



## **IPRA Global Conference**

**'Peace and Justice in a Globalized World: Opportunities & Challenges'**  
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**© Hans Günter Brauch,**

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### **Security and Peace Impacts of the Climate Paradox: Assessing the Hobbesian Climate Change & Security Discourse**

**Ecology and Peace Commission**

**Saturday, 24 November 2012, 16:20-18:20**

### **Session 2: Sustainability Transition and Sustainable Peace**



Berlin

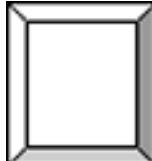


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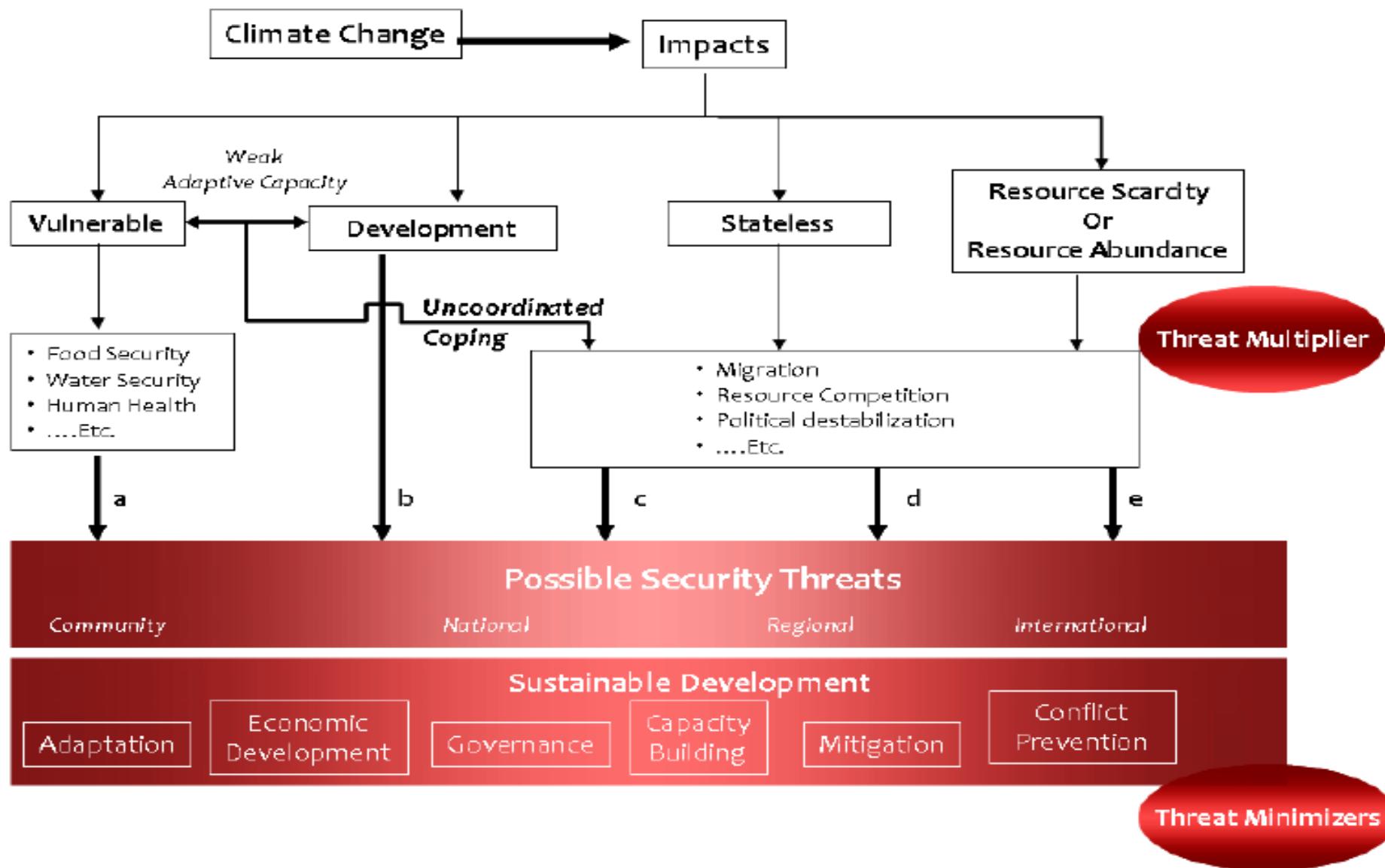
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# 1. Introduction: Two Alternative Discourses

- **Reactive policies and scientific discourse:**  
Continuation of present trends of anthropogenic Climate Change: may lead to severe security implications for international, national & human security, espec. to climate-induced migration, crises, conflicts or: climate change as a threat multiplier!
- **Proactive policies & scientific discourse:**  
Strategies of long-term transformative change towards sustainable development (sustainability transition), especially in those sectors (energy, transportation, housing etc.) or: climate change as a threat minimizer!

# 1.1. Report of UN-Sec-General (11.9.2009)



## **2. First Discourse: Securitization of Climate Change**

### **Three security policy debates**

#### **Climate change & internat. security discourse**

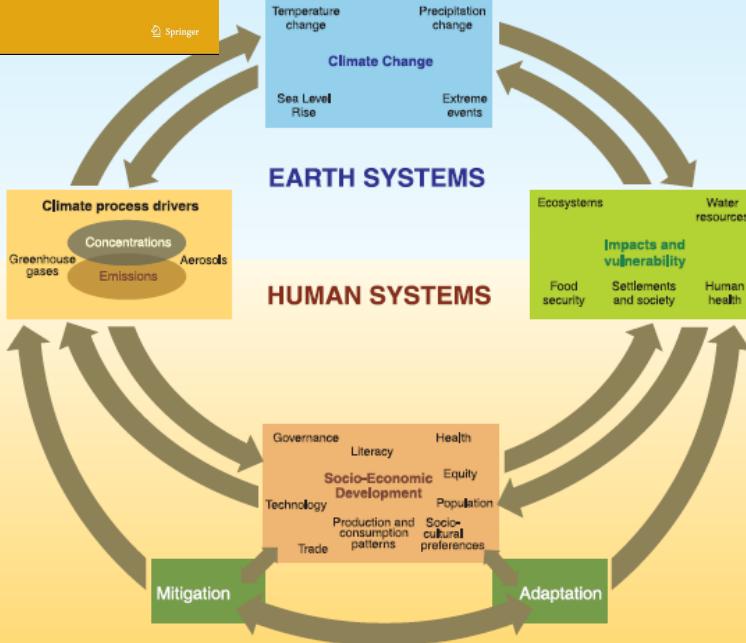
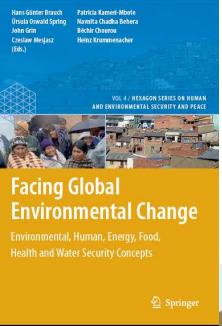
- UN (17 April 2007): FM M. Beckett, UK presidency**
- EU (2008): EC & Council Study & roadmap process**
- UN GA (June 2009) Res., Report by Sec. General**

#### **Climate change & national security discourse:**

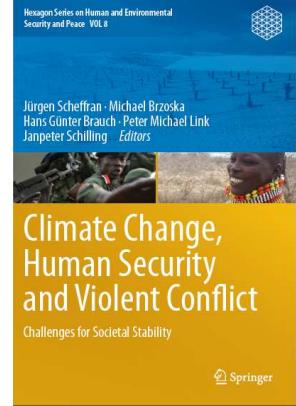
- US studies: CNA, CSIS, NIC (CIA), NSS 2010**

#### **Climate change & human security discourse**

- IHDP (GECHS): Lonergan & Brklacich (chairmen)**
    - 2005: conference in Norway on Climate change and human security**
  - HSN (Canada was a co-founder & a major sponsor)**
  - 2007/2008: Greek HSN presidency**
- 2011-2014: IPCC, WG II, chapter on human security**



# 3. Climate Change & Security Nexus in Social Sciences



## Four Schools

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

## Two Approaches

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

# **4. Alternative Discourse: Proactive Policies to a Fourth Sustainability Revolution & for a Sustainable Peace**

- **Mindset of ‘business-as usual’ and the cornucopian vision** are mental obstacles that restrained political willingness toward long-term transformation of economic, social & political system.
- Radical climate skeptics portrayed climate change as a major threat to the American way of life and jobs. Ultra conservative climate skeptical movements to attack & delegitimize the IPCC contradict the American optimism in scientific progress.
- The necessary long-term transformation and the sustainability transition (Grin/Rotmanns/Schot 2010) require in the USA and Canada a fundamental change of their dominant worldview, consumerist culture, values, belief systems, and of the attitudes & behavior of the people and fundamental transformation of the energy system aiming at a progressive decarbonization.
- This challenges powerful sectors of the economy, the interests of business groups and also of the trade unions representing these old economic sectors.

## **4.1. 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, missions 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
- No Need for a Sustainability Revolution

## 4.2. 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.
- In this vision of ***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 change**’ or **catastrophic GEC** with both linear and chaotic changes in the climate system and their socio-political consequences that represent a high-risk approach.

## 4.3. Fourth Sustainability Revolution

- 2<sup>nd</sup> 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.

## 4.4. Alternative Vision

- The alternative 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, interstate relations), **mindsets** (strategic perspectives of policy-makers) and new forms of national and global *governance*.
- This alternative vision refers to the need for a “**new paradigm for global sustainability**” (Clark/Crutzen/Schellnhuber 2004), for a “transition to [a] much more sustainable global society”, aimed at peace, freedom, material well-being and environmental health. Changes in technology and management systems alone will not be sufficient, but “significant changes in governance, institutions and value systems” are needed, resulting in a fourth major transformation after “the stone age, early civilization and the modern era”. These alternative strategies should be “more integrated, more long-term in outlook, more attuned to the natural dynamics of the Earth System and more visionary”

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

- Key actors for development and implementation are:
  - **States:** initiate, fund & 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

## 4.6. Role of Knowledge

- The fourth sustainability revolution must be knowledge-based!
- The great transformation of the industrial revolution relied on new innovative scientific and technological knowledge that is either the result of inventions or resulted in new innovations.
- Despite its already widely accepted objectives and the many viable low-carbon technologies already available to us, the transformation is a joint quest.
- Research and education are tasked with developing sustainable visions, in co-operation with policy-makers and citizens; identifying suitable development pathways, and realising low-carbon and sustainable innovations.
- The WBGU recommends intensified refocusing of national and international research towards the Great Transformation, and the provision of the requisite funds. The relevant scientific findings must also be made accessible and understandable to allow people to accept the change and to participate democratically in the transformation.

# 4.7. Four Knowledge-based Concepts of for Alternative Vision

- Key concepts of the alternative vision of a new fourth ‘sustainable revolution’ are a 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.
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## 4.8. Worldview of Scientists

- *Worldview* concept evolved from ‘Weltanschauung’ that refers to a wide world perception and to a **framework of ideas and beliefs through which individuals interpret the world & interact with it.**
- A comprehensive worldview includes the **fundamental cognitive orientation of a society, its values, emotions, and ethics** through which a society or a group interprets the world in which it interacts.
- Worldview is the **fundamental cognitive, affective, & evaluative presupposition a group of people makes about the nature of things, & which they use to order their lives.**
- The ‘**construction of integrating worldviews**’ begins from fragments of worldviews offered to us by different scientific disciplines and various systems of knowledge to which different perspectives contribute in the world’s cultures.
- **Gert Krell** used this concept for distinguishing among several macro-theoretical approaches in international relations.

## 4.9. Mindset of Policymakers

- The concept of *mindset* includes a fixed mental attitude or disposition that predetermines a person's responses to and interpretations of situations by referring to different patterns of perceiving and reasoning.
- Fisher used it as ‘cultural lenses’ that filter our view of and reaction to the world. With regard to the ‘Fourth Sustainable Revolution’ this concept refers to a discussion of a post-carbon society, where solidarity, equity, and social justice are the key drivers instead of the maximization of profits and the destruction of the Earth without thinking of the next generations or of the collapse of ecosystems.
- **Ken Booth** mindsets “freeze international relations into crude images, portray its processes as mechanistic responses of power and characterize other nations as stereotypes”. Many mindsets have survived the fundamental global contextual change of 1989/1990, as the Cold War “exists as our living past, and it exerts a powerful presence by being both remembered and forgotten in complex ways”.

# 5. Emergence of Alternative Discourse

- **Research & Dialogue Project: Sustainability Transition and Sustainable Peace (STSP)**
- Second debate is partly policy driven, by debate on a **green economy** that has been launched by **UNEP, OECD and by different DGs of the European Commission.**
- **Scientific discourse** on sustainability transition evolved
  - after conference in Amsterdam (2009); Lund (2011), Copenhagen (2012)
  - *Sustainability Transitions Research Network* (STRN)
  - journal on *Environmental Innovation and Sustainability Transition* (EIST)
  - *Routledge Book Series in Sustainability Transitions* (since 2010).
- **This new project tries to link this emerging debate with the experience of international relations and environment, security, development and peace (ESDP) studies by addressing possible impacts of both alternative policy trends for international peace and security.**

# 5.1. Past Transitions & War/Peace

- **All three technical revolutions (longterm transformations):**
  - the first **agricultural revolution** (10.000 to 6.000 years ago),
  - the second **industrial revolution** (1750-1890/1914), and
  - the third revolution of **communication, transportation and information (CTI) technologies** (since 1890 or 1920) ('second industrial revolution') have resulted in a higher and more violent level of warfare and have thus impacted negatively on international peace and security.

**This experience raises several new key research questions:**

- Will the suggested fourth sustainability revolution lead to new multiple and potentially violent conflicts within and among countries?  
May the suggested sustainability transition in the energy sector reduce the potential of resource-related violent conflicts and wars?
- From a scientific and conceptual perspective, which strategies, policies and measures may be needed to combine the proposed process of a long-term transition of the scientific institutions and their new knowledge, of societies and the business community and economic sectors as well as new forms of governance with the goal of a sustainable peace?

## **5.2. Political Urgency and Research Agenda: Towards a Fourth Sustainability Revolution**

### **Glooming Prospects for Post-Kyoto Regime: Paralysis**

- Prospects for Post-Kyoto climate regime at COP 17 in Durban are low
- At present it becomes increasingly unlikely to realize the 2°C world
- Probability of ‘dangerous climate change’ increases dramatically
- This increases the probability that thresholds in the climate system may be crossed, that tipping points may be unleashed, triggering cascading processes as: ‘Arabellion’ and ‘Fukushima nuclear disaster’

### **Business-as-usual paradigm prevails in politics & media**

- In light of global financial crisis, the sense of urgency for proactive climate action has declined since 2009 prior to Copenhagen (COP 15)
- The US government is paralyzed due to ideological confrontation within the US Congress and between the Senate & the House
- Lack of urgency among BASIC countries to accept commitments.

## 5.4. Implications for the Social Sciences

- The challenge of research on the societal impacts of global environmental change in the Anthropocene requires an understanding of the observed and projected changes within the earth system and its physical and societal impacts for the human systems, i.a. an analysis of earth systems sciences.
- This requires increased funding for multi-, inter- and transdisciplinary research to address the ‘consilience’ of the sustainability paradigm.
- Research on sustainability transition may not be limited to a research agenda of the priorities, pathways & strategies towards sustainability
- For sociology and political science it requires to address ‘cascading processes’ in the ‘world risk society’ stimulated by the ,principle of *precaution through prevention*‘ (Ulrich Beck, 2011).
- For international relations, security and peace research this requires conceptual research on the conditions and possibilities of a sustainable peace as a global political framework for a sustainable transition.

# 5.5. Goals, Objectives, Thesis & Structure

**'Sustainability transition' research has evolved since 2004:**

- Clark, Crutzen, Schellnhuber: 'Science for Global Sustainability' (2004).
- Dutch *Knowledge Network on Systems Innovation & Transition*
  - complex systems analysis,
  - socio-technological and a governance perspective".
- Relies on research that has evolved since the 1990s when "innovation & technology scholars ... started to address environmental innovation and sustainability transitions more explicitly:
  - *technological innovation systems approach* (TIS) and
  - *multi - level perspective* (MLP) approaches has contributed.
- '*Sustainability Transitions Research Network*' (STRN, 2009/2010),
- 'Routledge Studies in Sustainability Transitions' (2010),
- Journal '*Environmental Innovation and Sustainability Transitions*' (2011)
- WBGU Report on a 'Social Contract for Sustainability' (2011)

# 5.6. WBG (2011): New Social Contract for a „Global Transformation“

- WBGU explains reasons for a ‚post fossil-nuclear metabolism‘ concluding that the transition to sustainability is achievable.

## A New Social Contract

- Transformation into a sustainable society requires a modern framework for nine billion people for living with each other, and with nature: a new Contrat Social.
- This virtual social contract relies on each individual's self-concept as a responsible global citizen. This contract is also a contract between generations.
- Science plays an essential role here, as for the first time in history, a profound transition is not caused by imminent necessity, but by precaution and well-founded insight. In this respect, the social contract also represents a special agreement between science and society.
- A new culture of democratic participation through the appointment of ombudsmen ... to ensure the protection of future-oriented interests. Sustainability-oriented approach can be given a secure, firm footing through the inclusion of 'climate protection' in the constitution as a national objective, and through establishing a climate protection law.
- A low-carbon transformation can only be successful if it is a common goal, pursued simultaneously in many of the world's regions.
- Therefore, the social contract also encompasses new ways of shaping global political decision-making and cooperation beyond the nation state.

## 5.7. Two Parallel Discourses on ST

- 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 consequences 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 evolutionary 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:

## 5.8. 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 transi-tions**' 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.

# 5.9. 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.
- 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.

# **6. Seven Dimensions of Debate on Sustainability Transition**

**In a talk at the first sustainability transition and sustainable peace (STSP) workshop I distinguished among 7 dimensions of ST**

<[http://www.afes-press-books.de/html/sustainability\\_workshop\\_overview.htm](http://www.afes-press-books.de/html/sustainability_workshop_overview.htm)>

- 1. Temporal Dimension of Sustainability Transition**
- 2. Spatial Dimension of Sustainability Transition**
- 3. Scientific Dimension of Sustainability Transition**
- 4. Societal Dimension of Sustainability Transition**
- 5. Economic Dimension of ST**
- 6. Political Dimension of ST**
- 7. Cultural Dimension of ST**

# 7. Goal of the STSP Project

- **Sustainability Transition and Sustainable Peace Project (STSP)** was launched after the project on the **Reconceptualization of Security** (2004-11): 270 peer reviewed book chapters in vol. 3, 4 , 5 in the Hexagon Book Series on Human, Environmental Security & Peace (HESP) as **Global Human and Environmental Security Handbook for the Anthropocene**.
- This new international research and dialogue project on Sustainability Transition and Sustainable Peace Project (STSP) **addresses key scientific and political challenges of the 21st century**:
- **Relative failure of international efforts to address, face & cope with impacts of global environmental change & global climate change** that have resulted in a
- **'climate paradox' that major industrialized and democratic countries were unable or unwilling to comply with their global legally binding and declaratory commitments they adopted during the first Earth Summit in Rio de Janeiro in June 1992 in the aftermath of the end of the Cold War:**
  - United Nations Framework Convention on Climate Change (UNFCCC)
  - United Nations Convention on Biodiversity (UNCBD)
  - Rio-Declaration on Environment and Development
  - Agenda 21

# 7.1 Scientific Response to Policy Failures

## This failure is reflected in

- the inability of the international community represented by the world of states to agree on a legally binding follow-up to Kyoto Protocol by the end if 2012;
- in the relative failure of the Conference of Parties (COP) to the UNFCCC at
  - COP 15 in Copenhagen, Denmark (2009);
  - COP 16 in Cancun, Mexico (2010);
  - COP 17 in Durban, South Africa (2011);
- in the failure of most G8 countries to initiate measures to implement their announced goal (2007-2011) to reduce their GHG emissions by 80% by 2050 that decided on 18-19 May 2012 at their summit in the USA not to repeat in their Camp David Declaration previous commitments;
- in the failure of the G20 meeting in Los Cabos (Mexico) on 18-19 June 2012 to adopt any legally binding agreement on financing climate change activities in developing countries in their G20 Leaders Declaration
- in the failure of the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro on 20-22 June 2012 to adopt any new and legally binding decisions at besides the declaratory statement: Outcome of the Conference: The future we want

## 7.2. Two Alternative Visions & Strategies

- This sceptical diagnosis refers to 2 different approaches on international security & environmental policy:
  - a business-as usual policy that the market, economic initiatives and military power will be able to cope with its consequences;
  - a willingness to move towards a fourth sustainability revolution that requires multiple efforts to move towards a long-term transition towards sustainability.
- This project tries to link this emerging debate with the experience of international relations and environment, security, development and peace (ESDP) studies by addressing possible impacts of both alternative policy trends for international peace and security

## 8. Conclusions: G-20 Climate Performance

- Climate performance of G20 countries since 1990 has been unsatisfactory. Only Russia and EU27 countries met their GHG reduction obligations (KP)
- Of Annex B countries Australia, Canada and the USA have been laggards.
- The USA never ratified the KP,
- Canada withdrew while Australia and Japan still adhere to these obligations.
- The G8 have repeatedly declared to reduce their GHG emissions by 80% without agreeing on the base year: 1990 for the EU27 and 2005 for the USA and Japan (?).
- EU launched its Energy Roadmap 2050: aims at 80-95% CO2 reduction,
- No similar commitments exist for Russia, Japan, Canada and USA.
- Some Non-Annex B G20 countries have made reduction pledges for 2020 under the Cancun Agreement,
- No BASIC countries pledged to stabilize their GHG emissions on the level of 1990 or 2050. The major change from 1990 to 2020 will occur between the Annex-1 and Non-Annex 1 countries: while the
- share of the global GHG emissions of the Annex-1 countries is projected to decline from above 50% to more than 1/3
- that of the Non-Annex 1 countries is projected to rise from just below 50% to nearly 2/3. This trend is reflected in the global population projections for the G-20 until 2030, 2050 and 2100.

# 8.1. Need for a Fundamental Change

- Changes in the global GHG emissions may not be achieved by relying on a business-as-usual approach in science, government, the business community and in society. Adhering to a such an approach may increase the prospects that a dangerous or catastrophic climate change may trigger multiple international, national and human security consequences. Rather, a major change in GHG emissions requires strategies, policies and measures that aim at a ‘sustainability transition’ towards a low-carbon or green economy with a major reduction of hydrocarbon energy sources (coal, oil, gas) and a significant increase of renewables linked with significant energy efficiency improvements in all energy (electricity, transportation, heating/cooling), production (industry, agriculture) and consumption sectors. Such a ‘sustainability transition’ requires a fourfold approach linking the:
  - **scientific dimension** (a new scientific revolution towards sustainability that requires a fundamental shift in the dominant scientific worldview);
  - **societal and cultural dimension** (changes in values, attitudes, culture, worldviews, mindsets, and behavior);
  - **economic dimension** (energy sector, production and consumption patterns) aiming at a progressively de-carbonized and partly dematerialized world, regional, national and local economy;
  - **political dimension** (changes in governance processes at the local, national, regional and international level and in the national and international policy goals to be oriented at a sustainable peace).

## 8.2. ‘Sustainability Transition’: Major Challenge for Humankind during the 21st Century

- **This process of a ‘sustainability transition’** is major challenge for humankind in 21st century in dealing with impacts of global environmental change (climate change, water, soil, biodiversity) during the Anthropocene era of Earth history, humankind has entered with the first and second industrial revolutions.
- A ‘fourth sustainability revolution’ covering all four dimensions of a process of sustainability transition may avoid the prospects of major resource conflicts (on hydrocarbons after peak oil) and climate-induced conflicts and wars and the needed cooperation may increase the prospects for a sustainable peace.
- **First & second industrial revolutions caused first changes in science and technology** (new scientific knowledge, inventions, innovations)
  - that resulted in an **industrialization of warfare (World War I, World War II)** that required a total mobilizations of human and material resources.
  - The ‘**great political transformation**’ in the USA during the 1940s from an isolationist and pacifist orientation towards a global and interventionist worldview and mind-set in international relations and politics implied a fundamental change in the value base of the only remaining world power that was not affected by the fundamental peaceful change in world order after the end of the Cold War.

# **8.3 Learning lessons from previous long-term transformative changes**

## **All three technical revolutions:**

- the first agricultural revolution (10.000 to 6.000 years ago),
- the second industrial revolution (1750-1890/1914),
- third revolution of communication, transportation and information (CTI) technologies (since 1890 or 1920) resulted in a more violent level of warfare and impacted negatively on international peace and security.

## **This experience raises several new key research questions:**

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**Thank you  
for your attention!**

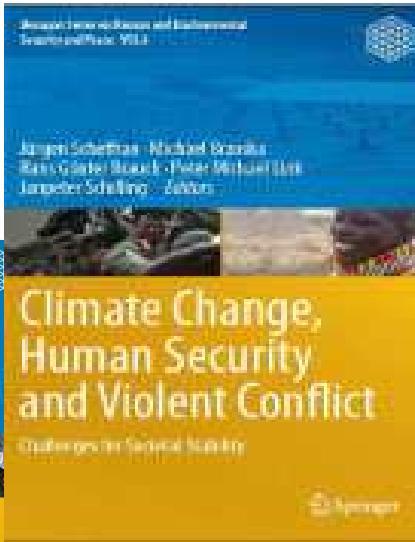
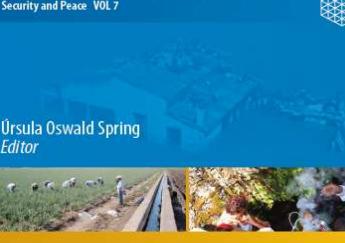
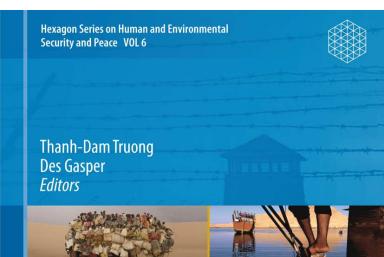
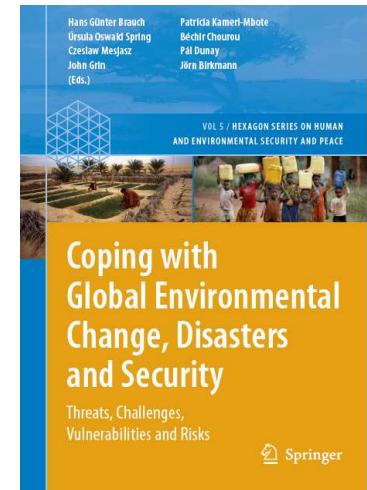
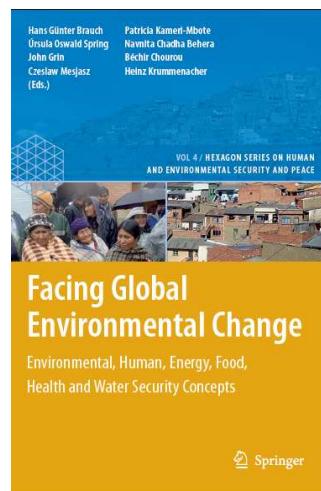
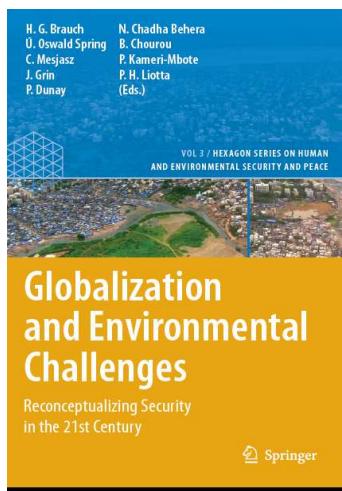
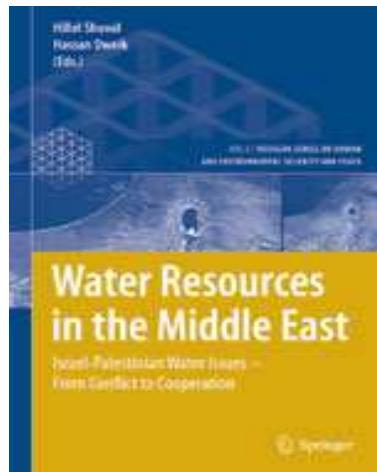
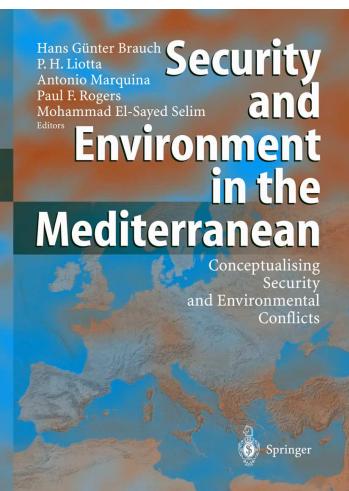
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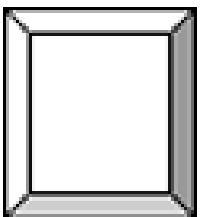
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