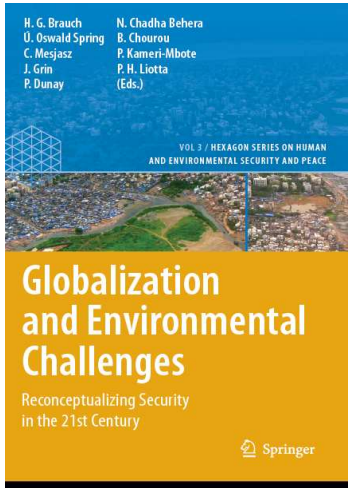
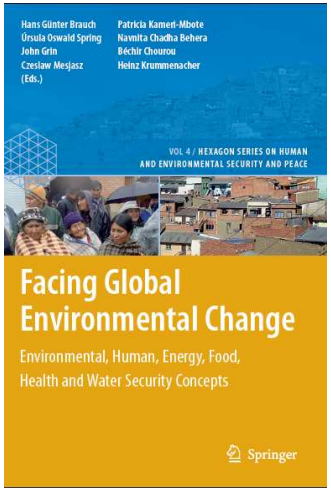
Thank you so much for your attention!

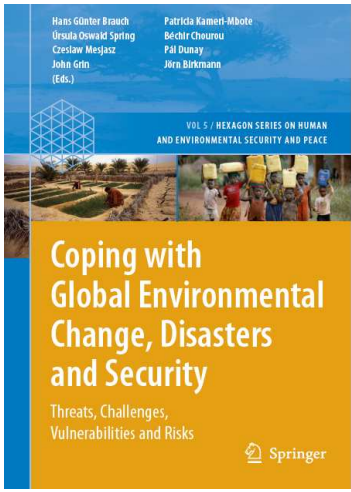
Hexagon Series: Volumes I-VIII

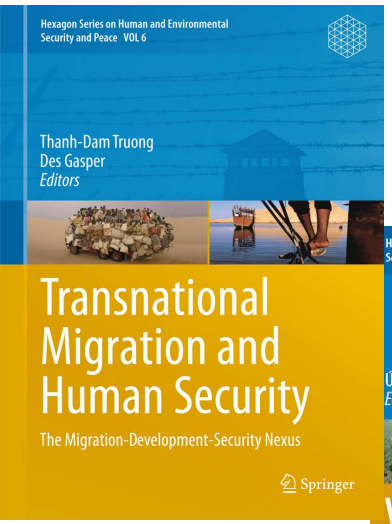


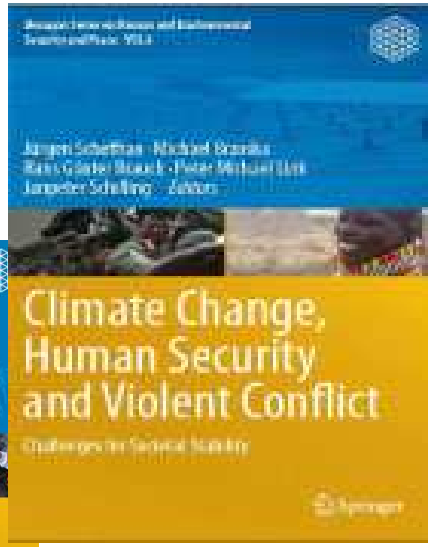












Forthcoming Volumes

- 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).
- Hans Günter Brauch, Úrsula Oswald Spring, John Grin, Jürgen Scheffran (Eds.): *Sustainability Transition and Sustainable Peace Handbook.* Hexagon Series on Human and Environmental Security and Peace 10 (Heidelberg – New York – Dordrecht – London: Springer-Verlag, 2015)