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UNIVERSITY
UNU-EHS
Institute for Environment
and Human Security

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**Munich Re
Foundation**
From Knowledge
to Action

The Conceptual Security Context: Human, Environmental and Water Security Do Water-related Social Vulnerabilities Create Human Security Threats, Challenges Vulnerabilities and Risks?

UNU-EHS & MunichRe Foundation

First Summer Academy for Social Vulnerability

Global Water Hotspots:

Water-related social vulnerabilities and resilience-building

23 – 29 July 2006, Munich Re Center at Schloss Hohenkammer

Download at: http://www.afes-press.de/html/download_hgb.html

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Questions to be addressed

Do water-related social vulnerabilities create human security threats, challenges, vulnerabilities and risks?

1. What is security and why to study security concepts?
2. How does human security differ from national security?
3. What are the four pillars of human security?
4. What are objects of analyzing environmental dimension of HS?
5. What does water security mean and what are its objects of its securitization?
6. What are the human security threats, challenges, vulnerabilities and risks from water-related hazards?
7. What are water-related social vulnerabilities?
8. For whom do water related hazards pose a survival dilemma?
9. What are HS objectives for reducing social vulnerability?
10. How can HS as 'freedom from hazard impacts' be achieved?

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1. Reconceptualizing Security: Publication Project

- Basic Assumption & Guiding Question:
 - Did global and regional political contextual changes trigger a reconceptualizing of security?
- What did change?
 - End of the Cold War: 9 November 1989: Berlin Wall;
 - Events of 11 September 2001;
 - Others: Death of Mao in China, economic crises in Latin America, 1980s, Southeast & East Asia, 1990s.
- Which were the conceptual innovations?
 - Theoretical: social constructivism & Beck: risk society
 - Widening, deepening & sectorialization of security

1.1. What did change?

- **1989-1991: End of the Cold War (E-W-C)**
 - Conflict formation & structure of international system: bipolarity, power & systemic conflict ended;
 - Military strategy: nuclear deterrence, MAD is past;
 - Division of the world, Europe, Germany ended;
 - New wars: Desintegration (SU, Yugoslavia, Africa).
- **11 September 2001: Vulnerability of U.S.**
 - Military & technol. superiority: no protection
 - From states to non-state actors: terrorists
 - Conversion: civilian artefacts into weapons
- **Econ. crises: econ. & social vulnerability**
 - Latin American crises of 1980s: social vulnerability: impact for regional security in Western hemisphere
 - Asian crisis 1990s: Japan. approach: human security

1.2. Which conceptual innovations?

- **1989-1991: End of the Cold War (E-W-C)**
 - **Widening:** from 2 to 5 security dimensions
 - **Deepening:** from national to human security
 - **Sectorialization:** energy, food, health, water security
- **11 September 2001: Vulnerability of U.S.**
 - **Shrinking:** weapons of mass destruction, terrorists
- **Transatlantic dispute on security concepts**
 - **Dispute of worldviews:** Hobbesians vs. others
 - **Wideners vs. narrowers:** Old vs. New Europe
- **Econ. crises: econ. & social vulnerability**
 - **New wars:** humans as victims: ,freedom from fear'
 - **Crises, Globalization & Complex Emergencies:** poverty: high economic and **social vulnerability**

1.3. Global Mental Mapping of Rethinking on Security

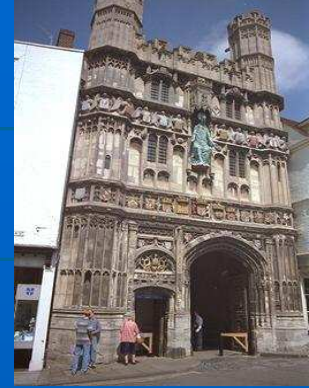
- **What does security mean globally?**
 - Security debate influenced by North Atlantic debate
 - What are cultural, philosophical, religious influences?
- **How has security been reconceptualized?**
 - What are obj. security dangers & subj. security concerns: threats, challenges, vulnerabilities and risks?
 - What are security threats, challenges, vulnerabilities and risks in 5 dimensions, for state and humankind?

GEC & hazards pose new security dangers?

- Global Environmental Change: pressure & cause
- **Water-related natural hazards**: impacts & societal outcome (victims) depend on social vulnerability



1.4. Canterbury, 2001: Conceptualizing Security and Environmental Conflict



Hans Günter Brauch
P.H. Liotta
Antonio Marquina
Paul F. Rogers
Mohammad El-Sayed Selim
Editors

Security and Environment in the Mediterranean

Conceptualising
Security
and Environmental
Conflicts



- **Focus: Mediterranean**
 - Environmental security research
 - Conceptualizing security in Europe, Maghreb/Mashreq, Israel & Turkey: narrow concept
 - Environmental Conflict
 - Six factors of GEC (hexagon)
 - Natural disasters & prevention
- **First Book in Springer Hexagon Series on HESP** (Human, environmental security & peace)

1.5. Montreal, Sopron, The Hague, 2004: Reconceptualising Security



H.G. Brauch, J. Grin, C. Mesjasz, P. Dunay, N. Behera, B. Chourou, U. Oswald, P. H. Liotta, P. Kameri-Mbote (Eds.): **Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century** (Berlin –New York : Springer-Verlag, 2007)



H.G. Brauch, J. Grin, C. Mesjasz, H. Krummenacher, N. Behera, B. Chourou, U. Oswald, P. Kameri-Mbote (Eds.): **Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts** (Berlin – New York : Springer-Verlag, 2007)

1.6. Istanbul & Bonn, 2005: Security Threats, Challenges, Vulnerabilities, Risks

Fourth AFES-PRESS Workshop



Fifth AFES-PRESS Workshop



- **WISC, 24.-27.8.2005**

- **IHDP, 9.-13.10.2005**

Third book:

- H.G. Brauch, C. Mesjasz, J. Grin, U. Oswald Spring, P. Kameri-Mbote, B. Hayek, B. Chourou, J. Birkmann (Eds.):

- ***Coping with Global Change, Disasters and Security - Threats, Challenges, Vulnerabilities and Risks***

- (Berlin et al.: Springer, 2008).

2. From Hazards to Social Vulnerability

- **Yautepec:** from a human security perspective focus on cause (**hazards**) and effects (**societal outcomes**) that pose for **human beings/humanity** (cause & victim of GEC) a **Survival Dilemma**: stay/die, migrate, protest/fight
<http://www.afes-press.de/pdf/Brauch_Yautepec.pdf>
- **Hohenkammer: Social vulnerability:**
 - Do water-related social vulnerabilities (**cause**) create human security threats, challenges, vulnerabilities and risks (**effects**)?
 - Goal: Develop the **Conceptual Security Context: for Human, Environmental and Water Security**

3. What is Security?

- Security term and concepts?
- Cultural, religious, philosophical influences?
 - **Western (European):** Greek – Roman tradition
 - Latin American: pre- & post Columbian tradition
 - Eastern: Buddhist, Confucian, Hinduist, Shintoist
 - Arab & Muslim and Jewish traditions
 - African: oral tradition & modern philosophy/ethics
- Wolfers: objective vs. subjective security
- Social constructivist: intersubjective
- Buzan, Waever, de Wilde: Copenhagen school
Securitization of perceived reality or the social construction of reality

3.1. What do we mean with „Security“?

Western thought: Impact of Greek & Roman (Latin) thinking

- **Security** (Lat.: 'securus', 'securitas', 'se cura'; It.: 'sicurezza'; Fr.: 'sécurité'; Sp.: 'seguridad'; P.: 'segurança'; G.: 'Sicherheit')
- Cicero/Lucretius: philosophical and psychological **state of mind**,
- subjective feeling of **freedom from sorrow**.
- Political concept of 'Pax Romana': **stability** in era of Augustus.
- Western thinking 'security' synonymous: 'certitudo' ('**certainty**')
- Since Augustus, and Middle Ages, 'securitas' was linked with '**pax**' & '**libertas**' that was associated with '**quieteness**'.
- 19th century, '**state**' is key security institution governed by law.
- 20th century, security also associated with preventing internal & external dangers; police & courts (**internal: justice & home affairs**) & political, econ., military measures (**external: security & defence**).
- a general 'societal idea of value', a universally employed '**normative concept**', different meanings in affirmative manner.
- **political value**, is related to individual or societal value systems

Eastern thinking: Buddhist, Hinduist, Confucian thinking

Arab/Muslim, Jewish and African thinking: oral tradition

3.2. Objective, Subjective, Intersubjective Security

- Wolfers (1962) pointed to two sides of the security concept: "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**".
- **Objective security dangers:** absence of threats
- **Subjective security concerns:** perception of absence of fear
- From a constructivist approach in international relations 'security' is the outcome of a process of social & political interaction where social values & norms, collective identities & cultural traditions are essential. Security: **intersubjective** or "what actors make of it".
- **Copenhagen school** security as a "**speech act**", "where a securitizing actor designates a threat to a specified reference object and declares an existential threat implying a right to use extraordinary means to fend it off".
- Such a process of "**securitization**" is successful when the construction of an "existential threat" by a policy maker is socially accepted and where "survival" against existential threats is crucial.

3.3. Copenhagen School: Securitization

- **Securitization**: discursive & political process through which an intersubjective understanding is constructed within a political community to treat something as an existential threat to a valued referent object, and to enable a call for urgent and exceptional measures to deal with the threat.
- **'Referent object'** (that is threatened and holds a general claim on 'having to survive', e.g. the **state, the environment or liberal values**),
- **'Securitizing actor'** (who makes the claim – speech act – of pointing to an existential threat to referent object thereby legitimizing extraordinary measures, often but not necessarily to be carried out by the actor), and
- **'Audience'** (have to be convinced in order for the speech act to be successful in the sense of opening the door to extraordinary measures).
- **It is not up to analysts to settle the 'what is security?'** question – widening or narrowing – but more usefully one can study this as an open, empirical, political and historical question.
- **Who manages to securitize what under what conditions and how?**
- **What are the effects of this?** How does the politics of a given issue change when it shifts from being a normal political issue to becoming ascribed the urgency, priority and drama of **'a matter of security'**.

Sources

- Wæver/Buzan/Kelstrup/Lemaitre 1993: *Identity, Migration and the New Security Order in Europe* (London: Pinter)
- Buzan/Wæver/de Wilde 1998: *Security: A New Framework for Analysis* (Boulder: Rienner)
- Wæver/Buzan/de Wilde 2007: *The Politics of Security* (Rienner)
- <http://polforsk.dk/download/securitytheory2006/homepage>

3.4. Security Perception: Worldviews and Mind-sets

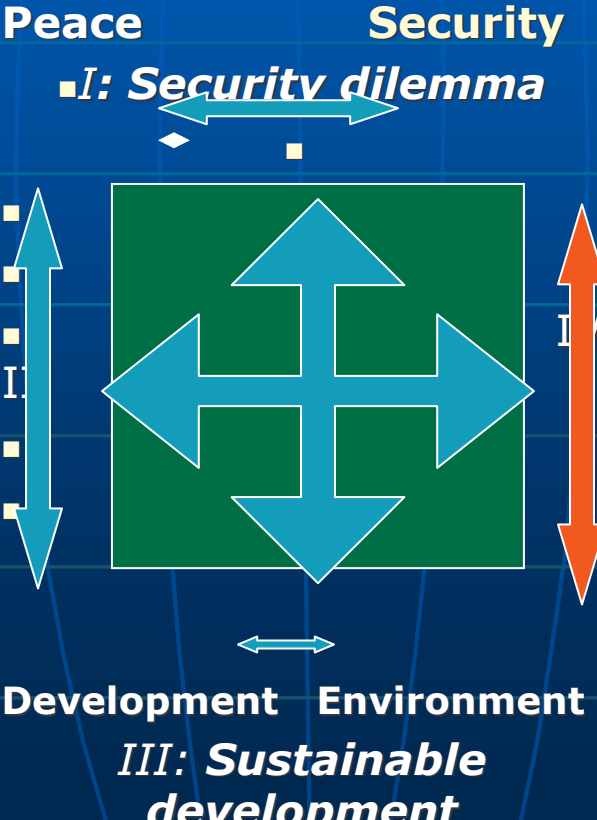
- Perceptions of security dangers (concerns) depend on worldviews of analyst & mind-set of policy-maker.
- **Mind-set (Ken Booth):** have often distorted perception of new challenges: include ethnocentrism, realism, ideological fundamentalism, strategic reductionism
 - **Booth:** Mind-sets freeze international relations into crude images, portray its processes as mechanistic responses of power and characterize other nations as stereotypes.
 - Old Cold War mind-sets have survived global turn of 1989/1990
- **3 worldviews** are distinguished by the English school:
 - ❖ *Hobbesian* pessimism (realism): power
 - ❖ *Kantian* optimism (idealism) *international law & human rights*
 - ❖ *Grotian* pragmatism: multilateralism, *cooperation* is vital.
- **3 ideal type perspectives in other cultures & traditions:**
 - Power matters: Sunzi, Thukydides, Machiavelli, Hobbes,
 - Ideas matter: Kant, W. Wilson
 - Cooperation matters: Confucius, Grotius

3.5. Questions for any Security Concept

- From a minimalist security definition: “low probability of damage to acquired values”, **Baldwin (1997)** raised 7 questions to be addressed by each security concept:
 - Security for whom? Security for which values?
 - How much security? From what threats? By what means?
 - At what cost? In what time?
- **Møller (2003)** argued that Wolfer’s definition ignores:
 - Whose values might be threatened? Which are these values?
 - Who might threaten them? By which means? Whose fears should count?
 - How might one distinguish between sincere fears & faked ones?
- **Hintermeier (2006/7)** has focused on 4 conceptual questions of:
 - Security for whom and what?
 - Security for which values?
 - Security from whom or what?
 - Security by what means and strategies?

3.6. Concepts of security in relation with peace, environment and development

Programmes, pillars & linkage concepts within the quartet

IR research programmes	Conceptual Quartet	Conceptual Linkages
<ul style="list-style-type: none"> Peace Research Security Studies Development Stud. Environment Studies <p>4 conceptual pillars</p> <ul style="list-style-type: none"> I: <i>Security dilemma</i> II: <i>Survival dilemma</i> III: <i>Sust. developm.</i> IV: <i>Sustain. peace</i> 	 <p>Peace Security</p> <p>I: <i>Security dilemma</i></p> <p>Development Environment</p> <p>III: <i>Sustainable development</i></p>	<p>Political use of concepts & theoretical debates on 6 linkages</p> <ul style="list-style-type: none"> Peace & security Peace & development Peace & environment Devel. & security Devel. & environment <p>Of interest here:</p> <ul style="list-style-type: none"> Security & environm.: environment. security <ul style="list-style-type: none"> water-related hazards Social vulnerability

4. From International & National to four Pillars of Human 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)
- **1990:** Widening, Deepening, Sectorialization
- **2001:** Shrinking: U.S. nat. security agenda **Global Security:** Steinbrunner (2000)
- **Cooperative Security:** Brookings Institution (1990's)
- **Human Security:** UNDP (1994): 4 pillars of HS

4.1. 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	Political	Economic	Environ- mental ↓	Societal
Human individual ⇒			Food sec. Health sec.	Cause & Victim	Food sec. Health sec.
Societal/Community				↓↑	
National	shrinking		Energy se.	↓↑	Food,health
International Regional			Water security	↓↑	Water security
Global/Planetary ⇒				GEC	

4.2. Environmental & Human Security

Expanded Security Concepts (Møller, '03; Oswald '01)

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	Individual, mankind	Survival	Nature, state, global.
Environmental sec.	Ecosystem	Sustainability	Humankind
Gender security (Oswald Spring)	Gender relations, indigenous people, minorities	Equality, identity, solidarity	Patriarchy, totalitarian in- stitutions (governments, churches, elites) intoler.

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**.

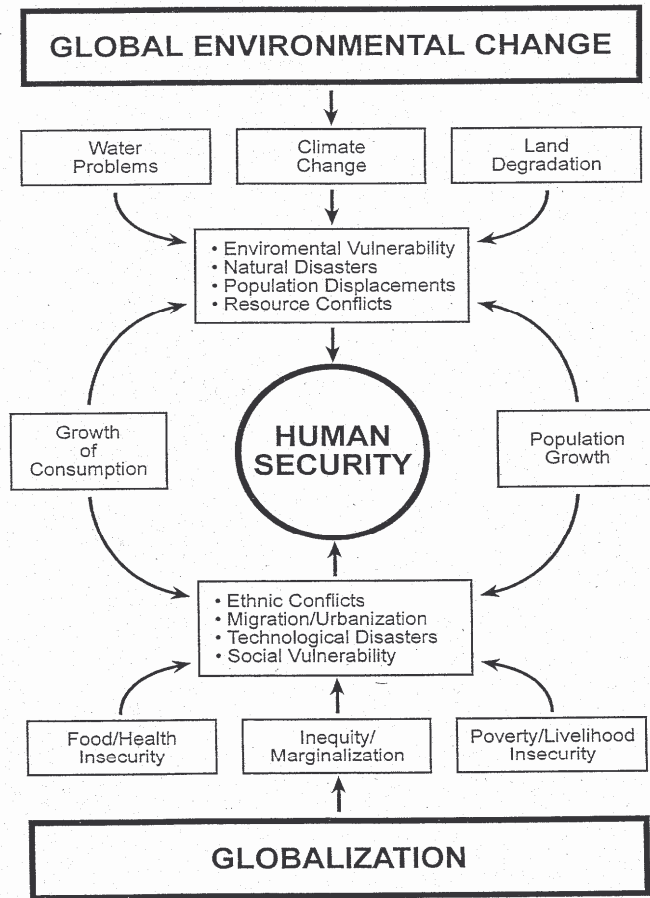
- ❖ **Major challenges:** global environmental change & humankind,
- ❖ **Focus:** Interactions between ecosystem & humankind, impact of global environmental change on environmental degradation, of increasing demand on environmental scarcity & environmental stress. [No Environment Security Network of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

4.3. Five Security Dimensions and Four Security Dangers & Concerns

Security Dimensions➡ ↓ Security Dangers	Military	Political	Economic	Social	Environmental Securi.	Human securit. Persp.
Threat	Hobbesian perspective: national/alliance security during Cold War			Grotian perspective: wider security concept in post Cold War era		
Challenges	Narrow 'hard' security concept			Wider 'soft' security concepts		
Vulnerabilities - Environmental - Social	Old and new security agenda: change in actors & meaning prior and after the Cold War				New agenda: GEC, Global warming, water-related hazard & disasters	
Risks	multiple applications in scientific and political communities prior and after the Cold War					

4.4. Environmental & Societal Vulnerability Facing Global Environmental Change & Globalisation

Global Change and Human Security



Human Security Perspective

- ❖ referent: individual/humankind
- ❖ value at risk: human survival
- ❖ threat: nature, Global environmental change & globalization

- **GEC > environm. vulnerability > disaster > migration > scarcity**
- **Globalisation > inequity > social or social vulnerability**

Achieving human secur. requires:

- adapting to, mitigating **environmental vulnerability** (protection-empowerment)
- **Reducing social vulnerability:** enhance coping capacity (resilience) by poverty eradication.

4.5. Four Pillars of Human Security

- **“Freedom from want”** human development agenda: poverty (stimulated by Asian economic crisis of 1990s) by reducing social vulnerability through poverty eradication programmes (UNDP 1994; CHS: Ogata/Sen: Human Security Now, 2003, Human Security Trust Fund, HSU of OCHA), **Japanese approach**;
- **“Freedom from fear”**: humanitarian agenda: violence, conflicts, weapons (Canada, Norway, Human Security Network) (UNESCO, HSN), **Canadian approach**: Human Security Rep. (2005)
- **“Freedom to live in dignity”**: agenda: rule of law, human rights, democratic governance (**Kofi Annan**: *In Larger Freedom* (March 2005))
- **“Freedom from hazard impact”**: environmental (GEC) & natural hazard agenda: Bogardi/Brauch vision, goal: securitize: “environment” (GEC as pressure) and “natural hazards” as impact by reducing environmental & social vulnerability & enhancing coping capabilities of societies confronted with natural & human-induced hazards (**Bogardi/Brauch 2005; Brauch 2005a, 2005b**).

4.6. First Pillar of HS: “Freedom From Fear”

- **Primary Focus of the Human Security Network**
- **Requirements and objects:**
 - **Rule of Law:** ICC, International Court of Justice and national, regional and local judicial courts and mechanisms
 - **Universal Humanitarian Standards:** initiatives in international, humanitarian and human rights law, human development, human rights education,
 - **Good Governance:** capacity building of not only national, but regional and local governments or leadership authorities; fostering democracy; respect for minorities
 - **Conflict Prevention/ Post-Conflict Reconstruction:** land mines, child soldiers, protection of civilian population in armed conflict, small arms and light weapons, trans-national organized crime (Ottawa Convention on Anti-personnel Landmines)
 - **Strong International Institutions**

4.7. “Freedom From Want”:

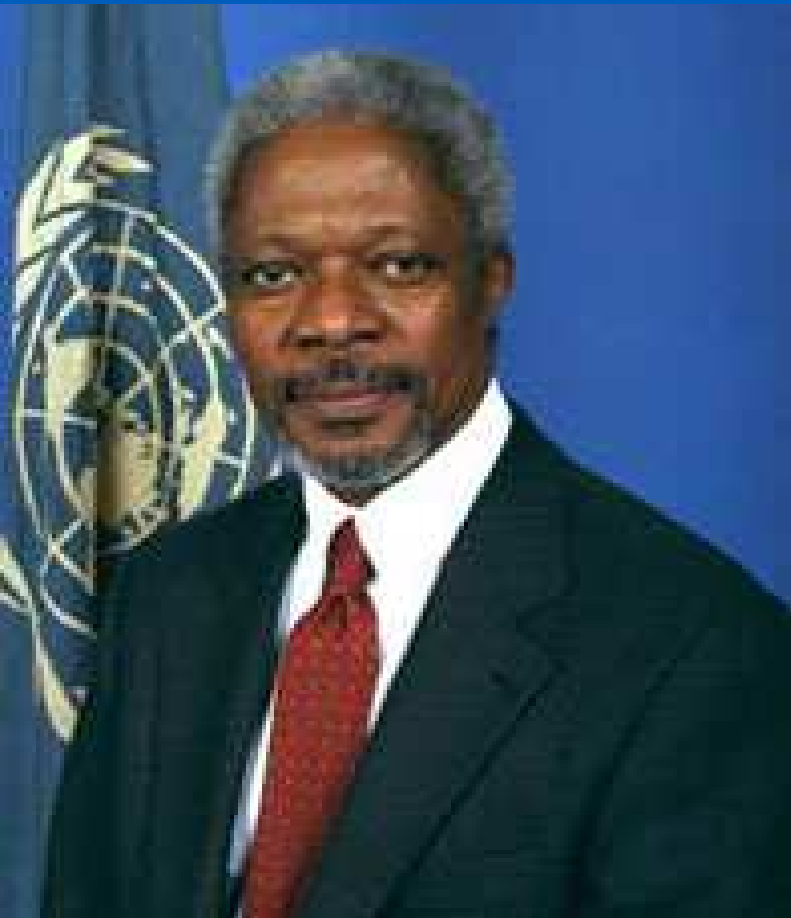
Human Security Commission: Human Security Now

- **Broad:** wider agenda, conceptually more convoluted
- **Goal:** reducing individual/societal vulnerabilities in the economic, health, environment, political, community, and food sphere. Create conditions that can lead to empowerment for individuals,
- **Japanese FM:** HS “comprehensively covers all menaces that threaten human survival, daily life, and dignity...and strengthens efforts to confront these threats.”
- **Threats:**
 - diseases, poverty, financial crises, hunger, unemployment, crime,
 - social conflict, political repression,
 - land degradation, deforestation, emission of GHGs, environm. hazards,
 - population growth, migration, terrorism, drug prod./trafficking



4.8. “Freedom to Live in Dignity”

- **Kofi Annan** – need for a human centered approach to security “human security can no longer be understood in purely military terms.
- It must encompass economic development, social justice, environmental protection, democratisation, disarmament, and respect for human rights and the rule of law.”
- “Embraces far more than the absence of violent conflict”



4.9. “Freedom From Hazard Impacts”

- **UNU-EHS:** Bogardi/Brauch (2005), Brauch (2005)
- **Goal:** reduce vulnerabilities/enhance capacity building & coping capabilities of societies faced with nat.hazards
- **Threats/Hazards:**
 - **Environmental:** floods, droughts, and other natural disasters, env. degradation, lack of water or clean water, human-induced climate change, exhaustion of fish resources, depletion of finite resources
 - **Societal:** poverty, improper housing, insufficient food and water, malfunctioning of technical systems, traffic accidents, population explosions, terrorism and organized crime
- **Develop vulnerability indicators and vulnerability mapping** to apply to operational realm by working on solutions
 - **improved early warning systems & capacity-building**
 - **disaster preparedness** (education and training, infrastructure)
 - coordinated rapid **disaster response** by local, regional and national level
 - developing clear guidelines for **post hazard reconstruction**
 - **long term strategies:** e.g. Kyoto, Montreal Protocol
 - **adaptation measures:** e.g. dams, switching to renewable energy
 - **mitigation measures:** restrict housing in hazard areas (coastal areas-flooding, mud slides), charging more for garbage disposal and energy usage, birth control measures

4.10. Towards a Fourth Pillar of Human Security as Freedom from Hazard Impact

- Natural hazards cannot be prevented, but their impact can be reduced by early warning and better disaster preparedness.
- **As the number of victims and affected people is influenced by the degree of social vulnerability a major goal of early warning, disaster preparedness and response must be policy and societal measures to reduce social vulnerability.**
- “Freedom from hazard impact” implies that people can mobilize their resources to address sustainable development goals rather than remain in the vicious cycle of the survival dilemma.
- “freedom from hazard impact” requires hazard specific policies & a combination of technical, organisational and political measures for:
 - *Slow-onset hazards*: sea-level & temperature increase (climate change)
 - *Rapid-onset hydro-meteorological hazards*:
 - *Rapid-onset geophysical hazards*: earthquakes, tsunamis
 - *Man-made disasters*: technical, organisational, political

5. Environmental Pressure, Stress and Natural Hazards

- Other Models: Environment – Response
 - OECD: PSR-Model
 - UN-CSD (Committee for Sustainable Development)
 - EEA (European Environment Agency)
- PEISOR Model: Environmental stress and extreme and sometimes fatal outcomes
- Hazards: Nature impacting on humans: victims: poor and highly vulnerable people
- Concept of social vulnerability
- Human security: Freedom from hazard impact

5.1. Models on Linkage of Cause & Impact: GEC and Policy Responses

■ „Pressure-State-Response“ (PSR) of OECD (1993-1999): ---->

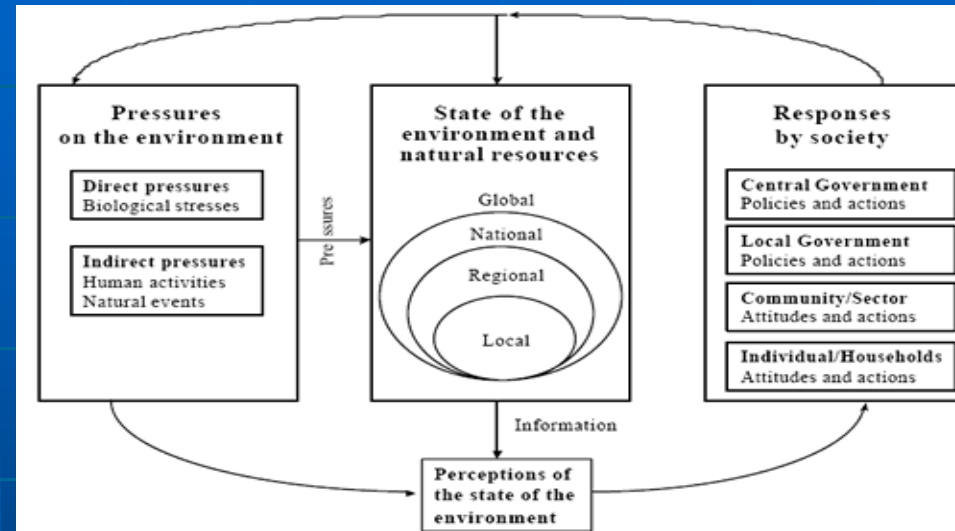
- P: pressure;
- S. state of environment,
- R: policy response;

EU: (DPSIR, EEA 1998)

- D: Driving Force
- P: Pressure
- S: State
- I: Impact
- R: Response“ ----->

■ UN-CSD. Driving Force-State-Response (DSR)

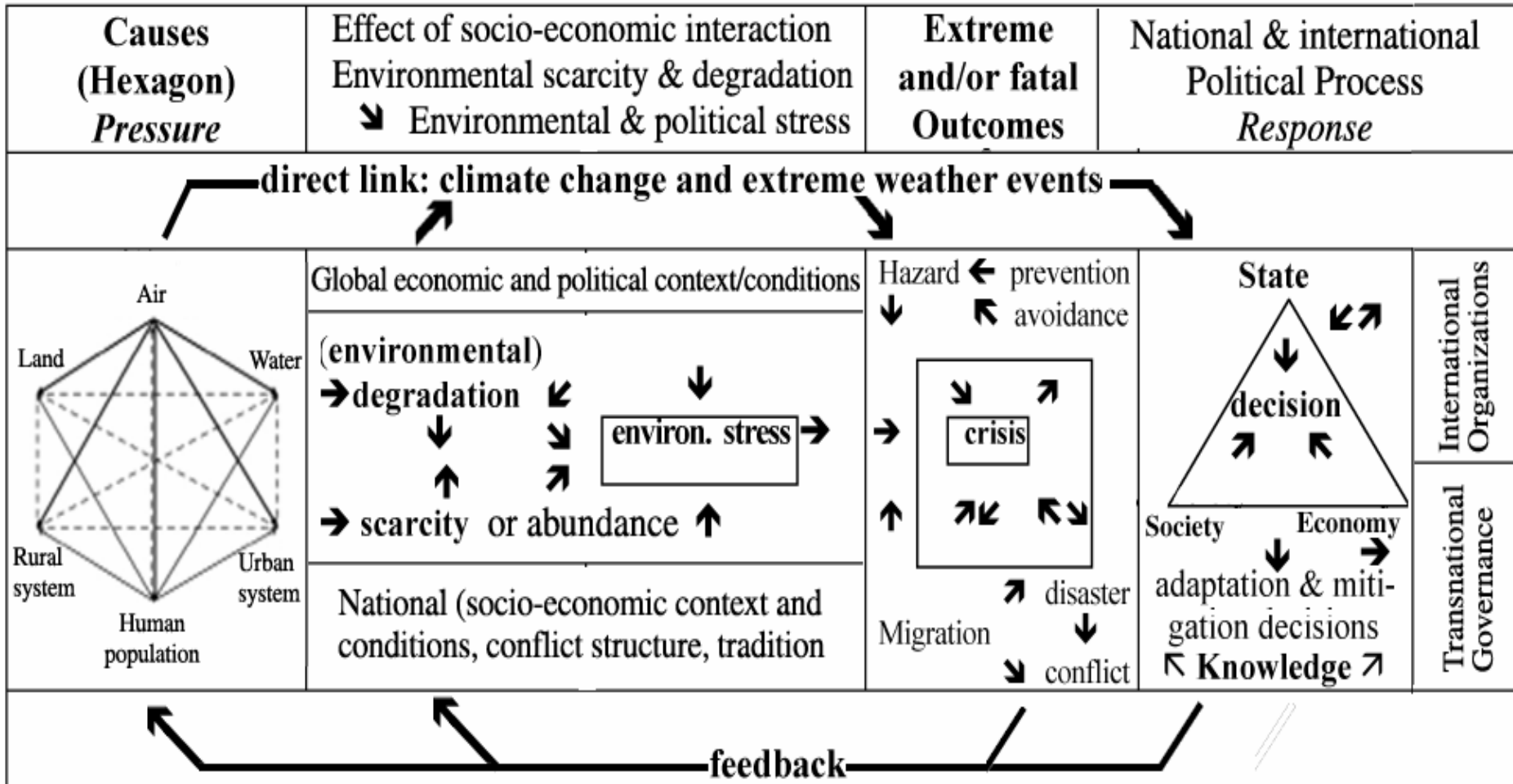
- D: Determinants of human activities;
- S: State of sustainable development;
- R: Responses.



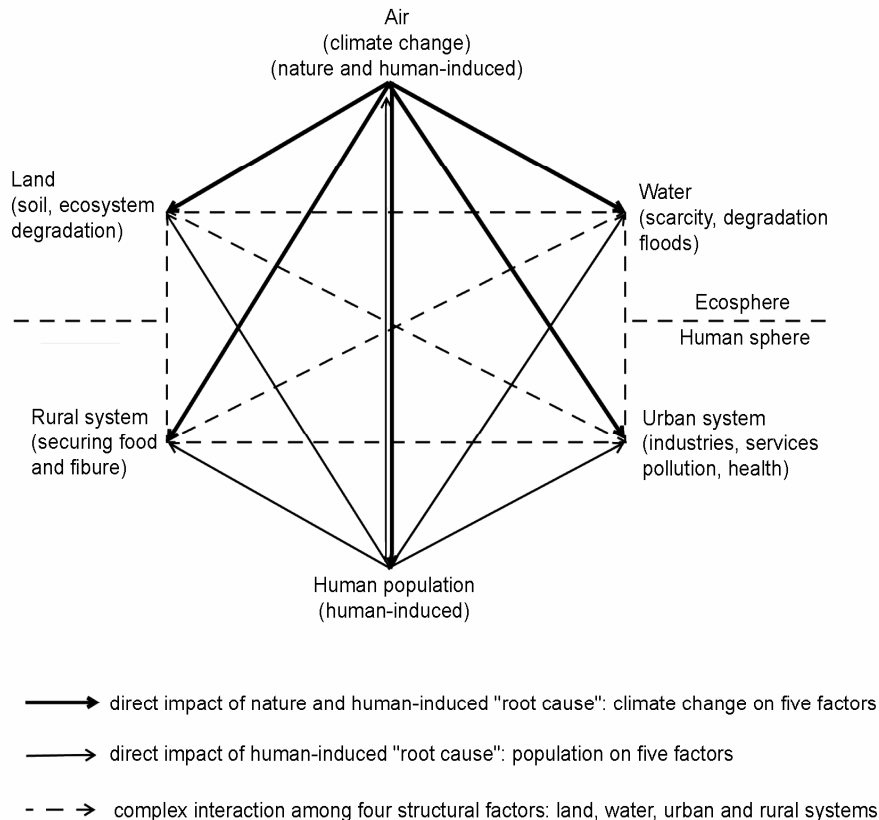
5.2. PEISOR Model: Global Change, Environmental Stress & Extreme Outcomes

- **The model distinguished 5 stages:**
 - **P: Pressure:** Causes of GEC : Survival hexagon
 - **E: Effect:** environm. scarcity, degradation & stress
 - **I: Impact:** Extreme or fatal outcome: hazards
 - **SO: Societal Outcomes:** disaster, migration, crisis, conflict, state failure etc.
 - **R: Response** by the state, society, the economic sector and by using traditional and modern know-ledge to enhance coping capacity and resilience

5.3. PEISOR Model: Global Change, Environmental Stress & Extreme Outcomes



5.4. Cause: **P**ressure of Global Environmental Change: Six Determinants: Survival Hexagon



Ecosphere:

- **Air: Climate Change**
- **Soil: Degradation, Desertification**
- **Water: degradat./scarcity**

Anthroposphere:

- **Population growth/decline**
- **Rural system: agriculture**
- **Urban system: pollution etc.**

Mode of Interaction

- **Linear, Nonlinear**
- **Exponential**
- **Chaotic, abrupt**

5.5. Effects: Environmental Scarcity, Degradation & Stress

Four Phases of Env. Sec, Research since 1983 - 2003

First Phase: Conceptual Phase: Concept Environmental Security

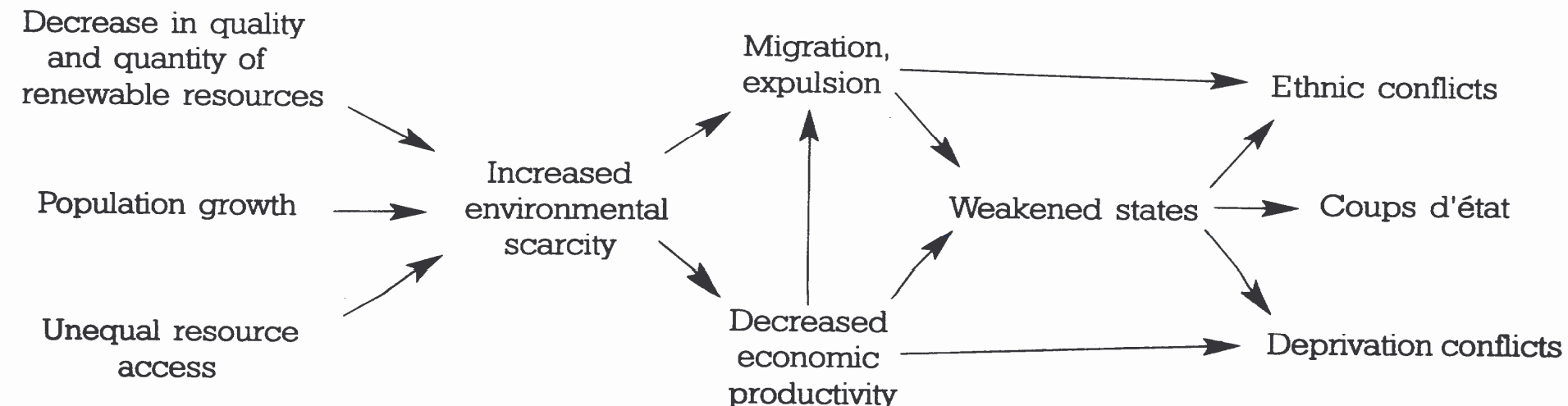
Second Phase: Empirical Phase: Case studies: Scarcity - Conflict

- Toronto: Homer-Dixon: since 1991: 3 Projects (figure © Homer-Dixon 1998)
- Zürich/Bern: Günther Bächler, K.Spillmann

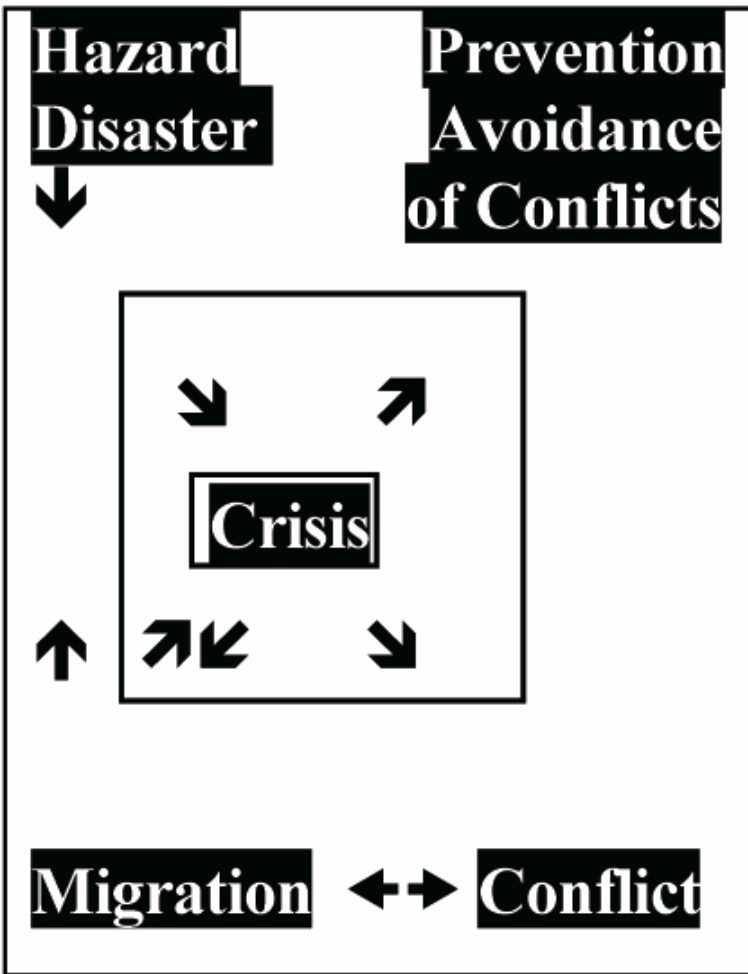
Third Phase: Manifold Research without Integration (1995 - pres.)

Sources of environmental scarcity

Social Effects



5.6. Impact: Human-Induced Natural Hazards Drought, Famine and Societal Outcomes



Much knowledge on these factors:

✓ Drought, migration, crises, conflicts

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

➤ Drought & drought-ind. migration

➤ Famine & environm.-ind. migration

➤ Conflicts & conflict-induced migration

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

➤ Domestic/international crises/conflicts

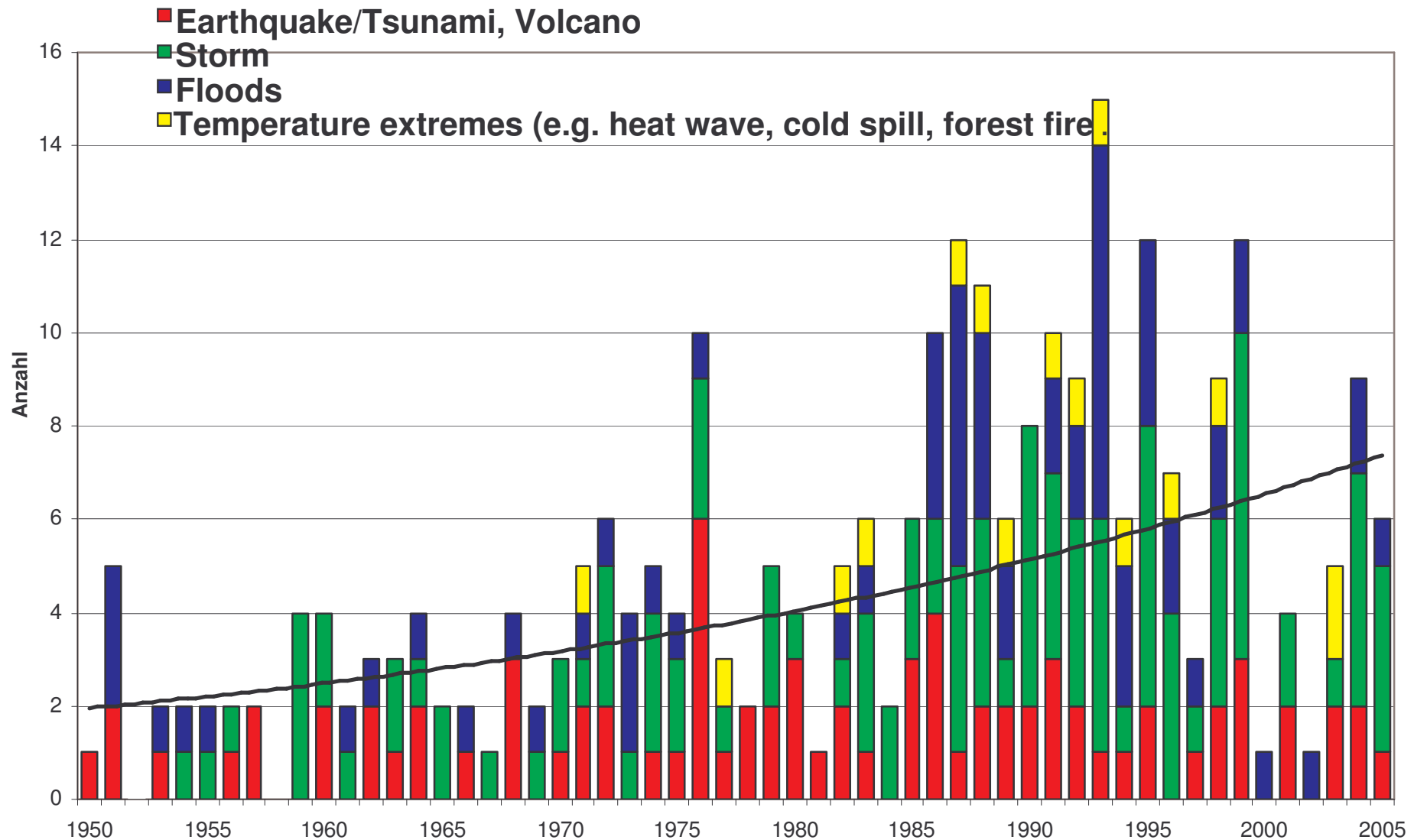
➤ Environmentally or war-induced migration as a cause or consequence of crises and conflicts

5.7. Societal Outcomes: Knowledge on Linkages of Outcomes

- **What are consequences of climate change, desertification and water scarcity for:**
 - Environmental scarcity
 - Environmental degradation
 - Environmental stress?
- **What are indirect Societal Outcomes of:**
 - Human-induced hydro-meteorological **natural water-related hazards** (Storms, floods, landslides, drought) due to natural variability & increase due to climate change?
 - For **migration, societal crises and domestic and international conflicts**?
 - What role does **social vulnerability of victims** play?

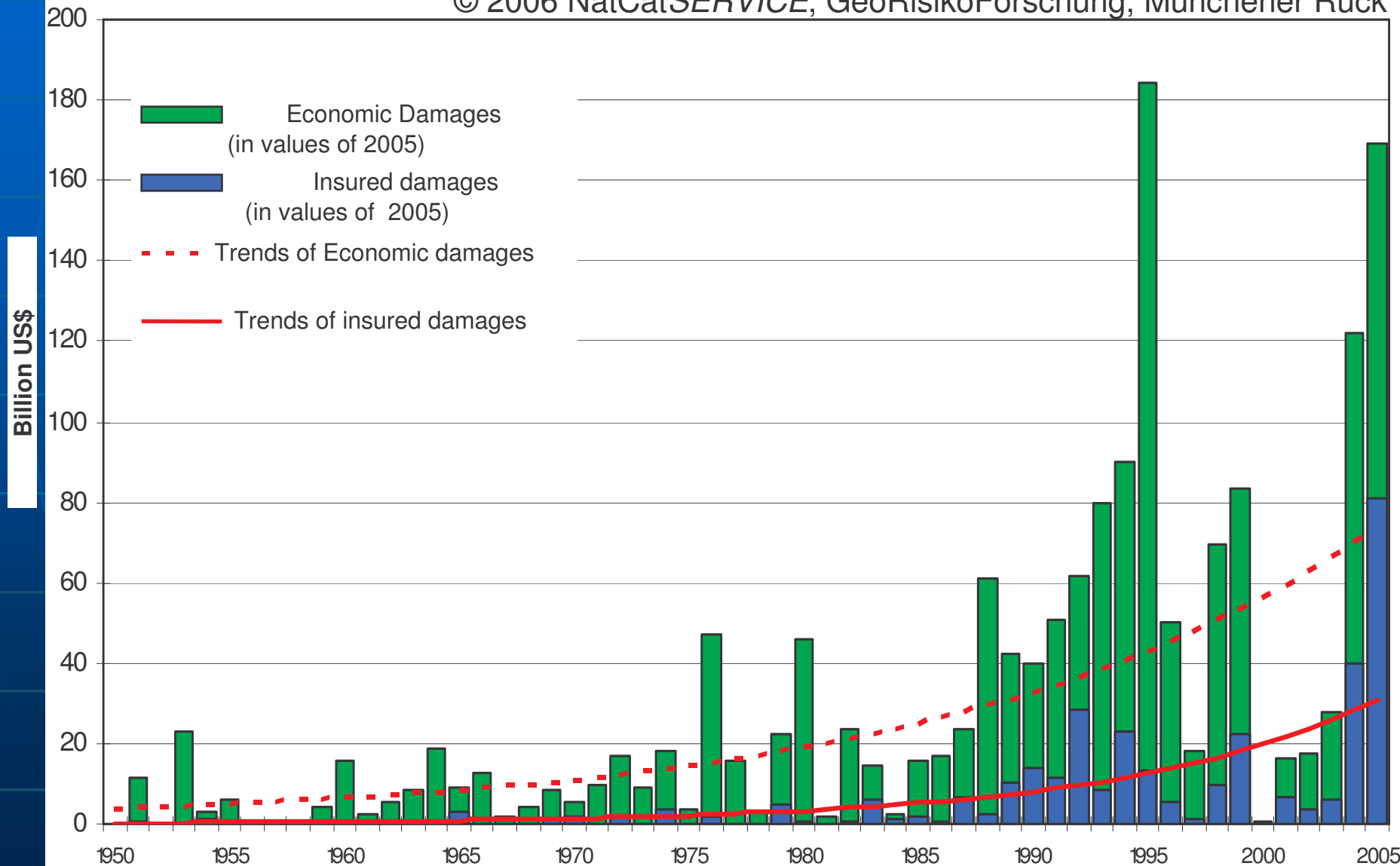
5.8. Global Impacts: Major Natural Disasters 1950 – 2005. Source: MunichRe, 2006

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5.9. Major Natural Hazards (1950-2005), Economic and Insured Losses

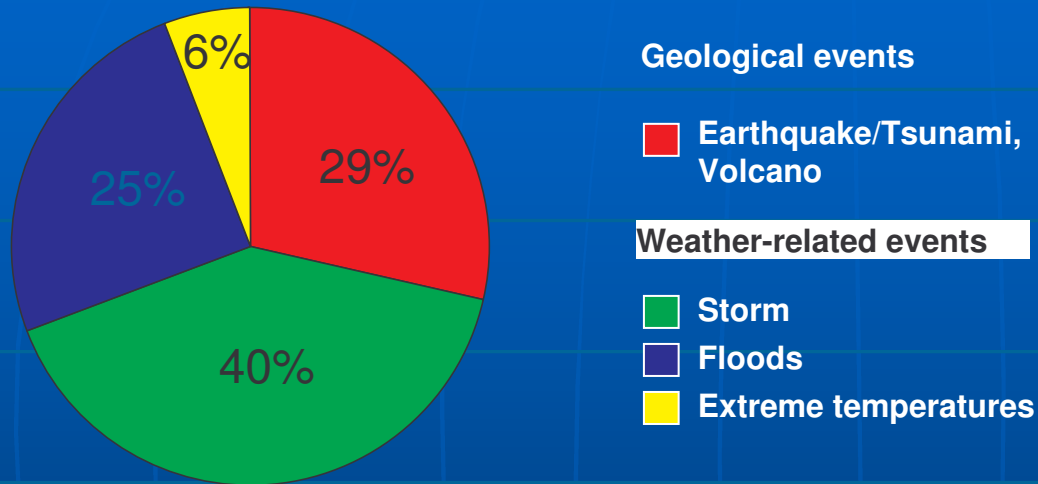
© 2006 NatCatSERVICE, GeoRisikoForschung, Münchener Rück



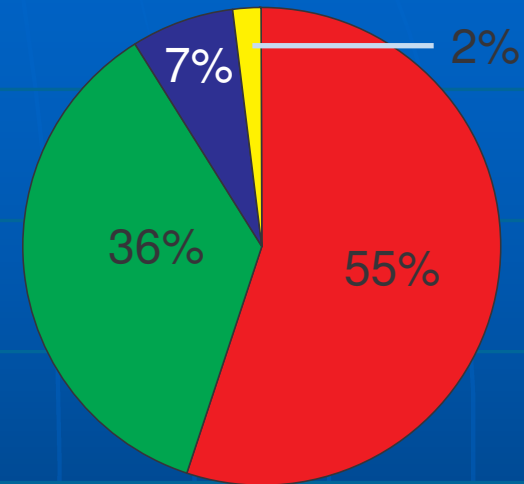
5.10. Major Natural Hazards (1950-2005).

Source: Munich Re Research Div., 2006

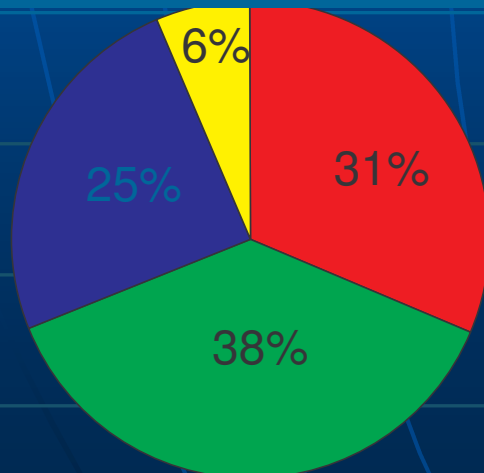
267 Events



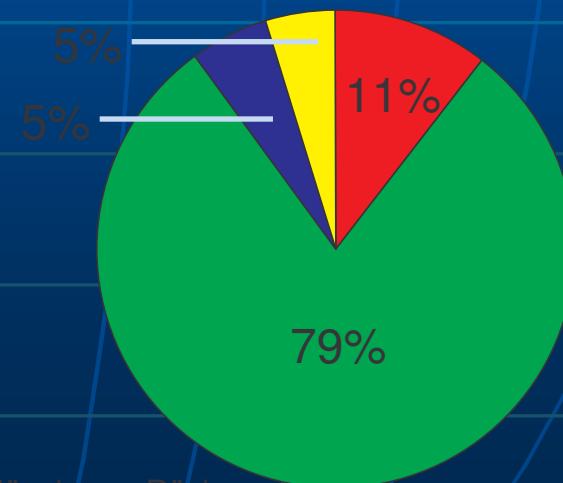
1,75 Million Dead



Economic damage: 1.400 billion US\$



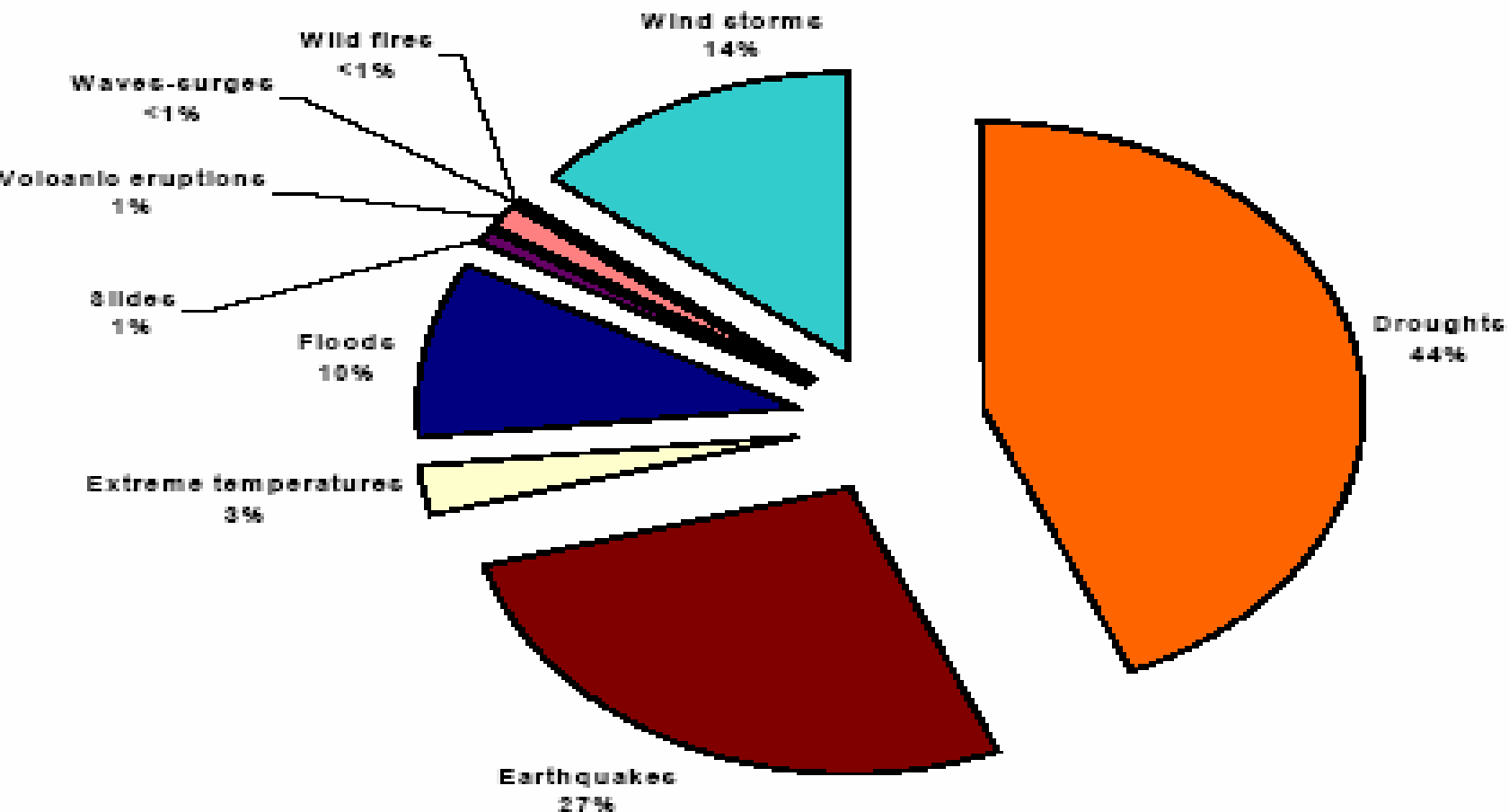
Insured damage: 340 billion US\$



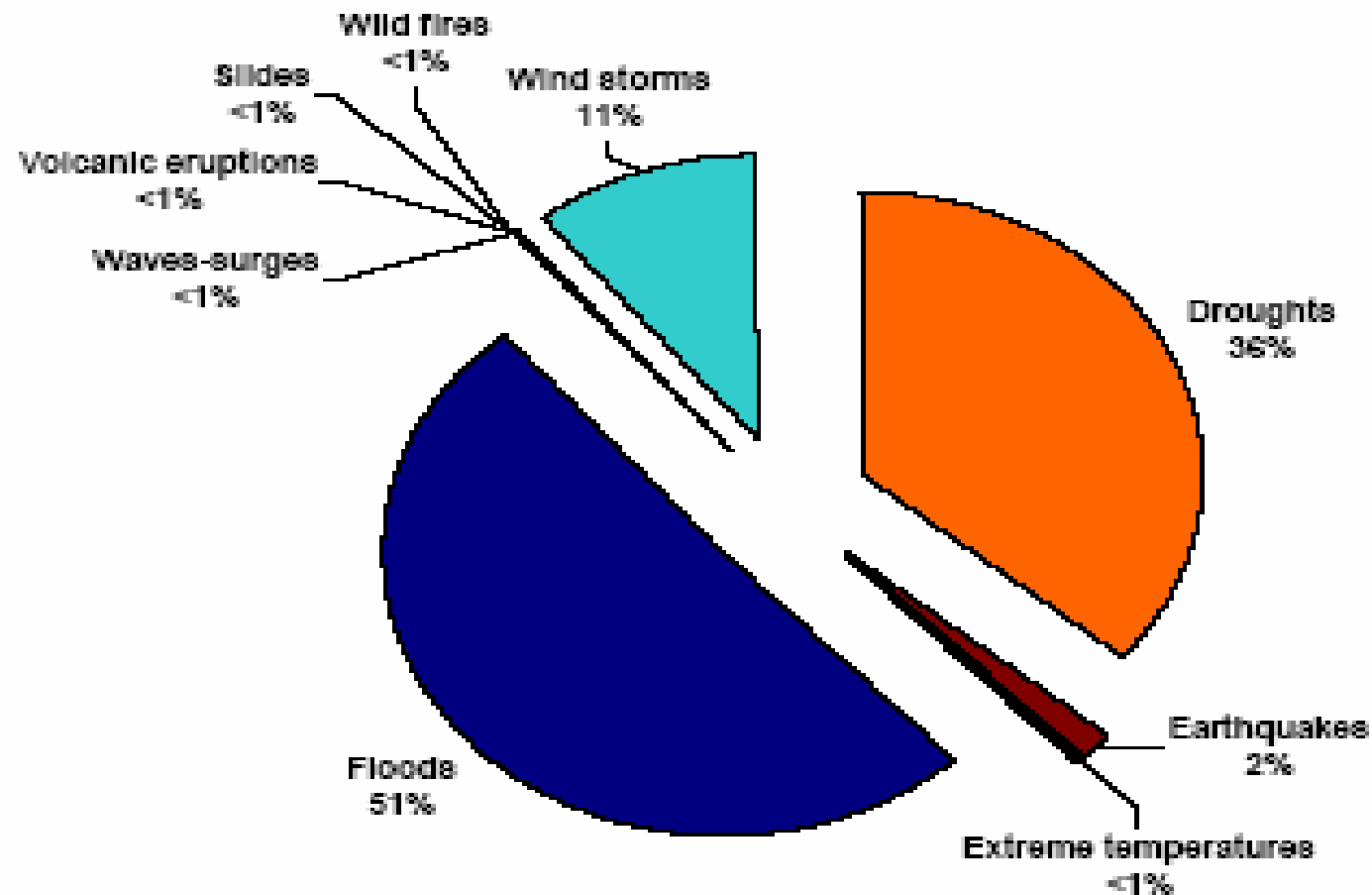
*in Werten von 2005

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5.11. Reported Death of Natural Hazards globally (1974-2003): 2.066.273 persons



5.12. Affected persons of Natural Hazards globally (1974-2003): 5 076 494 541 persons



(1) injured + homeless + affected

Source: © Hoyois und Guha-Sapir (2004)

5.13. Water-related Hazards: Victims of Storms, floods, drought, extreme temperatures

- **MunichRE (1950-2005), major events**
 - **Events:** Storms/floods/extreme temperatures: **71%**
 - **Dead:** 45% of 1,75 mio. people
 - **Economic damage:** 69%
 - **Insured damage:** 9%
- **CRED (1974-2003), all reported events**
 - **Dead:** Storms (14%); floods (10%); extreme temperatures (3%); drought (44%): **71% of a total of 2.066.273 persons**
 - **Affected:** Storms (11%); floods (51%); extreme temperatures (>1%); drought (36%): **98% of a total of 5 076 494 541 persons**

5.14. Policy Responses to Natural and Water-Related Hazards

■ Slow onset hazards: GEC

- **Climate change:** temperature increase, sea level rise
- **Policy response: policy & measures: Reducing greenhouse gas emissions (UNFCCC, Kyoto Protocol)**
- Soil degradation & erosion: desertification
- Water scarcity, degradation, water stress

■ Rapid onset hazards:

- **Storms** (winter storms, hurricanes, cyclones)
- **Flash floods, flooding**
- **Drought**
- **Policy response:** Early warning, disaster preparedness and response (infrastructure, training, education, foodaid),
- **Reducing social vulnerability: simultaneous concepts:**
 - **Climate change: adaptation & mitigation**
 - **Poverty eradication**
 - **Protection and empowerment of the people**

5.15. Global Climate Change: Temperature Increases & Sea Level Rise

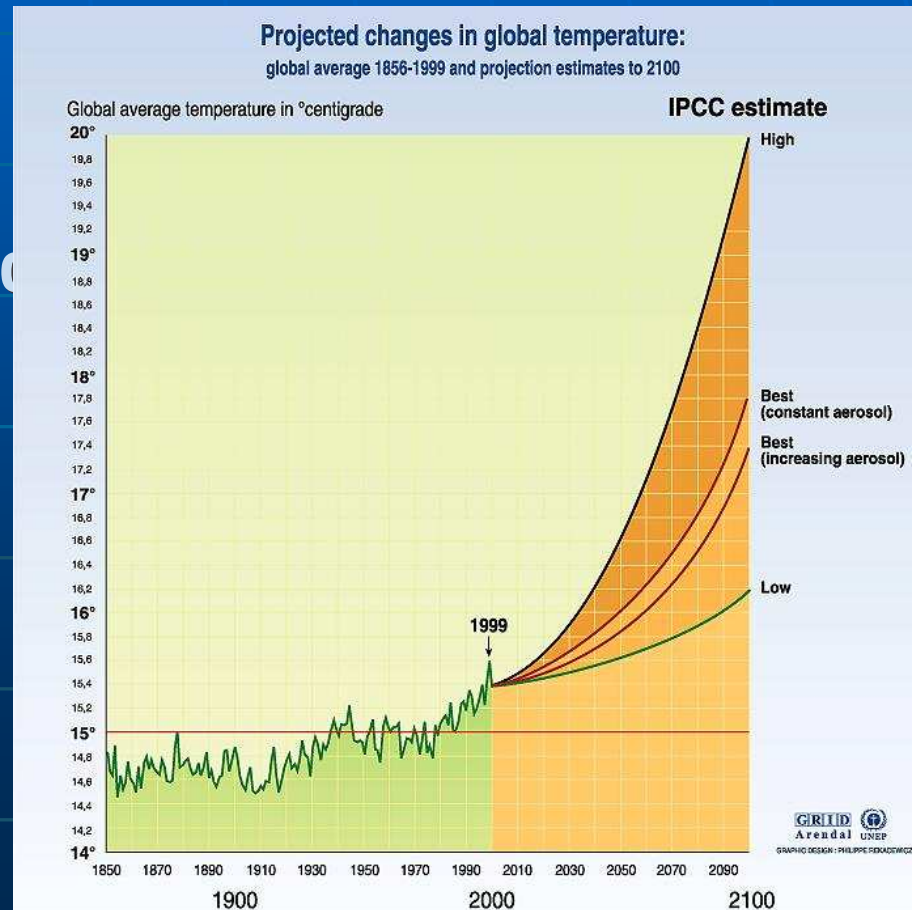
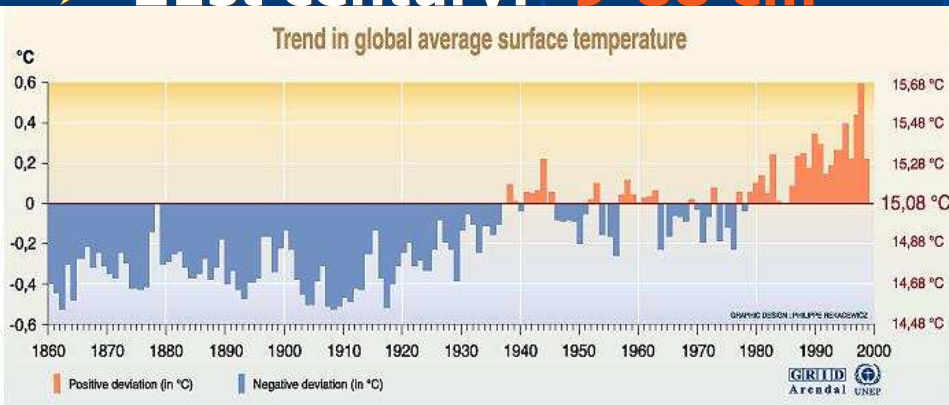
2 Climate Change Impacts: Temperature & Sea level Rise

- ❖ Global average temperature rise in 20th century: **+ 0.6°C**
- ❖ Proj. temperature rise: 1990-2100: **+1.4 – 5.8°C**

Sources: IPCC 1990, 1995, 2001

Sea level Rise:

- 20th cent.: **+0,1-0,2 m**
- 21st century: **9-88 cm**



Source : Temperatures 1856 - 1999: Climatic Research Unit, University at East Anglia, Norwich UK. Projections: IPCC report 95.

5.16. Extreme Weather Events in the 20th & 21st Century (IPCC, TAR 2001, WG II)

Confidence in observed changes (latter half of the 20th century)	Changes in Phenomenon	Confidence in projected changes (during the 21st century)
Likely ⁷	Higher maximum temperatures and more hot days over nearly all land areas	Very likely ⁷
Very likely ⁷	Higher minimum temperatures, fewer cold days and frost days over nearly all land areas	Very likely ⁷
Very likely ⁷	Reduced diurnal temperature range over most land areas	Very likely ⁷
Likely ⁷ , over many areas	Increase of heat index ¹² over land areas	Very likely ⁷ , over most areas
Likely ⁷ , over many Northern Hemisphere mid- to high latitude land areas	More intense precipitation events ^b	Very likely ⁷ , over many areas
Likely ⁷ , in a few areas	Increased summer continental drying and associated risk of drought	Likely ⁷ , over most mid-latitude continental interiors. (Lack of consistent projections in other areas)
Not observed in the few analyses available	Increase in tropical cyclone peak wind intensities ^c	Likely ⁷ , over some areas
Insufficient data for assessment	Increase in tropical cyclone mean and peak precipitation intensities ^c	Likely ⁷ , over some areas

5.17. Climate Change Poses Environmental ‘Threats’, ‘Challenges’, ‘Vulnerabilities’ and ‘Risks’ for National and Human Security

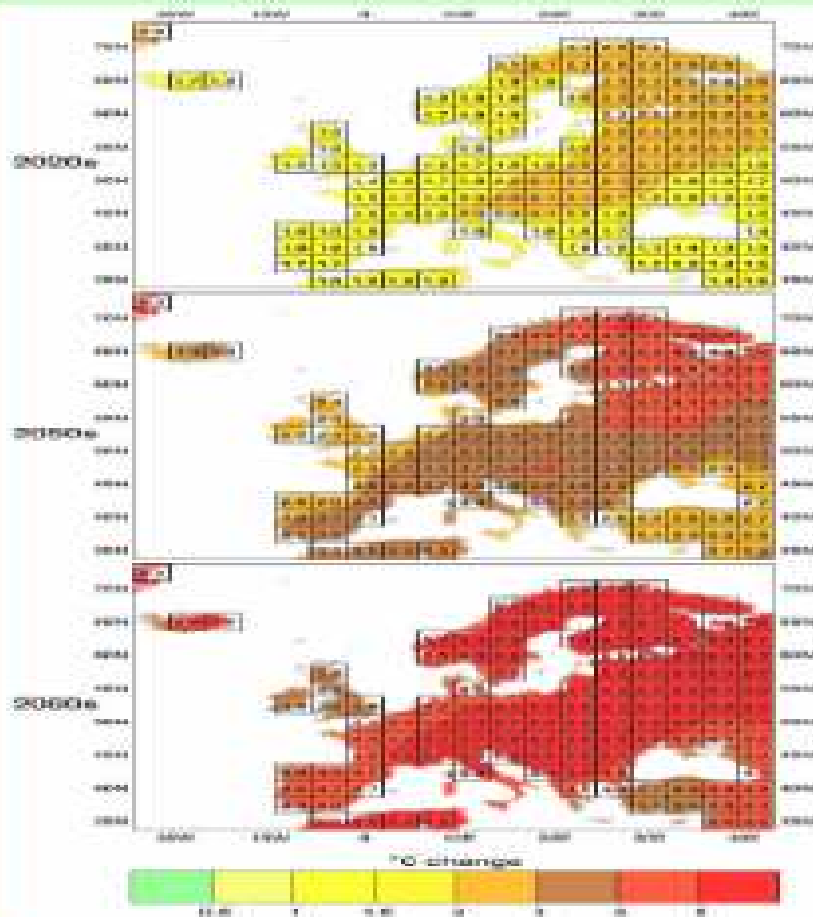
Environmental causes, stressors, effects & natural hazards pose	Natural and economic factors		Societal impact factors (exposure)	
	Substantial threats for	Challenges affecting	Vulnerabilities for	Risks for
	Security objects (for what or whom?)			
Climate change - temperature increase (creeping, long-term)	<ul style="list-style-type: none"> - Human health - agriculture (yield decline) - biodiversity - desertification 	<ul style="list-style-type: none"> - tourism - food security - fisheries - government action - econ. action 	<ul style="list-style-type: none"> - infect. disease - damage to crops - natural systems - water scarcity - forest fire 	<ul style="list-style-type: none"> - human populations - the poor, old people and children due to heat waves
Climate change - sea level rise (creeping, long-term)	<ul style="list-style-type: none"> - Small island states - marine eco-system, - indigenous communities, - industry, energy 	<ul style="list-style-type: none"> - deltas - coastal zones - marine, freshwater ecosystems 	<ul style="list-style-type: none"> - coastal cities, habitats, infrastructure, jobs - cities, homes, jobs 	<ul style="list-style-type: none"> - livelihood - poor people, - insurance, - financial services

5.18. Projected Changes for Winter Temperatures & Summer Precipitation in Europe (2020/2050/2080)

© M. Parry, Meeting of EU Agriculture/ Environment Ministers, 11.9.2005, London

Winter Temperatures

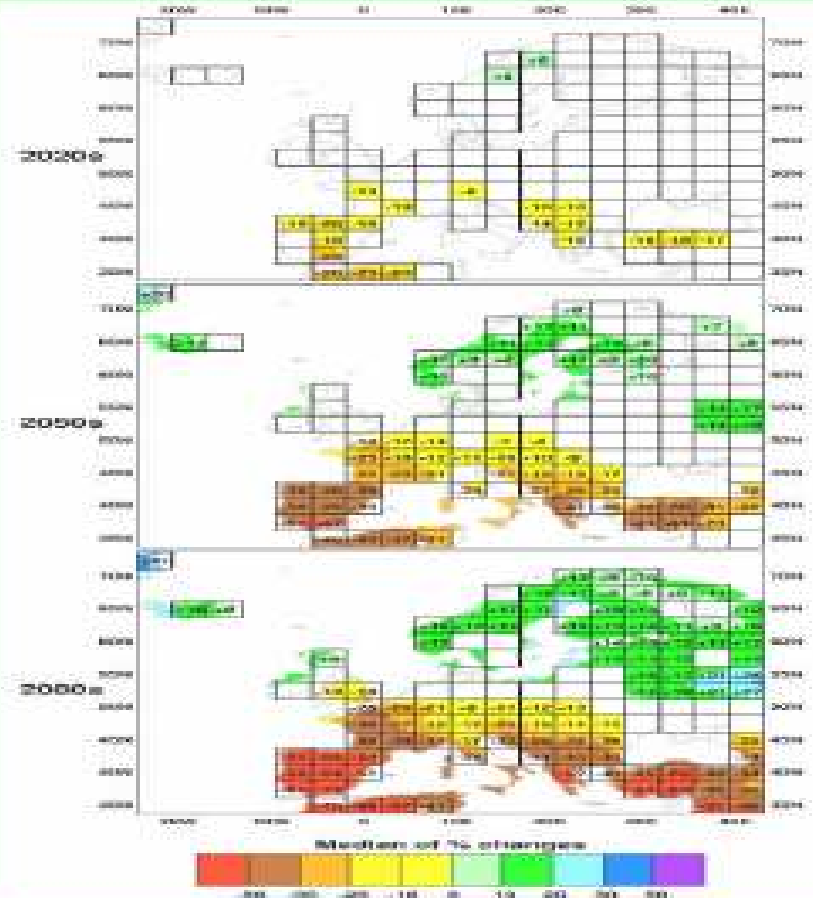
A2



Summer Precipitation

(only significant changes shown)

A2



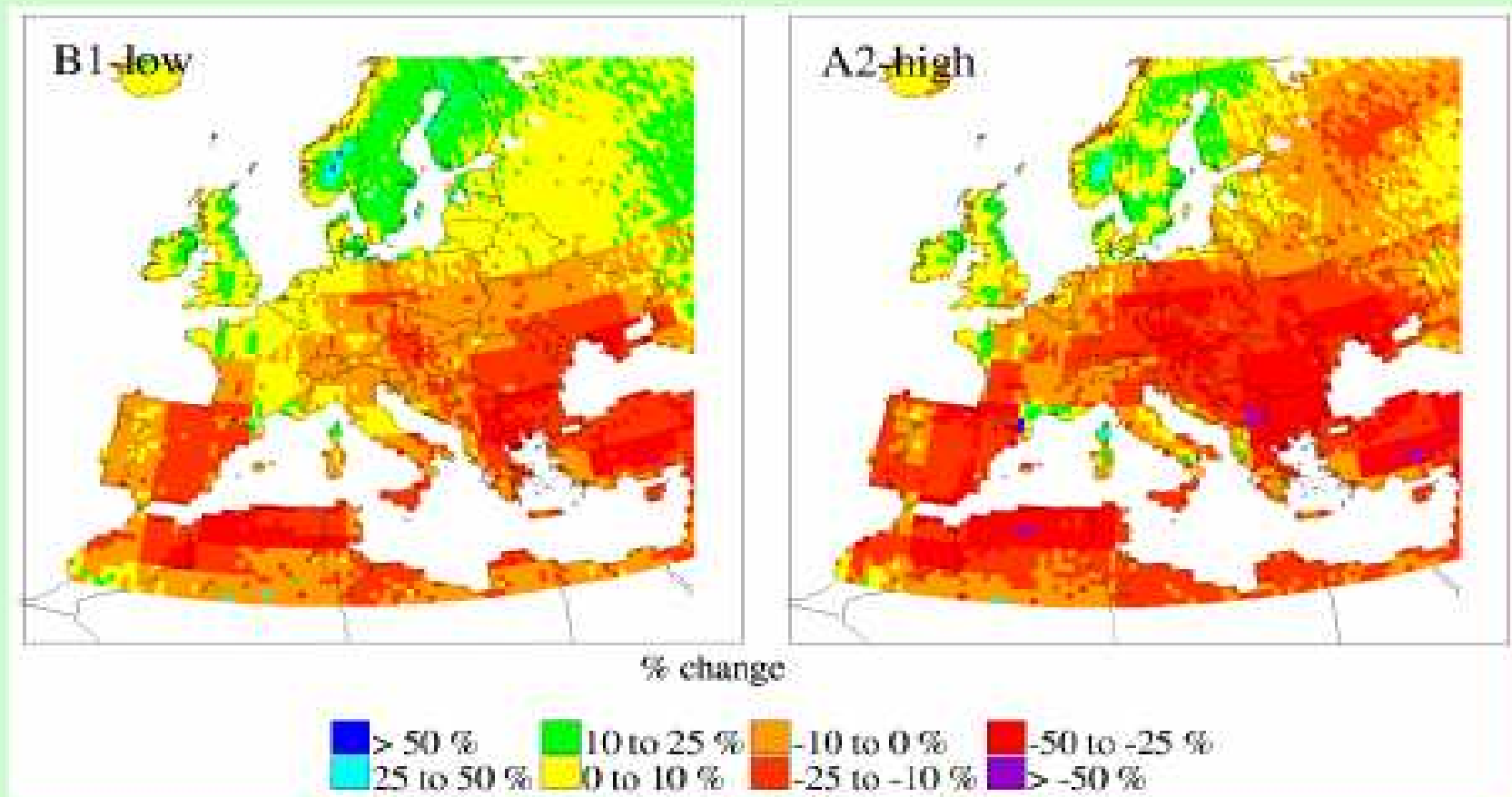
5.19. Water Availability in Europe, 2050's

© M. Parry, Meeting of EU Agriculture/ Environment Ministers, 11.9.2005, London

WATER AVAILABILITY, 2050s

(CHANGE IN ANNUAL RUNOFF)

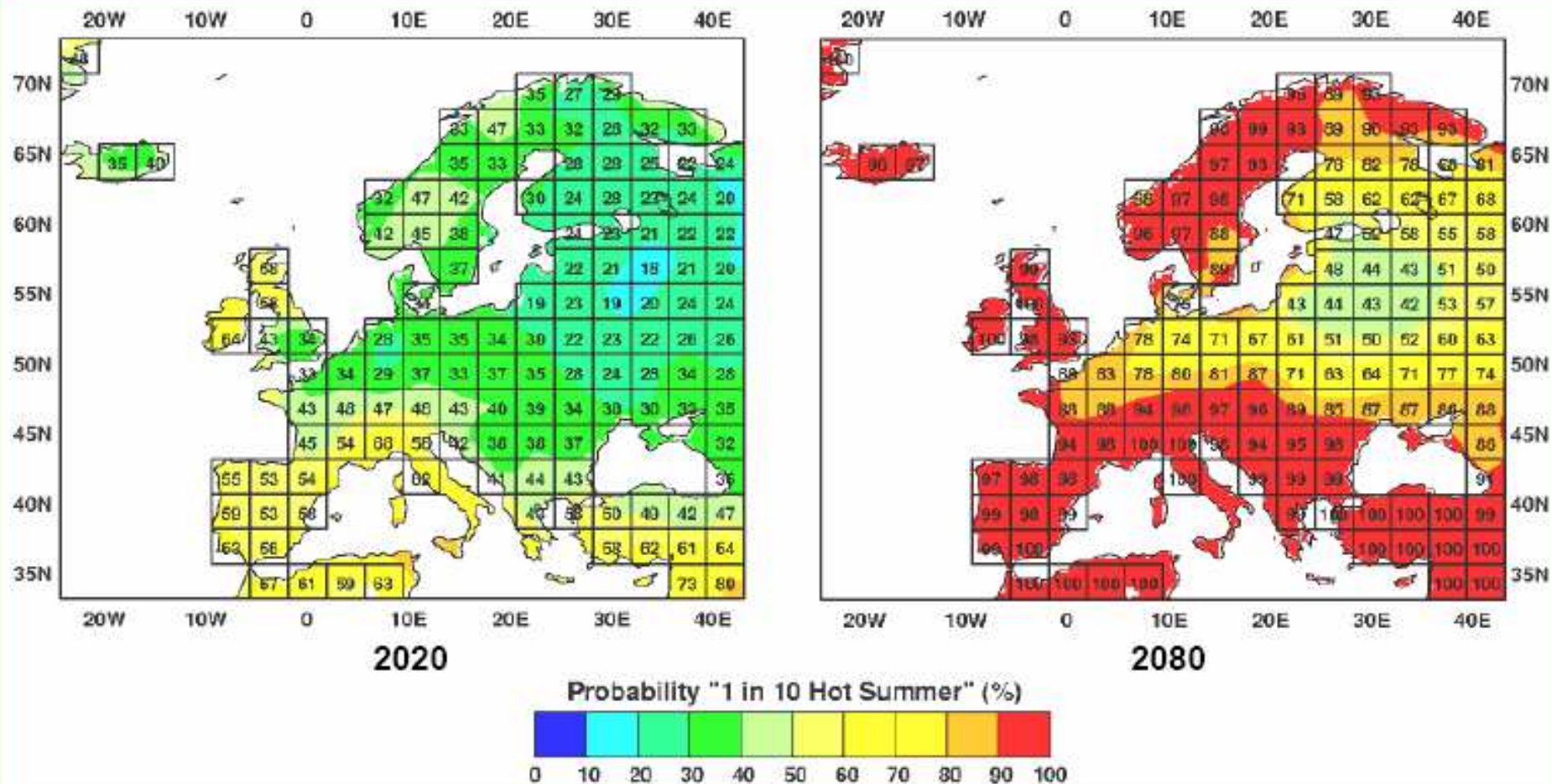
Acacia Project



5.20. Probability of 1 in 10 Hot Summers (%) by 2020 and 2080

© M. Parry, Meeting of EU Agriculture/ Environment Ministers, 11.9.2005, London

A2

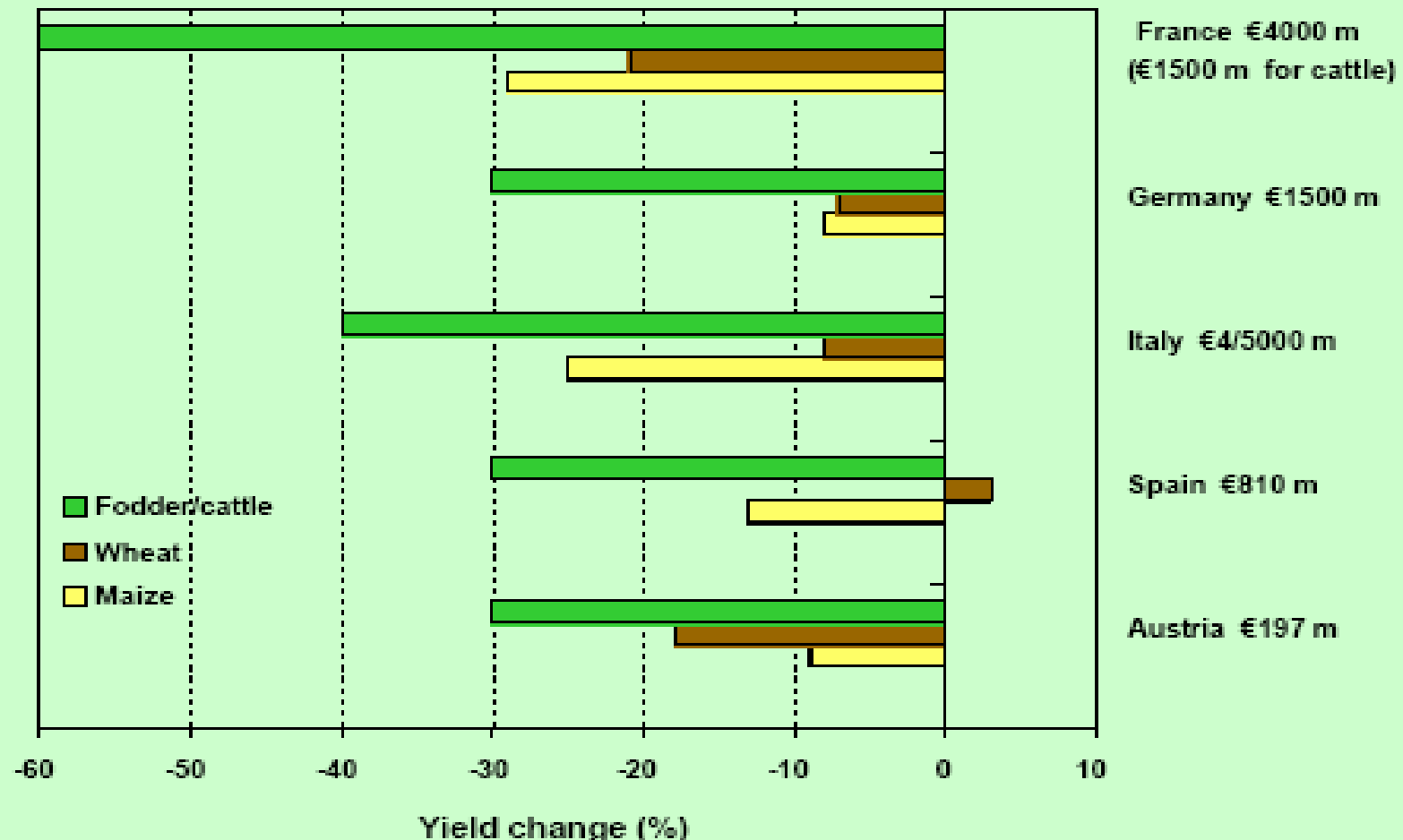


5.21. Effects of 2003 summer heat wave on agricultural yield in five EU countries

© M. Parry, Meeting of EU Agriculture/ Environment Ministers, 11.9.2005, London

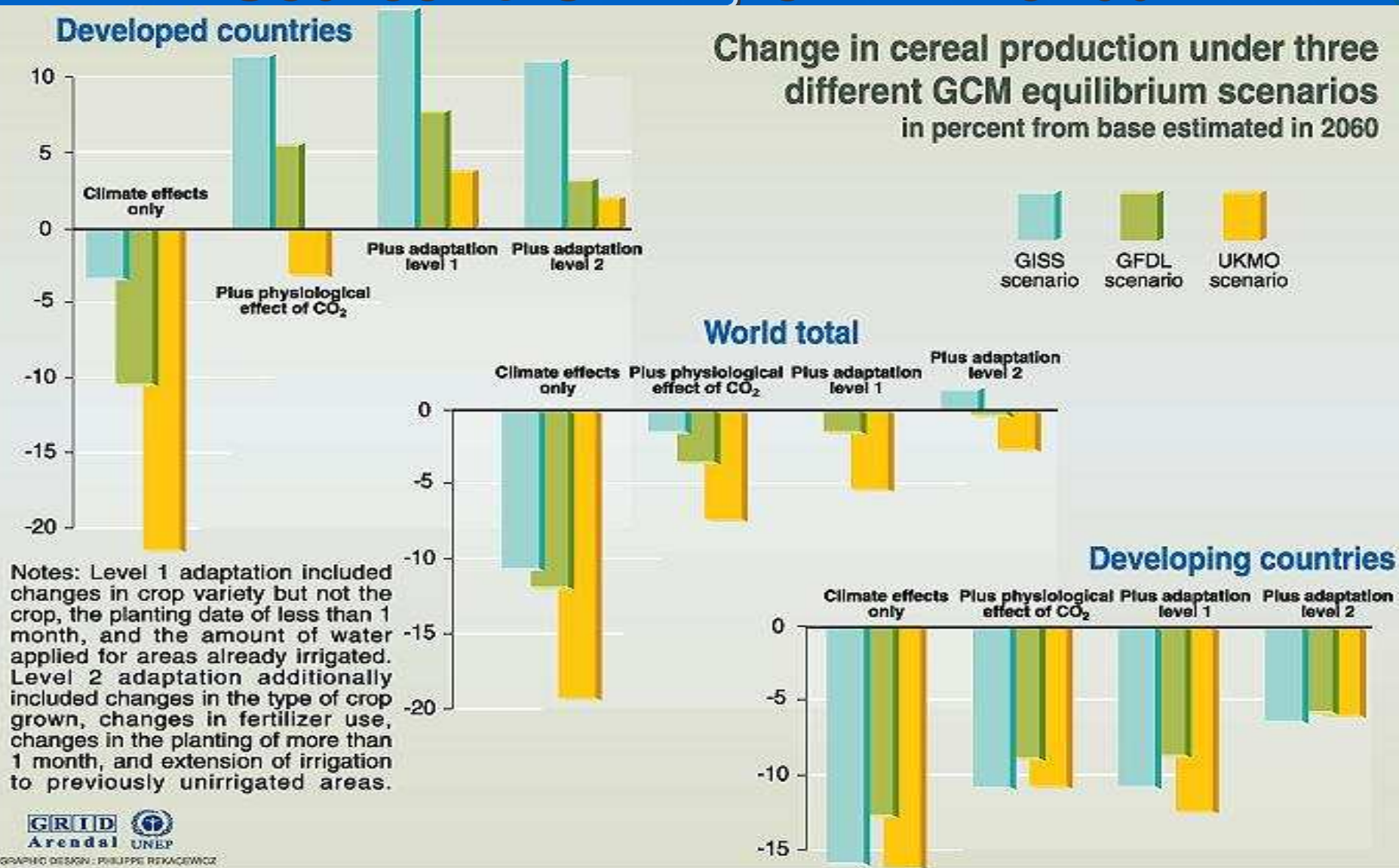
COPA

Effects of 2003 summer heat wave on EU agriculture



5.22. Climate Change Impacts on Agriculture

Source: © UNEP; GRID Arendal



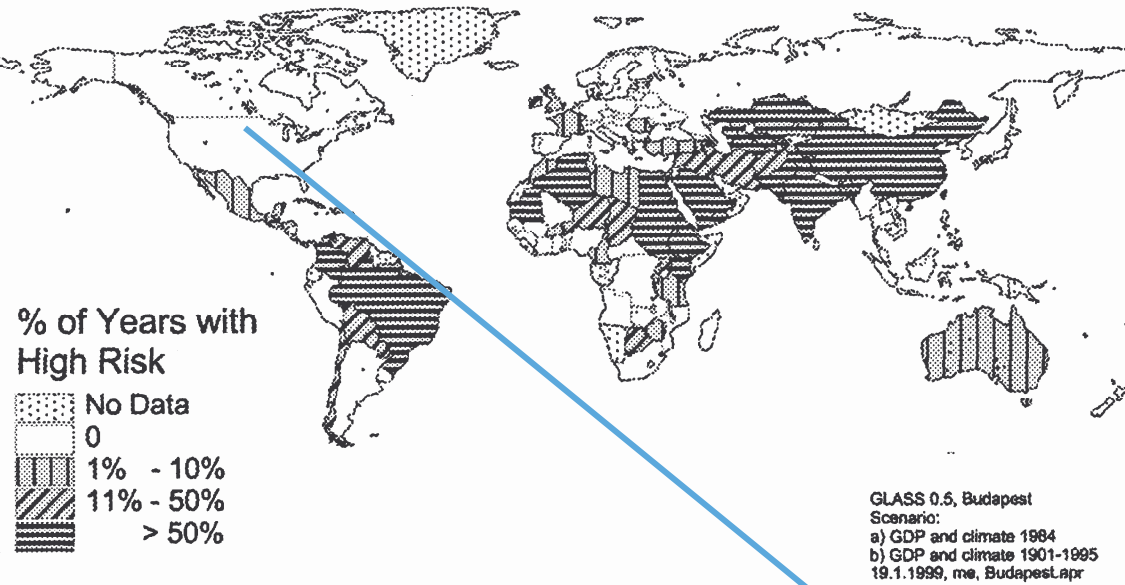


Figure 4. High Potential for Food Crisis 1901-1995.

**← High Potential
for Food Crisis
(1901-1995)**

© Alcamo/Endejan 2002: 143

5.23. Food Crises High Potential for Food Crisis (2001- 2050) with GDP and Climate Change →

© Alcamo/Endejan 2002-143

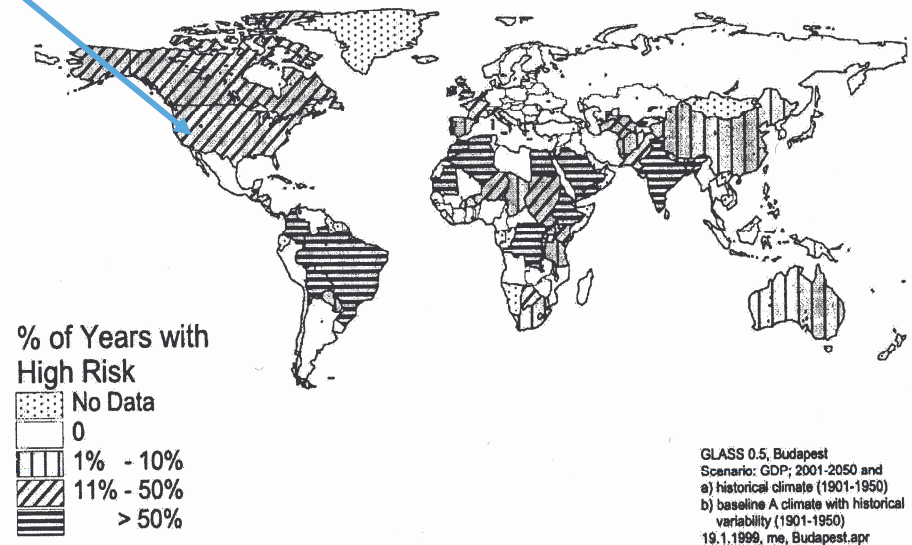
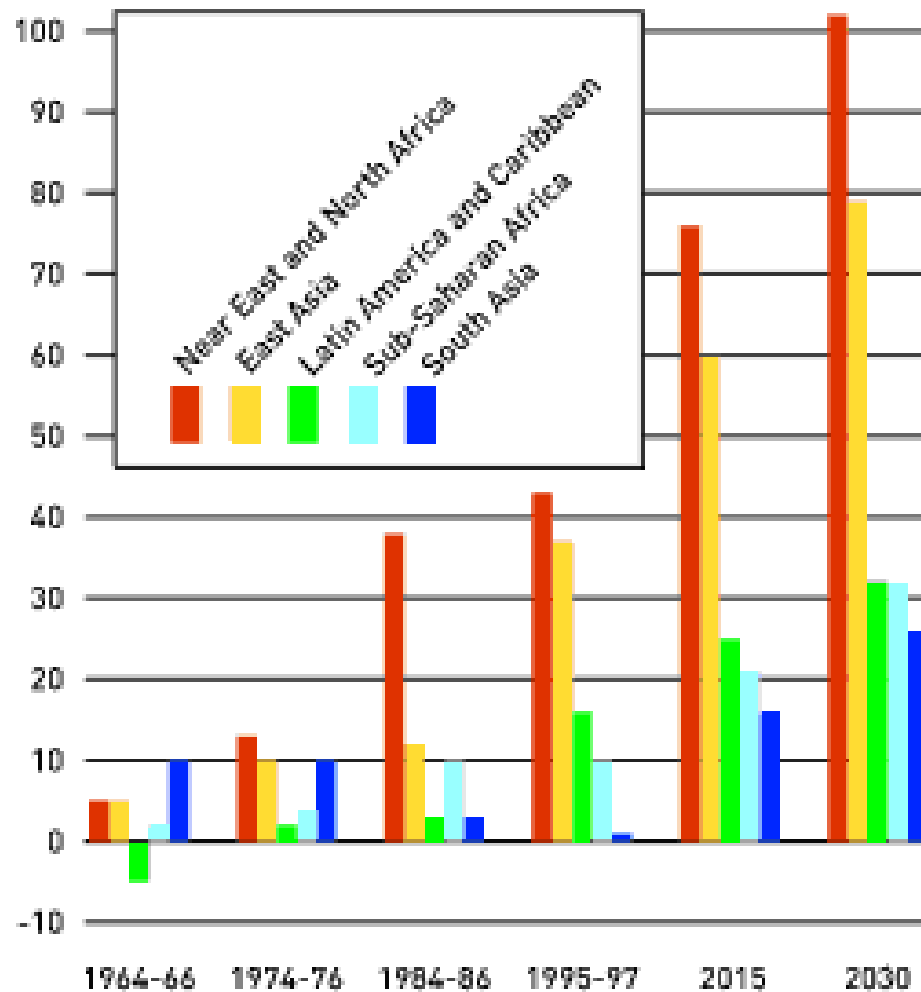


Figure 6. High Potential for Food Crisis 2001-2050
– with GDP Increase and Climate Change.

5.24. FAO (2000) Increase in Cereal Imports

Net cereal imports in developing countries

millions of tonnes



- **FAO: 4 March 2003, Rome** World's population will be better fed by 2030, **but hundreds of millions of people in developing countries will remain chronically hungry.**
- Number of hungry people will decline from 800 million today to 440 million in 2030.
- **The target of the World Food Summit (1996) to reduce the number of hungry by half by 2015, will not be met by 2030.**

5.25. Climate Change: A New National “Security” Challenge? Climate change may spark conflict

- Britain's Defence Secretary, John Reid, pointed to violent collision between a rising world population & shrinking world water resource: global warming. **Climate change may spark conflict between nations** and British armed forces must be ready to tackle violence.
- He forecast that violence and political conflict would become more likely in the next 20 to 30 years as **climate change turned land into desert, melted ice fields and poisoned water supplies.**
- He ... listed **climate change alongside the major threats** .. in future decades, incl. terrorism, demographic changes, global energy dem.
- He warned of increasing uncertainty about the future of the countries least well equipped to deal with **flooding, water shortages and valuable agricultural land turning to desert.**
- „We see uncertainty growing ... about the geopolitical and human consequences of climate change. **Impacts such as flooding, melting permafrost & desertification could lead to loss of agricultural land, poisoning of water supplies & destruction of economic infrastructure.**
- **More than 300 million people in Africa currently lack access to safe water; climate change will worsen this dire situation.,,**

5.26. **Climate Change** Poses Threats, Challenges, Vulnerabilities & Risks for **Human**, National, Food & Health **Security**

- **Globally: past trends & future projections**
 - Temperature increase and change in precipitation
 - Increase in both flash floods & droughts
 - **Hazard impacts depend also on social vulnerability and resilience**
 - Response requires both protection & empowerment of the people
- **Climate Change Impacts on Human Security**
 - Increase in temperature (flash floods & droughts) & sea level rise poses a
 - „survival dilemma“ for affected poor people in the South:
 - a) to stay at home and to protect property (women, children, old p.)
 - b) to leave their home and to move to mega cities (metro poles)
 - c) to fight for the access to water (nomads in Sahel countries)
- **Conceptual Response is HUGE (U. Oswald Spring, Mexico)**
 - **Human, Gender and Environmental Security (HUGE)**
 - a) to cope with survival dilemma of the victims of Global Environm. Change
 - b) to develop survival strategies by enhancing resilience

6. Dimension and Sector of Analysis: Environmental & Water Security

- **Environmental security**
 - 3 phases of research
 - Conceptual academic debate (US nation. security)
 - Application; ENSEC initiative
- **Linking human & environmental security**
 - 'People-centred' environmental security (Barnett)
 - Environmental dimension of human security (Bogardi/Brauch 2005, Brauch 2005, 2005a)
- **"Water" as an Object of Securitization**
 - Concepts of Water Security
 - Too much water: Storms and floods
 - Too little water: Drought and famine
 - Water Conflicts and water cooperation
 - UNESCO PCCP project
 - Water-related hazards and water security

6.1. Environmental Security

- **Political & Scientific concept**
 - **Political concept of international relations**
 - 1987: Brundtland Report
 - 1987/1988: Mikhail Gorbachev; speech to UN GA
 - 1996-1999: NATO, U.S.-German CCMS project
 - 2003: ENVSEC: OSCE, UNDP, UNEP, NATO. UNECE
 - **Scientific concept: 3 phases of research**
- **Dimension of a widened security concept**
 - **Referent: of global & international security**
 - Impact of gradual climate change (Brauch, BMU, 2002)
 - Impact of abrupt climate change (Schwartz/Randall, 2003)
 - **Of national security**
 - 1st & 2nd phase of environmental security research
 - **Of human security**
 - UNDP Report (1994)

6.2. 3 Stages of State-centred Research on Environmental Security (1983 - 2006)

Main referent of research has been “nation state”

- **First conceptual phase (1983-1990): Political & conceptual**
 - Impacts of wars on environment (**Westing**), since 2001: **UNEP-PCAU**
 - Environment as a cause of crises & conflict
- **debate on env. security as a new U.S. national security issue**
 - Ullman, 1983; Mathews, 1989, N. Myers, 1989
- **Second empirical phase (1991-2000): Theoretical & empirical**
 - Canada: **Th. Homer-Dixon**: Scarcity: cause of conflict (1994-1999)
 - Switzerland: **Bächler/Spillmann (ENCOP, Ecoman, Econile, NCCR-NS)**: case studies on env. scarcity, degradation as causes of environmental stress & conflicts and environmental cooperation
- **Third Phase: methodological diversity (since ca. 1995-present):**
 - **GECHS**: GEC & HS: climate change impacts on human security (2005)
 - **WBGU/PIK**: Syndromes of global change
 - **Swiss project (NCCR – N/S)**: mitigating syndromes of global change,
 - **PRIO**: Civil War re-search: **ongoing, many directions, little synthesis**
 - **World Bank**: Collier/Bannon: environm. abundance as a cause of conflicts

6.3. Linking Human & Environmental Security

- **Two separate schools of thought:**
 - **Environmental security:** primarily state-centred (U.S. focus)
 - **Human security:** so far no focus of the Human Security Network (14 states) on environment & on natural hazards
 - **HSN 8th Min. meeting in Bangkok (1-2 June 2006):** reference to the need to consider GEC and natural hazards
- **'People-centred' environmental security:**
 - **Jon Barnett (Au/NZ, 2001):** reduce environmental degradation for the vulnerable people. He draws on ecology and hazard theory with the key notions of risk, vulnerability and resilience.
- **Environmental dimension of human security:**
 - **UNDP (1994):** 'environmental security' one of 7 components of an all-encompassing human security concept.
 - **GECHS (1999):** focuses on the pressures and effects of GEC
 - **UNU-EHS (2005):** focuses on the impacts, the societal outcomes but also on policy response, primarily in the UN system.

6.4. Water Security (WS)

- **“Ministerial Declaration (MD) of The Hague on Water Security in the 21st Century” (22.3.2000) by first WWF stated water security required that:**
 - freshwater, coastal and related ecosystems are protected and improved; that sustainable development and political stability are promoted, **that every person has access to enough safe water at an affordable cost to lead a healthy and productive life**
 - and that the **vulnerable are protected from risks of water-related hazards.**
- **Ministerial Dec. (2000) pointed to 7 main challenges for WS:**
 - 1.Meeting basic needs
 - 2.Securing the food supply
 - 3.Protecting ecosystems
 - 4.Sharing water resources
 - 5.Managing risks
 - 6.Valuing water
 - 7.Governing water wisely

6.5. From Water Conflict to Cooperation

UNESCO's PCCP project

- **Water scarcity & degradation: as cause of conflict or determinant for cooperation:**
 - Sadat, Boutros-Ghali, Serageldin: **water war thesis**
 - P. Gleick (2004): Chronology of water conflicts
 - A. Wolf: collection of water treaties, counter thesis: no water wars (depends on definition of war)
 - Kipping: Senegal: scarcity: cooperation, abundance: war (Senegal and Mauritania)
- **UNESCO: PCCP Project (2001-2003, 2004-)**
 - **UNESCO: linkage: potential conflict & co-operation potential**
 - 2001-2003: priority to international water conflicts with potential to cause tension or even open conflict between sovereign states.
 - Case studies: a) how conflicts escalate and how the vicious circle can be broken; b) how cooperation develops in different situations; and c) what practical steps are necessary to assist this process
 - **Cooperation in river basin management (commissions), NBI**
 - building trust is central to successful strategies for cooperation
 - river basin commissions: helping to bypass political roadblocks & achieve sound technical understanding for policy decisions

7. Water-related Social Vulnerabilities

- **Social vulnerability of whom?**
 - Poor living in hazard-prone areas (habitat, livelihood)
- **Social vulnerability from what?**
 - Water-related natural hazards
 - Impact of storms
 - Impact of flash floods
 - Impact of drought
 - Violent domestic conflicts & wars
 - Complex emergencies: violence & hazard impact
 - Tsunami: Aceh and Sri Lanka
 - Earthquake in Kashmir;
 - Sudan: drought & ethnic-religious conflict
 - Zaire/Congo: Goma volcano eruption in area with war refugees
- **Hazards & social vulnerability pose a survival dilemma for those with high social vulnerability**
 - Cause of forced migration: from village to cities
 - Gender difference in social vulnerability: survival dilemma

7.1. Vulnerability as a Scientific Concept

- **Vulnerability concept of six communities:**
 - global environmental change
 - climate change community
 - **Hazard/disaster,**
 - environment, development & Early warning community
- **Vulnerability:** generated by “social, economic & political processes”.
 - **Oliver-Smith (2004)** “vulnerability: a political ecological concept.”
 - **Wilches-Chaux (1989): 11 types:** “natural, physical, econ., social, political, technical, ideological, cultural, educational, ecological, institutional **vulnerab.**”
- **Vulnerability to GEC & Climate Change:**
 - **Vulnerability to GEC:** risk of adverse outcomes to receptors or exposure units (human groups, ecosystems, communities) of changes in climate, environmental variables, & social conditions. ... **Vulnerability is a multidimensional concept involving exposure; sensitivity; and resilience.** ... Vulnerability can increase through cumulative events or when multiple stresses weaken the ability of a human group or ecosystem to buffer itself against future adverse events.
 - **IPCC WG II** distinguishes between **sensitivity, adaptive capacity & vulnerability** (“the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes”).
 - **Mandate:** “assess vuln. of ecol. systems, socioecon. sectors, & human health”
- **Vulnerability as Political & Scientific Concept in Hazard Research**
- **Peduzzi (2000), Early Warning Unit at UNEP/DEWA/GRID-Europe contributed to** indicators for ‘global vulnerability & risk mapping

7.2. Social Vulnerability in Hazard, Development Research, and Policy Community

■ No Consensus on Vulnerability Concept:

- **Review of vulnerability concepts** in above six communities no consensus on definition, criteria & indicators for measurement of vulnerability.
- For **hazard community**, vulnerability: combination of add. contributing factors causing a hazard due to natural variability or human inducement to a disaster. Selection of these factors: worldview, mind-set, perception, theories & models.
- **Vulnerability is always socially constructed**. 'vulnerability' is how the analyst or policy-maker has defined it and which of the many definitions have become accepted by a consensus within the respective research community.

■ Social vulnerability' in hazard research: to distinguish social from physical, economic, political, human factors

■ DFID (2003) Social vulnerability is the complex set of characteristics that include a person's:

- **initial well-being** (nutritional status, physical and mental health, morale;
- **livelihood and resilience** (asset pattern & capitals, income & exchange options, qualifications);
- **self-protection** (degree of protection afforded by capability & willingness to build safe home, use safe site);
- **social protection** (forms of hazard preparedness provided by society more generally, building codes, mitigation measures, shelters, preparedness); and
- **social and political networks and institutions** (social capital, but also role of institutional environment in setting good conditions for hazard precautions, peoples' rights to express needs and of access to preparedness).

8. Human Security Threats, Challenges, Vulnerabilities and Risks from Water-related Hazards

- The four concepts: threats, challenges, vulnerabilities and risks
- The data base: different focus and data of MunichRe vs. CRED
- Drought, famine & victims: clashes between herders and farmers in the Sahel
- Floods: case study on China and Vietnam
- Storms: case study on the Caribbean: Cuba vs, Haiti, US vs. Mexico

9. Security Objects for Coping Strategies and Resilience Building

- **Report of Human Security Commission: Freedom from Want (2003)**
- **Protection: key role of the state**
 - Reducing physical vulnerability: shelters, dams etc.;
 - Building infrastructure;
 - Early Warning;
 - Disaster preparedness and rapid response.
- **Empowerment: role of the state & people**
 - Reducing social vulnerability, e.g. habitats in hazard prone regions;
 - Local knowledge;
 - Citizens' participation;
 - Training and preparedness of residents.



9.1. Human Security Commission Report: Ogata/Sen: Human Security Now (2003)

- **Commission on Human Security (CHS)** established in January 2001 at initiative of Japan. The Commission consisted of twelve persons, chaired by Sadako Ogata (former UNHCR) Amartya Sen (1998 Nobel Economics).
- **CHS goals:** a) promote public understanding, engagement and support of human security; b) develop the concept of human security as an operational tool for policy formulation and implementation; c) propose a concrete program of action to address critical and pervasive threats to HS.
- **Human Security Now** (2003) proposes a **people-centered** security framework that focuses “**on shielding people** from critical and pervasive threats and **empowering them to take charge of their lives**. It demands creating genuine opportunities for **people to live in safety and dignity and earn their livelihood**. Its final report highlighted that:
- More than **800,000 people a year lose their lives to violence**. Ca. **2.8 billion suffer from poverty, ill health, illiteracy & other maladies**

10. Conclusions and Suggestions for Research & Policy

Do Water-related Social Vulnerabilities Create Human Security Threats, Challenges Vulnerabilities and Risks?

- Water-related hazards (storms, flash floods, flooding, drought) have increased
 - in number, intensity,
 - Number of persons killed, affected
 - damage and insured damage
 - **Lack: gender-specific data (women, children, old people)**
- Impact on number of dead/affected differs due
 - Life, property, livelihood and survival of many people is threatened or challenged by these events
 - In developing countries number of dead & affected is higher due to high degree of social & environmental vulnerability
- Water-related hazards pose threats, challenges for:
 - Human security: human survival, survival dilemma & strategy
 - Food, health and livelihood security: push factor -> migration
 - Less for national, regional and international security.

10.1. Conclusions

- 1. Security can no longer use state as sole referent.**
States can no longer monopolize the security realm.
- 2. Human Security is threatened by**
 - underdevelopment (freedom from want),
 - violent conflict (freedom from fear), and
 - societal and natural hazards (freedom from hazard impacts)
- 3. A consensus must be reached on:**
 - more precise conceptual definition and
 - better operationally practical measures
- 4. Key Conceptual Task for HS:**
 - to identify priority issues without becoming
 - too outstretched and therefore operationally unfeasible
- 5. Policy Response: Reducing Social Vulnerability & Building Resilience Simultaneously Addressing:**
 - Poverty and Violence
 - with Hazard Impacts

10.2. Policy Response: Reducing Social Vulnerability & Building Resilience

- **To environmental scarcity, degradation & stress:**
 - **Proactive climate policy:** reduce greenhouse gases by shifting to nonfossil energy resources, especially renewables
 - **Combat desertification and soil erosion:**
 - **Cope with water scarcity & degradation** by demand-side management and alternative supply (desalination with renewables)
 - **Cope with population growth, rural emigration and urbanisation**
- **To extreme outcomes of GEC, hydro-meteorological hazards & severe societal consequences:**
 - **Reducing the hazard impact by enhanced early warning against multiple hazards and reducing social vulnerability by improved resilience**
 - **Improved policy of conflict resolution, prevention and adaptation and mitigation against challenges of GEC that may lead to conflicts (anticipatory learning & conflict avoidance)**

10.3. Simultaneously Addressing: Poverty & Violence with Hazard Impacts

- **4 pillars of human security address policy goals:**
 - Freedom from fear: „violence“, conflicts & wars and the means to fight them, small & light weapons
 - Freedom from want: „poverty“, basic human needs
 - Freedom to live in dignity: „good governance“ & „human rights“
 - Freedom from hazard impacts: **social vulnerability & resilience**
- **Policy strategies to address simultaneously: violence, poverty, human rights and hazard impacts**
 - Violence in local, regional, national and international conflicts
 - Violence in complex emergencies where a hazard impacts on a conflict region: volcano in Goma, tsunami in Sri Lanka/ Aceh
 - Where hazards cause, trigger, intensify, influence viol. conflicts
 - **These are being considered by the Human Security Network**

10.4. Policy Task: Strengthening Human Security as „Freedom From Hazard Impact“

Bogardi/Brauch (2005): focus on the env. dim. of HS by trying

- to mainstream both,
- to contribute to the fourth phase of the environmental security debate,
- to develop a new pillar of HS concept as “freedom from hazard impact”

This requires mainstreaming scientific and political efforts:

- **environmental dimension of human security** (conceptualisation in scientific community),
- a “**paradigm shift**” within the **UN System** from national towards a human security perspective on environmental threats, challenges, vulnerabilities, risks

For internat.organisations, a dual mainstreaming is needed:

- **to incorporate a “human security” perspective into “environmental security initiatives”,**
 - ENVSEC process of OSCE, UNEP, UNDP, and NATO
 - into the “green diplomacy” of the European Union launched at EC in Thessaloniki in June 2003; and,
- **to add a “environmental security dimension” to HSN agenda**
 - **with a special focus on complex emergencies**
 - **where violent conflicts and hazard impacts interact.**

10.5. Complex Emergencies

Co-existence of hazards & conflicts: challenge for intern. humanitarian organizations

- Tsunami impacted on two conflicts: Aceh & Sri Lanka
- Kashmir Earthquake (2005) impacted on conflict region
- Drought in Sahel zone has triggered small-scale viol.
- Earthquake (1985) in Mexico has led to political reform

Complex Causal Linkages

- Existing conflicts increase social vulnerability to hazards
- Hazards may cause disasters, migrations, crises & conflicts
- Two sides of environmental security: environmental conflict vs. peacemaking?

No Joint Dialogue & Research between two Early Warning Communities on Hazards & Conflicts

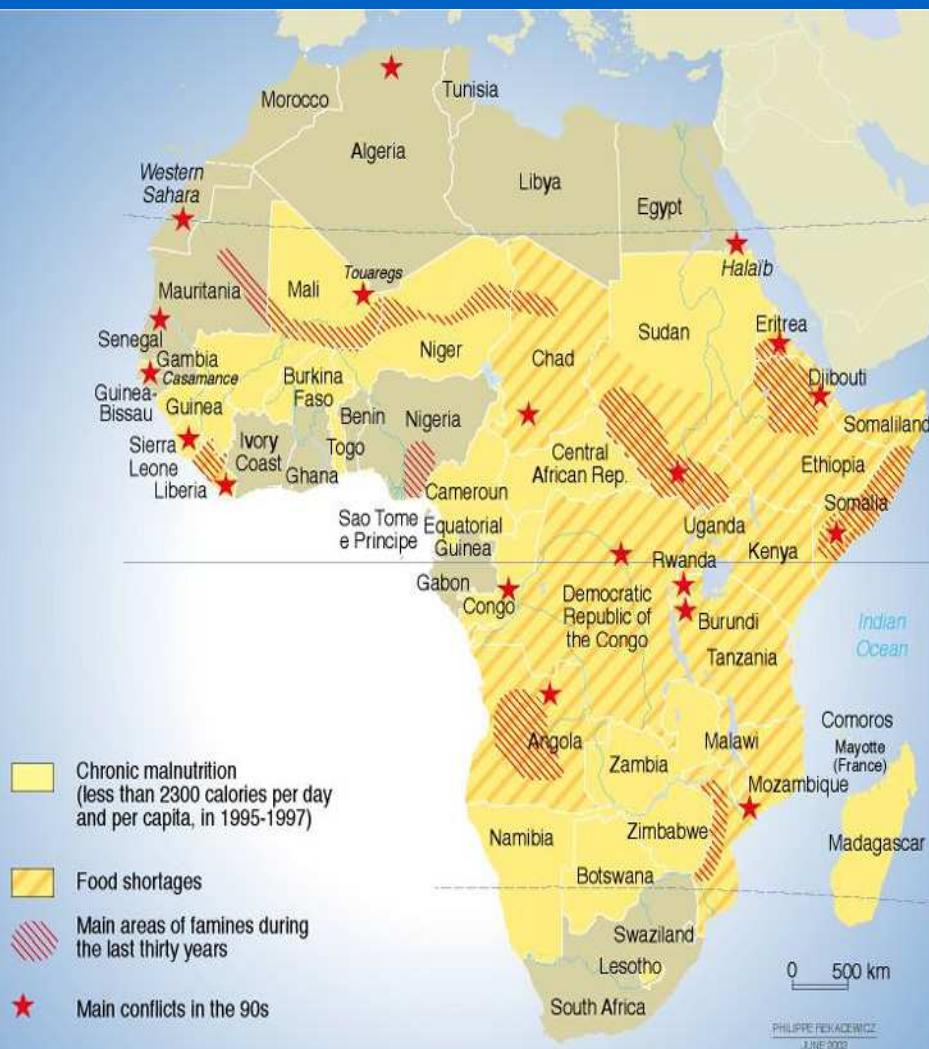
- **Parallel approaches:** operational consequences for customers
- **Humanitarian Organisations:** OCHA, IFRC-RCS deal with both

10.6. Hazards as a Cause of Conflict

Coincidence: famine areas & conflicts

Sudan: coexistence of: disasters, internal displacement, refugees, conflict

- **Famines, political unrest, and civil wars occur simultaneously in same countries & regions**
- **Migration: rapid spread of diseases, especially AIDS.**
- **Social science research is needed on links among extreme & fatal outcomes: drought, famine, migration, crises & conflicts.**



Sources: Map originally created by Sylvie Brunel and Cécile Marin. *Human Development Report*, PNUD, 1996; Ramsès 1994, Dunod; *Total Call of the HCR Examination of the Programs*, HCR, 2001; *The State of Food Insecurity in the World*, FAO, Rome, 1999; *Populations en danger*, Médecins sans frontières - Lepac, La Découverte, 1995; *Interventions*, Action internationale contre la faim, 1994; *Le Monde peut-il nourrir le monde?*, Les Clés de la planète, hors-série n° 1, Croissance, Paris, 1998.

10.7. Need for Mainstreaming of Early Warning of Hazards & Conflicts

- **Early Warning of Hazards and Disasters**
 - Earthquakes & Tsunamis: Charter
 - Floods & Storms: Weather Services
 - Drought & Famine: FAO, WFP, USAID et al.
 - Disease, Pandemics: WHO & nat. agencies
- **Early Warning of Crises and Conflicts**
 - Refugees, Internal Displacement & Migration: UNHCR, IOM
 - Crises: press, research, intelligence agencies
 - Conflicts: press, research, intelligence agencies
- **Linking early warning on disasters & conflicts**
 - ❖ **Successful early warning of hazards will also mitigate conflicts**
 - ❖ **Successful early warning of conflicts will reduce vulnerability to hazards**
 - ❖ **Scientific dialogue and political cooperation is needed**

10.8. 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.

10.9 Human Security Network Members & Goals

NATO (4)	EU (6)	Third World (6)
Canada		Chile
Greece	Austria	Costa Rica
Nether-lands	Ireland	Jordan
	Slovenia	Mali
Norwa y	Switzer- land	Thailand (chair)
		South Africa

The Network has an inter-regional & multiple agenda perspective, strong links: civil society & academia.

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

**Conferences at Foreign Ministers level in
Bergen, Norway (1999),
Lucerne, Switzerland: (2000),
Petra, Jordan (2001)
Santiago de Chile (2002),
Graz, Austria (2003),
Bamako, Mali (May 2004),
Ottawa, Canada (2005)
Bangkok, Thailand (2006)**

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

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

10.10. “Freedom from Hazard Impact”:

New Issue for “People-centred Development” for HSN

- During **Thai Presidency** (2005-2006) at 8th Ministerial meeting in Bangkok, 1-2 June 2006, the Thai foreign minister, **Kantathi Suphamongkhon**, suggested in the chairman’s conclusions:
- **The network should ... broaden the scope of its focus** into non-traditional threats to human security **by addressing ‘freedom from hazard impact’ such as threatening diseases and natural disasters** and promoting ‘freedom from exclusion’ through the involvement of the public in human security dialogue in order to engage all stakeholders.
- (1) **Environment:** prevention of global environmental impact as a result of human activities, with emphasis on the cross-sectional connection between **human security & environmental impact**, the significance of humanitarian assistance, and engagement with the business sector such as the **insurance industry** in time of **natural disasters**; (2) **HIV/AIDS:** integration and measurement of human security in existing HIV/AIDS national programmes;

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with you these conceptual ideas.**

**Thank you for your attention
and patience.**

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