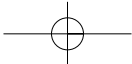
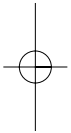
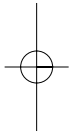
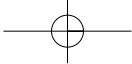


InterSecTions

‘Interdisciplinary Security ConnecTions’

Publication Series of UNU-EHS

No. 2/2005



Foreword

Human security: the freedom from want and the freedom from fear epitomise the core aspirations of human kind.

The motto of the United Nations University: "Advancing Knowledge for Human Security and Development" reflects the dedication of the entire UN System to address the issue of human security as one of its priorities. Furthermore it clearly links development and human security.

The concept of human security has evolved in recent years. Human security puts the individual, its environment and livelihood at the centre of debate, analysis and policy. Safeguarding it, requires a new approach and a better understanding of many interrelated variables – social, political, economic, technological and environmental – factors that determine the impacts on human security.

There are manifold challenges to human security. The United Nations University (UNU) Institute for Environment and Human Security (UNU-EHS) was created to assess the vulnerability and coping capacity of societies facing natural and human-induced hazards in a changing environment.

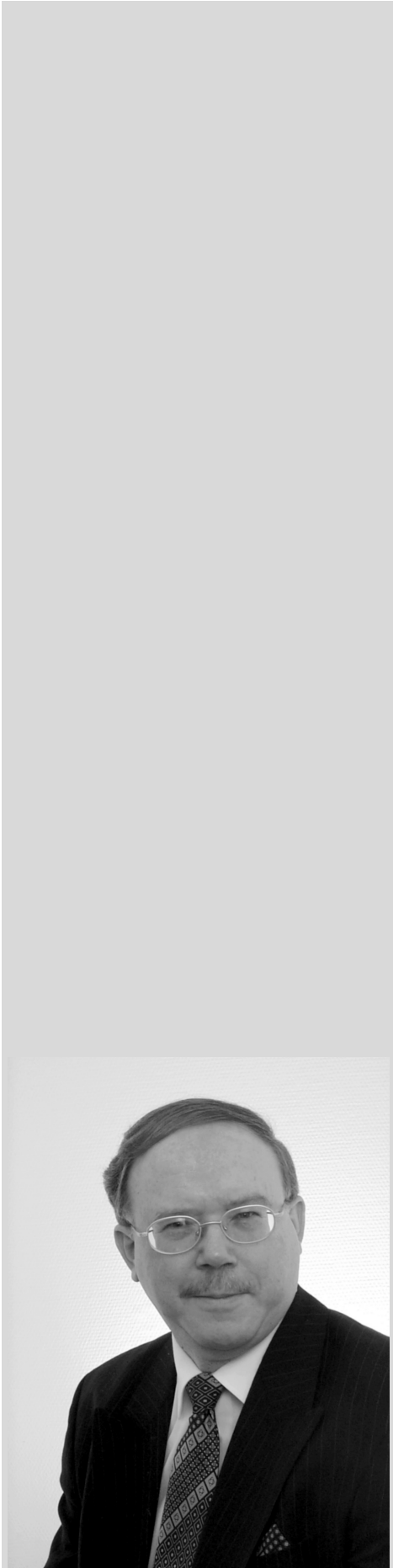
UNU-EHS explores threats to human security from environmental degradation, unsustainable land use practices, and from natural and man-made hazards. As part of UNU the Institute's aim is to advance human security through knowledge-based approaches to reducing vulnerability and environmental risks.

How did human security emerge as a key issue in international debate and concern? The present issue of UNU-EHS InterSecTions is dedicated to trace the development of the concepts of human security and environmental security, to document the scientific but also the institutional history of the process.

Dr. Hans Günter Brauch's narrative brings the reader through it, highlighting the unfolding convergence of concepts and ideas through the "lens" of political science, helping to define and to refine the environmental dimension of human security. The author concludes, that developing the environmental dimension of human security, both conceptually and operationally, and in particular to contribute to "freedom from hazard impact" remains a challenge for the work of UNU-EHS in the years to come.



Janos J. Bogardi
Director UNU-EHS



About the Author

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Environment and Human Security: “Towards Freedom from Hazard Impacts”

Hans Günter Brauch

1. Introduction: Towards the Mainstreaming of Two Concepts

Slightly more than a decade ago in the scientific community and in international organisations two conceptual lines have evolved on “environmental” and “human security”. The first focuses on the environmental dimension of security and the second takes human beings or humankind as referents of analysis. Building on the *Science Plan* of the Global Environmental Change and Human Security Project (GECHS 1999), the United Nations University Institute for Environment and Human Security (UNU-EHS 2004) will mainstream both concepts. While GECHS has focused on the *pressure* posed by global environmental change (GEC), UNU-EHS focuses on the *response* using two extreme environmental stressors: floods and drought as examples for threats to human security (Bogardi/Brauch 2005).

The goal of this “think piece” is to outline how to put environmental security challenges (hazards, slow and abrupt changes) on the agenda of the human security community and to develop a human security perspective on environmental challenges. It addresses the following questions:

- a) How has security been reconceptualised since 1990?
- b) How have the environment and security linkages been conceptualised so far?
- c) How has the human security concept evolved?
- d) How can the human security perspective be introduced into analysis of environmental challenges?
- e) How could the environmental dimension of human security analysis be strengthened?
- f) How can these conceptual considerations be translated into action to enhance the potential for environmental conflict avoidance, early warning of hazards and conflicts and better disaster preparedness?

*THE UNITED NATIONS
UNIVERSITY INSTITUTE
FOR ENVIRONMENT AND
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MAINSTREAM “ENVIRON-
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TWO EXTREME ENVIRON-
MENTAL STRESSORS:
FLOODS AND DROUGHT
AS EXAMPLES THREATEN-
ING HUMAN SECURITY.*

*THE REPORT OF THE
SECRETARY GENERAL'S
HIGH-LEVEL PANEL ON
THREATS, CHALLENGES
AND CHANGE (2004)
REFLECTS THE WIDENING
OF THE "SECURITY"
CONCEPT POINTING TO
NEW TASKS FOR THE
UN SYSTEM IN THE 21ST
CENTURY.*

The analysis will be pursued on two tracks: first by following the conceptual debate in the social sciences and second by highlighting and analysing the respective publications and activities of international organisations within and outside the UN system.

2. Reconceptualising Security: Widening and Deepening of Security Concepts

Security (lat.: *securus* and *se cura*; it.: *sicurezza*, fr.: *sécurité*, sp.: *seguridad*, p.: *segurança*, g.: *Sicherheit*) was introduced by Cicero and Lucretius referring to a philosophical and psychological state of mind. It was used as a political concept in the context of 'Pax Romana'. 'Security' as a political value has no independent meaning and is related to individual or societal value systems (Brauch 2003: 52).

The guarantee of "international peace and international security" was emphasised in the Covenant of the League of Nations (28 April 1919) and in the United Nations Charter (26 June 1945) "to maintain international peace and security". But in 1945, "development" and "environment" were not yet political concepts. The UN Charter distinguished among three security systems:

- a) a universal system of *collective security* contained in Chapter VI on pacific settlement of disputes (Art. 33-38) and in Chapter VII on "Action with respect to threats to the peace, breaches to the peace and acts of aggression" (Art. 39-50);
- b) "*regional arrangements or agencies*" for regional security issues in Chapter VIII (Art. 52 to 54), such as the Arab League (1945), OAS (1947) and CSCE/OSCE (1975, 1992); and
- c) a right of "*individual or collective self defence*" (WEU, NATO) in Art. 51.

While the first two systems deal with threats to the peace from within among member states, the third is oriented against an outside threat. They perform three functions: peaceful settlement of disputes, peace enforcement and peacekeeping. Art. 1.1 of the UN Charter calls on its members "to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace", "to develop friendly relations among nations", and "to achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian nature". The

UN Charter relies on a narrow “nation”-centred concept of “international security” and a concept of “negative” peace, though Art. 1.1, 1.2 and 1.3 “indicate that peace is more than the absence of war” (Wolfrum 1994: 50).

During the Cold War, collective self-defence prevailed while collective security was paralysed (Brauch/Mesjasz/Møller 1998). After 1990, collective security was temporarily strengthened, but with the failure to solve the Gulf War (1990-1991) and to cope with the post-Yugoslav conflicts (1991-1999) within the framework of the UN, NATO and the EU emerged as key security institutions.

Since 1990 the UN Security Council decisions on humanitarian interventions and the debate on “environmental” and “human” security have moved beyond these constraints. The Report of the Secretary General’s High-level Panel on Threats, Challenges and Change (2 December 2004) – denoted in the following “High level Panel” – reflects this widening of the “security” concept pointing to new tasks for the UN system in the 21st century. In the new emerging security consensus, collective security rests on three basic pillars (Synopsis of the Report):

Today’s threats recognize no national boundaries, are connected, and must be addressed at the global and regional as well as the national levels. No State, no matter how powerful, can by its own efforts alone make itself invulnerable to today’s threats. And it cannot be assumed that every State will always be able, or willing, to meet its responsibility to protect its own peoples and not to harm its neighbours. ... Differences of power, wealth and geography do determine what we perceive as the gravest threats to our survival and well-being. ... Without mutual recognition of threats there can be no collective security. ... What is needed is nothing less than a new consensus. ... The essence of that consensus is simple: we all share responsibility for each other’s security.¹

The High-level Panel distinguished among six clusters of threats, ranging from economic and social threats (including poverty, infectious disease, and *environmental degradation*, inter-state and internal conflict, weapons of mass destruction, terrorism and transnational organised crime). Thus, for the first time “environmental degradation” is listed among the threats confronting the UN that require preventive action “which addresses all these threats”. Development “helps combat the poverty, infectious disease, and environmental degra-

THUS, FOR THE FIRST TIME “ENVIRONMENTAL DEGRADATION” IS LISTED AMONG THE THREATS CONFRONTING THE UN THAT REQUIRE PREVENTIVE ACTION “WHICH ADDRESSES ALL THESE THREATS”.

¹ See for download of the complete report at: <http://www.un.org/secureworld/>

*THE HIGH-LEVEL PANEL
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AND ENFORCEMENT" OF
REGIONAL AND GLOBAL
TREATIES.*

dation that kill millions and threaten human security". The High-level Panel (§ 53) claims:

Environmental degradation has enhanced the destructive potential of natural disasters and in some cases hastened their occurrence. The dramatic increase in major disasters witnessed in the last 50 years provides worrying evidence of this trend. More than two billion people were affected by such disasters in the last decade, and in the same period, the economic toll surpassed that of the previous four decades combined. If climate change produces more flooding, heat waves, droughts and storms, this pace may accelerate.

The High-level Panel notes that "rarely are environmental concerns factored into security, development or humanitarian strategies" and it points to the lack of effective governance structures to deal with climate change, deforestation and desertification, as well as to the inadequate "implementation and enforcement" of regional and global treaties. In the discussion of the legitimacy of the use of military force, the High-level Panel distinguishes between "harm to state or human security". Two of the 101 recommendations of the High-level Panel deal with environmental issues, with renewable energy sources, and with the Kyoto Protocol.

The High-level Panel mentioned "human security" several times, but its main focus remained on the "state" as the cause and as a key actor in dealing primarily with military and societal threats. The environmental dimension of human security was noted in § 53.

During World War II, a new doctrine of "national security" was developed in the United States "to explain America's relationship to the rest of the world" (Yergin 1977: 193). During the Cold War the concepts of internal and national alliance and international security were used for a bipolar international order in which deterrence doctrines played a major role to prevent a nuclear war. "National" and "alliance security" was focused on military and political threats posed by the rival system.

As a social science concept, "*security* is ambiguous and elastic in its meaning" (Art 1993: 820). 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". Møller (2003: 277) argued that this 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 and faked ones?

According to Art (1993: 821): “to be secure is to feel free from threats, anxiety or danger. Security is therefore a state of the mind in which an individual ... feels safe from harm by others.” While objective factors in the security perception are necessary, they are not sufficient. Subjective factors influence security perceptions. Due to the anarchic nature of international relations, “a concern for survival breeds a preoccupation for security”. Security also involves “protection of the environment from irreversible degradation by combating among other things, acid rain, desertification, forest destruction, ozone pollution, and global warming” (Art 1993: 821).

The *perception* of security threats, challenges, vulnerabilities and risks (Brauch 2003, 2005) depends on the world-views or traditions of the analyst and on the mind-set of policy-makers. Three basic views have been distinguished by the English school (Bull 1977, Wight 1991), that of: a) *Hobbesian* pessimism (realism) where *power* is the key category; b) *Kantian* optimism (idealism) where *international law* and *human rights* are crucial; and c) *Grotian* pragmatism where *cooperation* is vital (Brauch 2003, 2004). From an American perspective, Snyder (2004) distinguished among three rival theories of realism, liberalism, and idealism (constructivism²). Booth (1979, 1987: 39-66) argued that “old mind-sets” often have distorted the assessment of “new challenges”. These mind-sets include “ethnocentrism, realism, ideological fundamentalism and strategic reductionism”, and they “freeze international relations into crude images, portray its processes as mechanistic responses of power and characterize other nations as stereotypes” (Booth 1987: 44). Many mind-sets have survived the global contextual change of 1989/1990 (Booth 1998: 28).

Influenced by these world-views and mind-sets, security is a key concept of competing schools of a) *war, military, strategic* or *security studies* from a Hobbesian perspective, and b) *peace and conflict research* that has focused on conflict prevention from a Grotian and/or Kantian view. Since 1990

2 In the social sciences, for the constructivists “ideas matter”. They argue that the reality, in this case security concepts, is socially constructed. According to Adler (2002: 95) and Guzzini (1998, 2000: 149) all constructivists agree on: “the social construction of knowledge and the construction of social reality”. Snyder (2004) distinguished in contemporary international relations three macro theories of realism, liberalism and idealism. He associates idealism with constructivism, and claims as its core beliefs that “international politics is shaped by persuasive ideas, collective values, culture, and social identities”.

**THE PERCEPTION OF
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**NOT ONLY THE SCOPE OF
“SECURITISATION” HAS
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“HUMAN-CENTRED”
SECURITY CONCEPT,
BOTH WITHIN THE UN
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ACADEMIC (PEACE
FOCUSED) SECURITY
COMMUNITY.**

the distance between both schools has narrowed. New approaches and interparadigm debates relevant for security have emerged between traditional approaches, critical security studies, and constructivist approaches.

Many authors (Buzan/Wæver/de Wilde 1998) have observed a recent widening and a deepening of the security concept in OECD countries, while in some countries a narrow military security concept has further prevailed. Within the UN and NATO, different security concepts coexist, namely a Hobbesian state-centred political and military security concept, and an extended Grotian concept that includes economic, societal and environmental security dimensions (Table 1).

Table 1: Vertical Levels and Horizontal Dimensions of Security in North and South (Brauch 2003)

| <u>Security dimension</u> | Military | Political | Economic | Environmental | Social |
|---------------------------|---|-----------|--|---------------|--------|
| Level of interaction | | | | ↓ | |
| Human → | | | energy, food, health, livelihood threats, challenges and risks may pose a <i>survival dilemma</i> in areas with high vulnerability | | |
| Societal/Community | | | | ↓↑ | |
| National | “Security dilemma of competing states” (<i>National Security Concept</i>) | | “Securing energy, food, health, livelihood etc” (Human Security Concept) that combines all levels of analysis & interaction | | |
| International/Regional | | | | ↓↑ | |
| Global/Planetary → | | | | | |

Not only the scope of “*securitisation*” (Wæver 1997) has changed, but also the referent object from a “national” to a “human-centred” security concept, both within the UN system (UNDP 1994; UNESCO 1997, 1998, 1998a, 1999, 2001, 2003; UNU 2002; UNU-EHS 2004), and in the academic (peace focused) security community. While “security studies” have returned to a narrow concept of national military security, specialists in environmental change and in peace research have used the concepts of “environmental” and “human” security and their linkages. From a realist Hobbesian worldview, environmental and human security challenges are not perceived as threats, and often non-existing. From a pragmatic Grotian perspective, environmental security challenges expose the societal vulnerability; this may lead to a “survival dilemma” (Brauch 2002a, 2004) for those with a high degree of societal vulnerability which may be most seriously affected by natural (or man-made) environmental hazards. From a Kantian, liberal or constructivist perspective international environmental treaties and regimes pose obligations for go-

vernments and peoples. Since 1990, gradually a fundamental reconceptualisation of security emerged (Buzan/Wæver/de Wilde 1998; Abdus Sabur 2003; Brauch 2005; Brauch/Grin /Mesjasz et. al. 2006).

In European security discourses, an expanded security concept has been used by both governments and in scientific debates (Buzan/Wæver/de Wilde 1998). Møller (2003) distinguished a “national” and three expanded security concepts of “societal, human, and environmental security”. Oswald (2001) added gender security and introduced a “human and gender” security (HUGE) concept (Table 2). Ullman (1983), Mathews (1989) and Myers (1989, 1994) put environmental concerns on the U.S. national security agenda. Bogardi (2004) and Brauch (2003) suggested to focus the human security discourse on the environmental dimension, especially on interactions between the individual or humankind as the cause and victim of factors of global environmental change, both in anthropogenic and natural variability contexts. This can be illustrated for climate change where the human consumption of fossil fuel has significantly increased global warming since the beginning of the industrial age. Major victims of this consumption pattern – due to an increase in extreme weather events – are often the poorest and most vulnerable people in developing countries.

**Table 2: Expanded Concepts of Security
(Møller 2001, 2003; Oswald 2001)**

| | Reference object (security of whom?) | Value at risk (security of what?) | Source(s) of threat (security from whom or what?) |
|--|---|---------------------------------------|--|
| National Security [political, military dimension] | The State | Sovereignty, territorial integrity | Other states, terrorism (substate actors) |
| Societal security | Nations, societal groups | National unity, identity | (States) Nations, migrants, alien cultures |
| Human security | Individuals humankind | Survival, quality of life | State, globalisation, GEC, nature, terrorism |
| Environmental security | Ecosystem | Sustainability | Humankind |
| Gender security | Gender relations, indigenous people, minorities | Equality, identity, solidarity | Patriarchy, totalitarian institutions (governments, religions, elites, culture), intolerance |

THE HUMAN SECURITY DISCOURSE SHOULD FOCUS ON THE ENVIRONMENTAL DIMENSION, ESPECIALLY ON INTERACTIONS BETWEEN THE INDIVIDUAL OR HUMAN-KIND AS THE CAUSE AND VICTIM OF FACTORS OF GLOBAL ENVIRONMENTAL CHANGE, BOTH IN ANTHROPOGENIC AND NATURAL VARIABILITY CONTEXTS.

DEALING WITH FUTURE ENVIRONMENTAL CHALLENGES ... REQUIRES TO "MAP A BROAD RANGE OF FUTURE ENVIRONMENTAL TRAJECTORIES" (MUNN 2000: XII). ... SCIENTISTS, BUT ALSO DECISION MAKERS AND ADMINISTRATORS ARE CHALLENGED TO THINK THE UNTHINKABLE, TO MINIMISE "SURPRISE" SHOULD NATURE MANIFEST ITSELF AS IT DID IN THE 2004 INDIAN OCEAN TSUNAMI.

3. Global Environmental Change as Issue Areas for Environmental Security

During the Cold War, environmental concerns have rarely been perceived as security problems. "Environment" and "ecology" as key *concepts* in the natural and social sciences have been used in different traditions and schools, in conceptual frameworks and approaches, and as guiding concepts. The *Encyclopaedia Britannica* (EB 1998, IV: 512) defined environment as: "the complex of physical, chemical, and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival". Ecology refers to the "study of the relationship between organisms and their environment" (EB 1998, IV: 354).

The environmental debate has gradually evolved since the 1950s, and since the 1970s global environmental change has focused on "human-induced perturbations in the environment" that encompass "a full range of globally significant issues relating to both natural and human-induced changes in the Earth's environment, as well as their socio-economic drivers". According to Munn (2002: xi) "changes greater than humankind has experienced in its history are in progress and are likely to accelerate". Dealing with future environmental challenges requires more than a prediction of a single future path. It requires to "map a broad range of future environmental trajectories" that may confirm "that the changes of the 21st century could be far greater than experienced in the last several millennia" (Munn 2000: xii). Scientists, but also decision makers and administrators are challenged to think the unthinkable, to minimise "surprise" should nature manifest itself as it did in the 2004 Indian Ocean Tsunami.

Since the 1990s, besides the International Geosphere-Biosphere Programme (IGBP), the International Human Dimensions Programme (IHDP), the World Climate Research Programme (WCRP), and DIVERSITAS were instrumental for rallying a global environmental change research community around coordinated scientific projects, and sensitising policy-makers and the public alike.

The human dimension of global environmental change covers both the contribution and the adaptation of societies to these changes. These processes pose many questions for social, cultural, economic, ethical, and even spiritual issues, e.g. for our motivation for saving, but also our role and responsibility with regard to the environment. Wilson (1998) noted a growing *consilience* (the interlocking of causal explanations across disciplines) in which the "interfaces between disciplines become as important as the disciplines them-

selves” that would “touch the borders of the social sciences and humanities”.

Global (environmental) change deals with changes in nature and society that have affected humankind as a whole and will increasingly affect human beings who are both a cause of this change and often also a victim. However, those who have caused it and those who are most vulnerable to and affected by it are not always identical. Global change affects and combines the ecosphere and the anthroposphere. The *ecosphere* comprises the *atmosphere* (climate system), the *hydrosphere* (water), the *lithosphere* (earth crust, fossil fuels), the *pedosphere* (soil), and the *biosphere* (life), while the *anthroposphere* deals with populations, social organisations, knowledge, culture, economy and transport, and other human-related systems (WBGU 1993).

More recently, Steffen et al. (2004: 1) have argued that a global perspective on the interactions between environmental change and human societies has evolved. This led to an awareness of two aspects of Earth System functioning: “that the Earth is a single system within which the biosphere is an active, essential component; that human activities are now so pervasive and profound in their consequences that they affect the Earth at a global scale in complex, interactive and apparently accelerating ways”. They have further argued “that humans now have the capacity to alter the Earth System in ways that threaten the very processes and components, both biotic and abiotic, upon which the human species depends”.

In the social sciences, the analysis of global environmental change and human-nature relationship is polarised between epistemological idealism and realism (Glaeser 2002: 11-24), or between *social constructivism* and *neo-realism*. The *neo-idealist orientation* has highlighted two aspects: a) the uncertainty of scientific knowledge and claims; and b) the attempt to explain the scientific and public recognition of environmental change influenced by political and historical forces (Rosa/Dietz 1998). At least three standpoints exist on environmental issues:

- a *pessimist* or *Neo-Malthusian view* stimulated by Malthus’ Essay on Population (1798) that stressed the limited carrying-capacity of the Earth to feed the growing population;
- an *optimist* or *Cornucopian view* that believed an increase in knowledge, human progress and breakthroughs in science and technology could cope with these challenges (Table 3).

GLOBAL (ENVIRONMENTAL) CHANGE DEALS WITH CHANGES IN NATURE AND SOCIETY THAT HAVE AFFECTED HUMANKIND AS A WHOLE AND WILL INCREASINGLY AFFECT HUMAN BEINGS WHO ARE BOTH A CAUSE OF THIS CHANGE AND OFTEN ALSO A VICTIM.

**THE POSITION ON
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AND IS NEEDED TO SOLVE
PROBLEMS.**

These two opposite positions have dominated the environmental debate since the Club of Rome's *Limits of Growth* (Meadows 1972), and Lomborg's (2001) *Skeptical Environmentalist*. Homer-Dixon (1999: 28-46) distinguished among *neo-Malthusians* (biologists, ecologists); *economic optimists* (economic historians, neoclassic economists, agricultural economists) and *distributionists* (poverty, inequality, misdistribution of resources). Brauch (2002, 2003) opted for a third perspective of an *equity-oriented pragmatist*.

Table 3 combines

- the three worldviews on security of the English school along with
- three ideal-type standpoints on the environment.

This leads to nine combined ideal-type positions on security and environmental issues. That of the United Nations system (position V) may be described as that of Grotian pragmatism in security terms and as an equity oriented pragmatic environmental perspective where “cooperation matters” and is needed to solve problems.

Table 3: Worldviews and Standpoints on Security and Environmental Issues

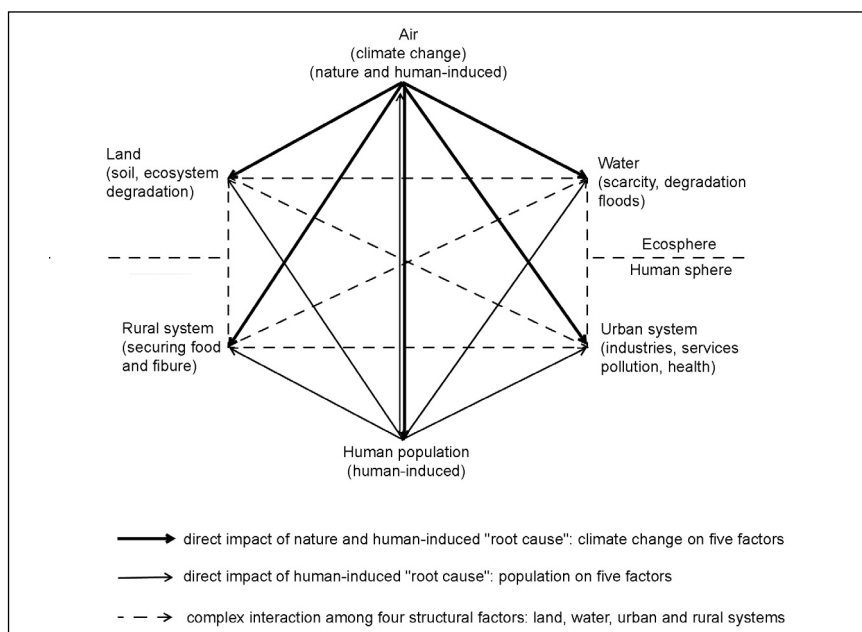
| Worldviews/Traditions on security (→) | Hobbes, Morgenthau, Waltz (neo)realist (pessimist) <i>Power matters</i> | Grotius liberal pragmatist <i>Cooperation matters</i> | Kant Neo-liberal institutionalist (optimist) <i>International law matters and prevails</i> |
|---|---|---|--|
| Standpoints on environmental issues (↓) | | | |
| Neomalthusian pessimist <i>Resource scarcity</i> | I | II | III |
| Equity-oriented pragmatist <i>Cooperation will solve problems</i> | IV | V International organisations and regimes | VI |
| Cornucopian neo-liberal optimist. <i>Technological ingenuity will solve problems</i> | VII | VIII | IX |

The complex interaction between processes in the ecosphere and anthroposphere have been visualised by Brauch (2002, 2003) in a “survival hexagon” (**Figure 1**) of three resource challenges: *air* (climate change), *land* (soil, ecosystem degradation), and *water* (scarcity, degradation, floods) and the following three social challenges: *human population* (growth, changes of its value systems), *urban systems* (services, industries, pollution, health) and *rural systems* (securing food and fibre).

These six factors may interact in different ways and contribute to environmental scarcity of soil, water and food that in turn intensify environmental degradation and result, taking the specific national and international context into account, in environmental stress that may lead – under certain socio-economic conditions and specific national and international contexts – to conflictual outcomes nearly exclusively at the national level. Only in rare cases they may affect neighbouring countries.

These may be resolved, prevented or avoided primarily by national political decisions and supported in some cases by diplomatic efforts. Whether environmental stress results in extreme and potentially violent outcomes depends on the national *political process* (interaction between state, society, and economy but also how knowledge is used for adaptation and mitigation purposes), and on the structures of governance.

Figure 1: Survival Hexagon of Six Resources and Social Factors after Brauch (2003: 126)



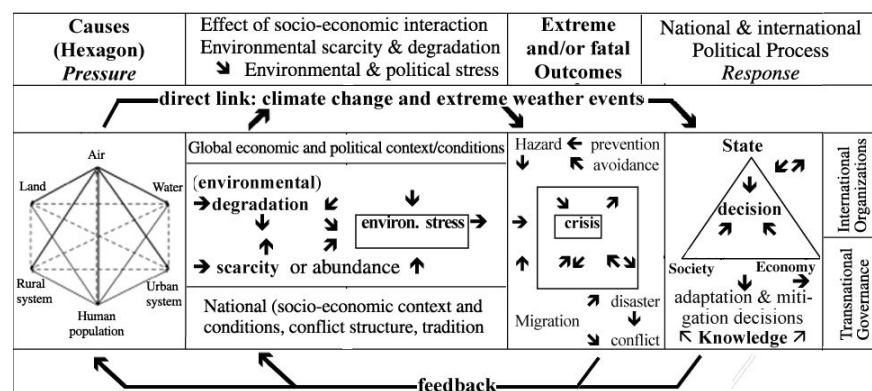
WHETHER ENVIRONMENTAL STRESS RESULTS IN EXTREME AND POTENTIALLY VIOLENT OUTCOMES DEPENDS ON THE NATIONAL POLITICAL PROCESS (INTERACTION BETWEEN STATE, SOCIETY, AND ECONOMY BUT ALSO HOW KNOWLEDGE IS USED FOR ADAPTATION AND MITIGATION PURPOSES), AND ON THE STRUCTURES OF GOVERNANCE.

BOTH OFFICIAL DEVELOPMENT ASSISTANCE ENDEAVOURS AND THE INTERNATIONAL PROCESSES OF ECONOMIC GLOBALISATION HAVE CONTRIBUTED SO FAR LITTLE TO POVERTY REDUCTION... WITHOUT ADDITIONAL EFFORTS THE AFFLUENCE IN THE NORTH AND POVERTY IN THE SOUTH MAY NOT BE OVERCOME UNTIL 2015.

Both official development assistance endeavours and the international processes of economic globalisation have contributed so far little to poverty reduction, as the report by Jeffrey Sachs on the implementation of the *Millenium Development Goals* of January 2005 has stated.³ Without additional efforts the affluence in the North and poverty in the South may not be overcome until 2015. The political process on the inter- and transnational level has contributed to the following outcomes:

- increased human mobility (internally displaced persons) within the South and migration from the South to the North (due to pull or push factors) that may and have resulted in some cases in tensions and internal or regional crises that may lead either to
- a successful resolution by cooperation, or in the worst case, possibly also to
- conflict at the internal (protest, skirmishes, civil strife, civil war) or international (bilateral, regional, interregional or global) level caused by the complex interaction of structural inputs, political processes, and constellations of mobility, conflict and cooperation (**Figure 2**).

Figure 2: Causes and Outcomes of Environmental Stress and Potential Outcomes after Brauch (2003: 126)



Depending on the system of rule and on the level of economic development, the interaction between the state, the economy, and the society differs, as will the role of knowledge due to scientific innovation to enhance the national coping capacities for adaptation and mitigation.

The IPCC (2001) has pointed to a direct causal connection between climate change and an increase in number and

³ "Whatever it takes", in: *Economist online*, 18.1. 2005

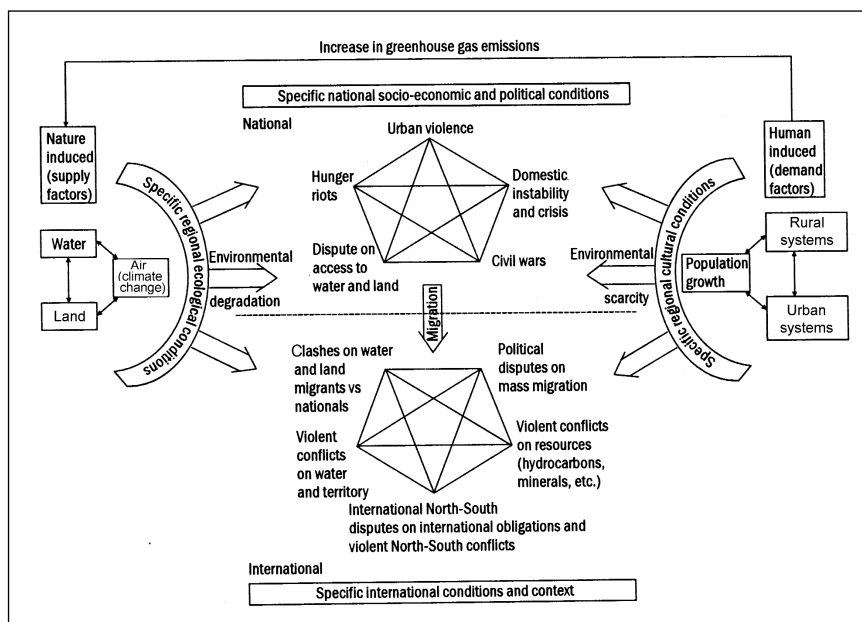
intensity of hydro-meteorological hazards (storms, floods, and drought) and disasters. Climate change may increase the probability and intensity of extreme weather events and thus increase internal displacements, transboundary, and even intercontinental migration.

Again both factors (hazards, migration) interact and may contribute, trigger or cause domestic crises that may escalate to different forms of low-level violence. The nature- and human-induced factors of Global Environmental Change (GEC) may contribute, trigger or intensify ethnic, religious or political conflicts and may lead to violence or raise the need for peacemaking. Four different socio-economic scenarios of the complex interplay of the above structural causes have occurred (**Figure 3**):

- domestic societal conflicts;
- resource and border conflicts (Klare 2001);
- regional violence with implications for different security perceptions in the South and of the North; and
- militarisation of non-military causes of conflicts.

In many developing countries, internal displacement has often been a first step towards transboundary migration, e.g. from Bangladesh to India or from Sahel countries to countries in North or West Africa, and in a few cases also overseas to Europe and North America.

Figure 3: "Pentagon" of Conflict Constellations for the Domestic and International Level after Brauch (2003: 130).



CLIMATE CHANGE MAY INCREASE THE PROBABILITY AND INTENSITY OF EXTREME WEATHER EVENTS AND THUS INCREASE INTERNAL DISPLACEMENTS, TRANSBOUNDARY, AND EVEN INTERCONTINENTAL MIGRATION.

*THE KEY QUESTION IS
HOW DO THE HIGHLY
COMPLEX PROCESSES OF
GLOBAL ENVIRONMENTAL
CHANGE (GEC) AFFECT
HUMANKIND AND
INDIVIDUALS? ...
HOW SHOULD THIS BE
ADDRESSED PRO-ACTIVELY
TO REDUCE THE
VULNERABILITY TO AND
IMPACT OF EXTREME
EVENTS, AND TO CONTAIN
A POTENTIAL ESCALATION
OF VIOLENCE?*

No violent domestic and international conflict has been caused so far by environmental degradation and population growth alone. The key question is how do the highly complex processes of global environmental change (GEC) affect humankind and individuals. Do they pose new threats, challenges, vulnerabilities and risks for security and survival for the human species (Brauch 2005), and how should these challenges be addressed pro-actively to reduce the *vulnerability* to and the *impact* of extreme events, and to contain a potential escalation of violence?

4. Environment and Security Linkages and Environmental Security Concepts

Since the 1990s, environmental and security linkages emerged as a topic of the conceptual and policy debate and for international organisations. The scientific (4.1.) and the political (4.2.) track of the re-conceptualisation of environmental security will be assessed.

4.1. Evolution of Environment and Security Linkages in Social Science Research

Brauch (2003: 92-120) has distinguished four phases of research on environmental security:

- *Phase I:* In the 1970s and 1980s research focused on the environmental impact of wars (Westing 1976, 1980, 1984, 1988, 2003), with conceptual contributions of Osborn (1953), Brown (1954), Galtung (1982) and Brock (1991, 1992) and proposals by Ullman (1983), Mathews (1989), and Myers (1989).
- *Phase II:* During the 1990s, two empirical environmental security research projects were pursued by the *Toronto Group* (Homer-Dixon 1991, 1994, 1996, 1999, 2000; Homer-Dixon/Blitt 1998), and by the *Bern-Zürich Group* (Bächler 1990, 1995; Bächler/Spillmann 1996a, 1996b; Bächler et al. 1996).
- *Phase III:* Since the mid-1990s comparative studies and conceptual deepening were launched by many research teams, partly relying on modelling, on management efforts and focusing on the conflict potential of resource use, on state failures, and on syndromes of global change.
- *Phase IV* of environmental security research has been identified by Dalby (2002) and Brauch (2003: 124-134; 2003a: 919-953) that combines natural structural factors (climate

change, water, soil) with human dimensions (population, urban and rural systems) of GEC, based on the expertise of both sciences with regard to outcomes and conflicts.

During the first phase “there was a need to redefine security and to include a new range of threats”, and “there was an acceptance that the object of security was no longer simply the state, but ranges to levels above and below the level of the state” (Loneragan 2002 V: 270-271). During the second phase in the 1990s the research teams led by Homer-Dixon and Bächler and Spillmann focused on the interaction between factors of global change, environmental degradation, scarcity, and stress and how these factors resulted either in environmentally triggered conflicts or environmental cooperation. During the third phase environmental security studies diversified in many directions (Brauch 2003: 92-120).

4.2. International Policy Activities since 1990 in the UN System on Environmental Security

Since the 1990s, the widening of the security concept has progressed and concepts of “environmental security” (UNEP, OSCE, OECD, UNU, EU), “human security” (UNDP, UNESCO, UNU), “food security” (WHO, World Bank), “energy security” (World Bank, IEA), and “livelihood security” (OECD) have been used. In 1987 President Gorbachev “proposed ecological security as a top priority that *de facto* would serve as a forum for international confidence building” (Brauch 2003: 81-92).

The Brandt-Report (1980) noted that “few threats to peace and survival of the human community are greater than those posed by the prospects of cumulative and irreversible degradation of the biosphere on which human life depends”. The Brundtland Commission (1987: 19) argued that the security concept “must be expanded to include the growing impacts of environmental stress – locally, nationally, regionally, and globally”. The Commission on Global Governance (1995) called for a broader concept of global security for states, people, and the planet. It claimed a linkage between environmental deterioration, poverty, and underdevelopment as causes of conflict. These reports put the linkage between environmental stress, conflicts and conflict resolution on the political agenda of international organisations.

The Millennium Report of the Secretary General (Annan 2000) mentioned several international organisations that have addressed the linkages between environmental stress and conflicts. The World Summit on Sustainable Development in Johannesburg (2002) in its political declaration and plan

THE BRUNDTLAND COMMISSION (1987: 19) ARGUED THAT THE SECURITY CONCEPT “MUST BE EXPANDED TO INCLUDE THE GROWING IMPACTS OF ENVIRONMENTAL STRESS – LOCALLY, NATIONALLY, REGIONALLY, AND GLOBALLY”.

*UN SECRETARY GENERAL
KOFI ANNAN (2003)
POINTED TO THE POTENTIAL
THREATS POSED BY
ENVIRONMENTAL
PROBLEMS AND HE
SUGGESTED THAT THE
UN SYSTEM SHOULD
“BUILD ADDITIONAL
CAPACITY TO ANALYSE
AND ADDRESS POTENTIAL
THREATS OF CONFLICTS
EMANATING FROM INTERNATIONAL
NATURAL
RESOURCE DISPARITIES”.*

of implementation referred to “food security” but “environmental” or “human security” were not mentioned explicitly. UN Secretary General Kofi Annan (2003) pointed to the potential threats posed by environmental problems and he suggested that the UN system should “build additional capacity to analyse and address potential threats of conflicts emanating from international natural resource disparities”.

In this regard, UNEP has been active in three areas: a) Disaster Management Branch (DEPI); b) UNEP’s Ozone Action Programme (DTIE); and c) UNEP’s Post Conflict Assessment Unit (Haavisto 2003). In January 2004 UNEP identified a “need for scientific assessments of the link between environment and conflict to promote conflict prevention and peace building” (Töpfer 2004: 1). UNEP’s Division of Early Warning and Assessment (DEWA) launched an “Environment and Conflict Prevention” initiative to stimulate “international efforts to promote conflict prevention, peace, and cooperation through activities, policies, and actions related to environmental protection, restoration and resources (Lonergan 2004: 2).

The Organisation for Security and Cooperation in Europe (OSCE) has dealt with security risks from environmental stress. Among the non-traditional security risks confronting OSCE countries in Central, Eastern and South-Eastern Europe, in the Caucasus, in Central Asia, and other parts of the former Soviet Union are transboundary pollution, shortage of drinking water, disposal of radioactive waste, reduction of human losses in man-made disasters and natural catastrophes. Among them are several hot spots in the Baltic Sea region, the Balkans, Central Asia, in the Black and Caspian Seas as well as in the Caucasus (Brauch 2003: 85-86). The OSCE Economic Forum organised several meetings on environmental security issues (e.g. in Prague in 2002).

In late 2002, OSCE, UNEP and UNDP launched a joint initiative to promote the use of environmental management as a strategy for reducing insecurity in South-Eastern Europe and in the Caucasus. The results were presented to the 5th ministerial conference in Kiev in May 2003 that adopted an environmental strategy for the countries of Eastern Europe, the Caucasus and Central Asia. After Kiev, the Environment and Security Initiative (ENVSEC) has focused on:

- 1) vulnerability assessment and on monitoring environment and security linkages;
- 2) policy development and implementation; and
- 3) institutional development, capacity building and advocacy.⁴

In October 2004 a report on cooperation over environmental risks in the South Caucasus was released that focused on:

- a) environmental degradation and access to natural resources in areas of conflict;
- b) cross-border water resources, natural hazards and industrial and military legacies, degradation due to military activities and bases; and
- c) population growth and rapid development of major cities.⁵

The Organisation for Economic Co-operation and Development (OECD) has addressed the linkages between development, environment and conflicts in several policy statements, such as “Development Assistance, Peace and Development Co-operation of the 21st Century” (OECD/DAC 1997), and in a scoping paper on the economic dimension of environmental security which are reflected in the “Guidelines on Conflict, Peace and Development Co-operation” (OECD/DAC 2001: 89).

The European Union has pursued two strategies for “environmental security”: a) integrating environmental goals into all sectoral policies (*Cardiff process*), including development, foreign and security policies; and b) stressing conflict prevention and management in its activities in international organisations (UN, OSCE) and for specific regions (Brauch 2003: 86-89). At the meeting of the European Council held in Barcelona in March 2002, a sustainable development strategy was adopted that emphasised the integration of environmental concerns into sectoral policies. The European Council in Seville (June 2002) approved a conflict prevention programme that aimed both at short-term prevention and at the root causes of conflict, in its development cooperation with poverty reduction. It also stressed “the importance, in the context of sustainable development, of maintaining the objective of food security as a basic component of the fight against poverty, as the World Food Summit in Rome has just reiterated”. The European Council meeting in Thessaloniki in June 2003 approved a green strategy of the EU. This strategy implies that environmental concerns have to be integrated into all foreign policy issues (Cardiff Process) and that environmental experts from the foreign ministries of all 25 EU countries meet once a month to discuss and coordinate pertinent environmental issues for the EU.

⁴ See at: http://www.iisd.org/pdf/2003/envsec_post_kiev.pdf

⁵ See at: <http://www.grida.no/enrin/environment-and-security/CAUCASUSeng.pdf>

THE EUROPEAN COUNCIL MEETING ... APPROVED A GREEN STRATEGY OF THE EU, WHICH IMPLIES THAT ENVIRONMENTAL CONCERNS HAVE TO BE INTEGRATED INTO ALL FOREIGN POLICY ISSUES ... IN THESE CONCEPTUAL, ANALYTICAL AND OPERATIONAL EFFORTS OF INTERNATIONAL ORGANISATIONS ON ENVIRONMENTAL SECURITY, SO FAR HUMAN SECURITY CONCERNS HARDLY PLAYED ANY ROLE.

*THE SECRETARY GENERAL
OF THE UNITED NATIONS,
KOFI ANNAN HAS
REFERRED ON SEVERAL
OCCASIONS TO THE NEED
FOR A HUMAN-CENTRED
APPROACH TO SECURITY.*

In these conceptual, analytical and operational efforts of international organisations on environmental security, so far human security concerns hardly played any role. A separate conceptual debate has evolved both in the social sciences and within international organisations.

5. Human Security Concepts of International Organisations and in the Social Sciences

Parallel to the academic debate on environmental security which influenced the policy agenda of several international organisations, the human security concept used by UNDP (1994) triggered a global and still strongly ongoing scientific debate. Since then, *human security* has been referred to as:

- a) a level of analysis;
- b) as a human-centred perspective (Annan 2001); and
- c) as an encompassing concept (UNDP 1994).

For the first approach, the *individual human beings* or the persons affected by environmental stress and its outcomes (hazards, migration, crises, conflicts) are the referent object; for the second a *normative orientation* is essential while the third is a combination of all five dimensions along with five levels of a widened security concept (Brauch 2003: 55, see Table 1).⁶

The first approach is too narrow to become politically relevant, while the third is too wide for analytical research (Mack 2004: 49). The second position of a *people-centred* human security concept comes closest to Kofi Annan's (2001) political perspective and the constructivist approach of GECHS that encompasses

- a) *development* (poverty eradication);
- b) *freedom* (human rights and system of rule); and
- c) *equity* on the international and *justice* on the national level.

The Secretary General of the United Nations, Kofi Annan has referred on several occasions to the need for a human-

⁶ See for definitions of human security at:
http://www.hsph.harvard.edu/hpcr/events/hsworkshop/list_definitions.pdf
 and at: http://www.uncrd.or.jp/hs/doc/04a_10jun_manip_concept.pdf
 for threats to human security,
 at: http://www.hsph.harvard.edu/hpcr/events/hsworkshop/comparison_definitions.pdf.

centred approach to security⁷. For him “human security can no longer be understood in purely military terms. Rather, it must encompass economic development, social justice, environmental protection, democratisation, disarmament, and respect for human rights and the rule of law”.⁸ In his view, “large-scale displacement of civilian populations, ... environmental disasters present a direct threat to human security”⁹ and “human security ... embraces far more than the absence of violent conflict”. He pointed to three building-blocks of the human security concept: “freedom from want, freedom from fear, and the freedom of future generations to inherit a healthy environment – these are the interrelated building blocks of human – and therefore national – security”.¹⁰

Krause (2004: 43-46) distinguished among two visions of human security as “freedom from want”, represented by the comprehensive UNDP (1994) concept and the Commission on Human Security (CHS 2003), and the “freedom from fear”, represented by the Human Security Network (HSN). For the second vision promoting human security requires the states “to provide security – in order that individuals can pursue their lives in peace” (Krause 2004: 66).

For the security studies community in general, the state remains the major referent object that is to be secured while both human security visions deal with the protection of the individual or citizen. Mack (2004: 48) pointed to a major shortcoming of the state-centred security paradigm that it cannot deal with threats to the individual emanating from the state, and that it hardly can explain state collapse. The first *Human Security Report* (2004) adopted “a narrowly focused definition of human security in which the threat is the relatively conventional one of political and criminal violence” (Mack 2004: 49). During the 1990s several UN institutions (UNDP, UNESCO, UNU) gradually adopted the human security concept.

Bogardi and Brauch (2005) claimed that human security could rest on three conceptual pillars reflecting also the

7 UN SG Kofi Annan: *Millenium Report*, chp. 3, pp 43-44, at: <http://www.un.org/millennium/sg/report/>

8 Kofi Annan: “Towards a Culture of Peace”, at: <http://www.unesco.org/opi/lettres/Text/Anglais/AnnanE.html> .

9 Kofi Annan: *Report of the Secretary General on the Work of the Organization*, UNGA, 55th session, Supplement No. 1 (A/55/1), (New York: UN, 2000):4.

10 Kofi Annan: “Secretary General Salutes International Workshop on Human Security in Mongolia”, Two-Day Session in Ulan Baator, 8-10 May 2000, Press Release SG/SM/7382.

*FOR THE SECRETARY
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“HUMAN SECURITY ...
EMBRACES FAR MORE
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*THE CLOSE LINKAGE
BETWEEN SUSTAINABLE
DEVELOPMENT AND
HUMAN SECURITY GOALS
ALSO IMPLIES THE
“FREEDOM OF FUTURE
GENERATIONS TO
INHERIT A HEALTHY
ENVIRONMENT”.*

corresponding pillars of sustainable development:

- “Freedom from want” (or economic and societal security dimensions) by reducing social vulnerability through poverty eradication programmes (UNDP 1994; CHS 2003);
- “freedom from hazard impacts” (environmental security dimension) by reducing vulnerability of societies confronted with natural and human-induced hazards (UNU-EHS 2004); and
- “freedom from fear” (political, military, and societal security dimension) by reducing the probability that people confront violence and conflict (UNESCO, HSN).

The close linkage between sustainable development and human security goals also implies the “freedom of future generations to inherit a health environment”.

5.1. UNDP and “Freedom from Want”

UNDP (1994: 22-46) shifted the referent of the traditional security concept from the “nation state” to the “people”, from military threats to the “protection from the threat of disease, hunger, unemployment, crime, social conflict, political repression and environmental hazards”. Human security, according to UNDP (1994: 23), means “safety from such chronic threats as hunger, disease, and repression”, and “protection from sudden and hurtful disruption in the patterns of daily life”. Human security is introduced as an “integrative concept” that requires a common understanding “that development must involve all people”. UNDP suggested shifting from territorial to people’s security “through sustainable human development”. It considered seven main dimensions of human security: 1. economic; 2. food; 3. health; 4. environmental; 5. personal; 6. community; and 7. political security. Global human security deals with global environmental challenges, such as “land degradation, deforestation and the emission of greenhouse gases”. UNDP argued that “the real threats to human security” in the 21st century will arise from the actions of people taking many forms, such as

- 1) unchecked population growth;
- 2) disparities in economic opportunities;
- 3) excessive international migration;
- 4) environmental degradation;
- 5) drug production and trafficking; and
- 6) international terrorism.

UNDP pointed to selected human security indicators that could contribute to early warning, such as

- a) food insecurity;
- b) job and income insecurity;
- c) human rights violations;
- d) ethnic or religious conflicts;
- e) inequity; and
- f) military spending.

In the scientific debate, this conceptualisation of human security has remained controversial (Møller 2003), and “no major analytic empirical study has used UNDP’s conceptual framework to actually study the war/development/governance nexus” (Mack 2004: 50).

5.2. UNESCO and “Freedom from Fear”

UNESCO’s medium-term strategy (1996-2001) studied “the new conditions for security” and “a new concept of security and the role of the UN system in this respect”. UNESCO (1997, 1998, 1999, 2001, 2001a, 2003) started a dialogue with institutes of strategic studies, defence institutes and representatives of the armed forces to review the thinking on security in the Post-Cold War period. UNESCO’s Medium-Term Strategy for 2002-2007 proposed “improving human security by better management of the environment and social change”, addressing “the need to prevent conflicts at their source and the needs of the most vulnerable populations at regional and sub-regional levels through its global network of peace research and training institutions, thereby reinforcing human security and contributing to the implementation of the Decade for a Culture of Peace and Non-Violence for the Children of the World”. This strategy aims at “the elaboration of integrated approaches to human security at the regional, sub-regional and national levels, targeting the most vulnerable populations including the preparation for the prevention and resolution of conflicts, in particular over natural resources”. In regional efforts on Africa (Goucha/Cilliers 2001), Latin America (Goucha/Rojas Aravenna 2003), and planned activities for Central and South Asia and the Arab world, UNESCO reviewed and mapped the thinking on human security with a major focus of freedom from fear to “prevent all forms of violence and conflict”.

UNESCO’S MEDIUM-TERM STRATEGY FOR 2002-2007 PROPOSED “IMPROVING HUMAN SECURITY BY BETTER MANAGEMENT OF THE ENVIRONMENT AND SOCIAL CHANGE”, ADDRESSING “THE NEED TO PREVENT CONFLICTS AT THEIR SOURCE AND THE NEEDS OF THE MOST VULNERABLE POPULATIONS ... THROUGH ITS GLOBAL NETWORK OF PEACE RESEARCH AND TRAINING INSTITUTIONS, THEREBY REINFORCING HUMAN SECURITY.

*THE COMMISSION ON
HUMAN SECURITY (CHS)
WAS ESTABLISHED IN
JANUARY 2001 AT THE
INITIATIVE OF JAPAN IN
RESPONSE TO THE UN
SECRETARY GENERAL'S
CALL FOR A WORLD
"FREE OF WANT" AND
"FREE OF FEAR."*

5.3. Two Agendas: Human Security Network and Commission on Human Security

Two "policy agendas" exist on human security, represented by the *Human Security Network* (HSN) that has been promoted by Canada and Norway since 1999 and by the *Commission on Human Security* (CHS), which was appointed by the UN Secretary General with financial support from Japan.

The Human Security Network (HSN) includes Austria, Canada, Chile, Greece, Ireland, Jordan, Mali, the Netherlands, Norway, Switzerland, Slovenia, Thailand as members and South Africa as an observer. The Network was launched at a meeting of the respective Foreign Ministers in Bergen (Norway 1999). Later ministerials were held in Lucerne (Switzerland 2000), Petra (Jordan 2001), Santiago de Chile (Chile 2002), Graz (Austria 2003), and in Bamako (Mali 2004).

The Human Security Network ... pursues security policies that focus on the protection and security requirement of the individual and society. ... The Network's current efforts to achieve greater human security include issues such as the universalization of the Ottawa Convention on Anti-personnel Landmines, the establishment of the International Criminal Court, the protection of children in armed conflict, the control of small arms and light weapons, the fight against trans-national organized crime, human development and human security, human rights education, the struggle against HIV/AIDS, addressing implementation gaps of international humanitarian and human rights law, and conflict prevention.¹¹

During the Canadian Presidency in 2004-2005, the HSN focuses on established human security issues (human rights, small and light arms, landmines, children affected by armed conflicts), and on emerging ones (responsibility to protect, HIV/AIDS, women, peace and security by encouraging discussions surrounding the UN Security Council (Women Peace and Security Resolution)¹². At the Ottawa ministerial in May 2005, a medium term agenda will be adopted.¹³

The Commission on Human Security (CHS) was established in January 2001 at the initiative of Japan in response to the UN Secretary General's call for a world "free of want" and "free of fear." The Commission consisted of twelve prominent persons and was chaired by Mrs. Sadako Ogata (former UN High Commissioner for Refugees), and Mr. Amartya Sen (1998 Nobel Economics Prize Laureate). The Commission pursued three goals:

¹¹ See at: <http://www.humansecuritynetwork.org/network-e.php>

¹² See at: <http://www.humansecuritynetwork.org/docs/28oct2004-e.php>

¹³ See at: http://www.humansecuritynetwork.org/docs/ottawa_plan-e.php

- a) to promote public understanding, engagement and support of human security;
- b) to develop the concept of human security as an operational tool for policy formulation and implementation; and
- c) to propose a concrete programme of action to address critical and pervasive threats to human security.

Its final report, *Human Security Now* (CHS 2003)¹⁴ proposes a new people-centred 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”.¹⁵

Its final report highlighted that:

“More than 800,000 people a year lose their lives to violence. About 2.8 billion suffer from poverty, ill health, illiteracy and other maladies. Conflict and deprivation are interconnected. Deprivation has many causal links to violence, although these have to be carefully examined. Conversely, wars kill people, destroy trust among them, increase poverty and crime, and slow down the economy. Addressing such insecurities effectively demands an integrated approach.

Human security means protecting vital freedoms. It means protecting people from critical and pervasive threats and situations, building on their strengths and aspirations. It also means creating systems that give people the building blocks of survival, dignity and livelihood. Human security connects different types of freedoms - freedom from want, freedom from fear and freedom to take action on one's own behalf. To do this, it offers two general strategies: protection and empowerment. Protection shields people from dangers. It requires concerted effort to develop norms, processes and institutions that systematically address insecurities. Empowerment enables people to develop their potential and become full participants in decision-making. Protection and empowerment are mutually reinforcing, and both are required in most situations.

Human security complements state security, furthers human development and enhances human rights. It complements state security by being people-centered and

***EMPOWERING PEOPLE
TO TAKE CHARGE OF
THEIR LIVES, DEMANDS
CREATING GENUINE
OPPORTUNITIES FOR
THEM TO LIVE IN SAFETY
AND DIGNITY AND EARN
THEIR LIVELIHOOD.***

¹⁴ See at: <http://www.humansecurity-chs.org/>. The English report may be downloaded at: <http://www.humansecurity-chs.org/finalreport/index.html>.

¹⁵ See at: <http://www.humansecurity-chs.org/finalreport/pressrelease.html>

***“HUMAN SECURITY ...
COMPLEMENTS STATE
SECURITY BY BEING
PEOPLE-CENTERED AND
ADDRESSING INSECURITIES
THAT HAVE NOT BEEN
CONSIDERED AS STATE
SECURITY THREATS...”***

addressing insecurities that have not been considered as state security threats.... Respecting human rights are at the core of protecting human security. Promoting democratic principles is a step toward attaining human security and development. It enables people to participate in governance and make their voices heard. This requires building strong institutions, establishing the rule of law and empowering people”.

The *Human Security Commission* arrived at policy conclusions in the following areas:

1. Protecting people in violent conflict;
2. Protecting people from the proliferation of arms;
3. Supporting the security of people on the move;
4. Establishing human security transition funds for post-conflict situations;
5. Encouraging fair trade and markets to benefit the extreme poor;
6. Working to provide minimum living standards everywhere;
7. According higher priority to ensuring universal access to basic health care;
8. Developing an efficient and equitable global system for patent rights;
9. Empowering all people with universal basic education; and
10. Clarifying the need for a global human identity while respecting the freedom of individuals to have diverse identities and affiliations.

After the release of the report the Advisory Board on Human Security (ABHS), consisting of eight distinguished members, was established to carry forward the recommendations of the Commission and to advise the UN Secretary General on the UN Trust Fund for Human Security.¹⁶ During its second meeting two reports were released.¹⁷ In May 2004, both the HSN and the ABHS organised a colloquium in Bamako (Mali) on “Conflict and Development - The Human Security Approach”.¹⁸

¹⁶ See at: <http://www.humansecurity-chs.org/abhs/index.html>

¹⁷ Denial of Citizenship: a) Challenge to Human Security and b) Critical and Pervasive Threats to Human Security: The Case for a Social Minimum for People in Situations of Chronic Poverty, Internal Conflict and Sudden Economic Downturns, see at: <http://www.humansecurity-chs.org/abhs/Boardmeetings/index.html>

¹⁸ See at: <http://www.humansecurity-chs.org/abhs/Activities/bamako.html>

Except a reference to one component of UNDP's human security concept, the environmental dimension of human security was not explicitly covered.

5.4. UNU-EHS Freedom from Hazard Impact

As a core project of IHDP, GECHS arose from the nexus of the human dimensions of GEC and the reconceptualisation of security. According to the GECHS definition:

"Human security is achieved when and where individuals and communities:

- a) have the options necessary to end, mitigate, or adapt to threats to their human, environmental, and social rights;
- b) actively participate in attaining these options; and
- c) have the capacity and freedom to exercise these options" (GECHS 1999: 29).

The primary purpose of GECHS is to promote research on environmental change and security. While GECHS has focused primarily on the causes of GEC (*pressure*), UNU-EHS will focus on the *response* to its extreme outcomes, especially floods and droughts aiming at "freedom from hazard impacts", by reducing vulnerability and enhancing the coping capabilities of societies confronted by environmental and human induced hazards.

The United Nations University deals with all three pillars of human security. In its Strategic Plan 2000, UNU (2000: 7-9) referred to "human security" as one of four powerful ideas for the new millennium, besides "development as freedom", "risk societies", and "comprehensive development". The *UNU Strategic Plan 2000* contrasted "national security" as military defence of the nation state, with "human security" emphasising "the individual's well being". Accordingly, human security refers to *freedom from* "want, hunger, natural disasters, attack, torture" etc., and *freedom to* "the capacity and opportunity that allows each human being to enjoy life to the fullest, starting from the basic human needs of clean water, food shelter, and education". The *UNU Strategic Plan 2002* stressed the "need for a stronger global governance system" focusing on "the maintenance of world peace, human security and development as well as the sustainable management of the world's resources" to provide "global public goods, such as financial stability and environmental security, and fight 'global public bads' such as organized crime, terrorism, and illegal trade". Repeatedly, the UNU Strategic Plan 2002 called for developing the dual goals of "human security and development".

UNU-EHS WILL FOCUS ON THE RESPONSE TO EXTREME OUTCOMES, ESPECIALLY FLOODS AND DROUGHTS AIMING AT "FREEDOM FROM HAZARD IMPACTS", BY REDUCING VULNERABILITY AND ENHANCING THE COPING CAPABILITIES OF SOCIETIES CONFRONTED BY ENVIRONMENTAL AND HUMAN INDUCED HAZARDS.

HUMAN SECURITY IS CLOSELY RELATED TO VULNERABILITY, "THE LATENT THREAT THAT SOME DIMENSIONS OF HUMAN INSECURITY COULD MANIFEST THEMSELVES IN CRISES AND DISASTERS".

Quoting van Ginkel (2000), Rector of UNU, "in policy terms, human security is an integrated, sustainable, comprehensive security from fear, conflict, ignorance, poverty, social and cultural deprivation, and hunger, resting upon positive and negative freedoms". UNU's Vice Rector Thakur (2004: 347) rejected both a national security concept and an all-inclusive security agenda. If security is limited to threats to human life,

many non-traditional concerns ... require exceptional policy response: environmental threats of total inundation or desertification; political threats of the complete collapse of state structures; population flows so large as to destroy the basic identity of host societies; structural coercion so severe as to turn human beings into chattels; etc. (Thakur 2004: 347).

For Thakur national security prefers the military in the authoritative allocation of collective goods in favour of arms, "while failing to protect citizens from chronic insecurities of hunger, disease, shelter, crime, and environmental hazards". For UNU, human security is concerned,

with the protection of the people from critical and life-threatening dangers, regardless of whether the threats are rooted in anthropogenic activities or natural events, whether they lie within or outside states, and whether they are direct and structural. It is 'human-centred' in that its principal focus is on people both as individuals and as communal groups. It is 'security oriented' in that the focus is on freedom from fear, danger, and threat (Thakur 2004: 248).

The United Nations University Institute on Environment and Human Security (UNU-EHS) in Bonn was established in late 2003 to develop the environmental dimension of human security further not only with regard to the scientific conceptual debate, but also its operational consequences for capacity building primarily to enhance governance capabilities within the UN system and in the member states. From its perspective, the concept of human security is closely related to vulnerability, "the latent threat that some dimensions of human insecurity could manifest themselves in crises and disasters". In a speech to the World Conference on Disaster Reduction (WCDR) in January 2005, UN Undersecretary General van Ginkel warned against creating

with our technology and infrastructure a false sense of security. ... Emphasis should be on reducing vulnerabilities and improving coping capacities, through education and capacity development, strengthening response preparedness and vigilance". He pointed to the activities of the UNU-EHS "to create indicators to measure the vulnerability of communities to disasters. Such assessments will help policymakers set priorities for disaster

prevention. Through UNU-EHS, the university is working to anticipate the cumulative effects of such long-term, creeping environmental disasters for human kind as desertification, steadily falling levels of groundwater, land degradation and other consequences of environmental neglect.

In the Report of the Secretary-General on the Implementation of the UN Millennium Declaration, vulnerability is interpreted as a social feature, closely related to poverty, diseases, and lack of (economic) options, characterised by weak governance and underdeveloped infrastructure (UNGA 2004). Environmental but also man-made hazards may expose vulnerability. Disasters may be identified with events of exposed and apparent vulnerability. In the context of vulnerability of affected communities both the creeping deterioration of the determining factors of human existence (climate, environment, socio-economic conditions) as well as the impact of extreme events of natural and/or man-made origin are of particular importance (**Figure 2**). The level of risk they pose in different locations, the vulnerability of societies to them and the response capabilities have generally worsened (Bogardi 2004a, 2004b, Bogardi/Birkmann 2004). All these changes contribute to the deterioration of human security. During the last decades evidence has pointed to a marked growth in the frequency and magnitude of natural hazards and their economic consequences (Munich Re 2000; IPCC 2001; UNISDR 2004; UNDP 2004). The exposure of the poor to extreme weather events and the subsequent disasters may delay development for decades. The statistical evidence, the observed trends, but also the documented political will underline the necessity to study and document the environmental dimension of human security that can only be achieved through a dynamic equilibrium between human-kind and its surroundings.

In the perspective of UNU-EHS, the concept of human security focuses on threats that endanger the lives and livelihoods of individuals and communities. Safeguarding and improving human security requires a new approach that would enable a better understanding of many interrelated variables – social, political, institutional, economic, cultural, technological, and environmental. Deterioration of these factors amplifies the impacts of environmental change and their superposition with the consequences of extreme events when they occur.

The UNU-EHS has been conceived and established to improve the knowledge base for the assessment of vulnerability and coping capacity of societies facing natural and human-

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CONSEQUENCES.***

*WITHIN THE SOCIAL
SCIENCES AND IN
INTERNATIONAL
RELATIONS, THE HUMAN
SECURITY CONCEPT
HAS REMAINED
CONTROVERSIAL.*

induced hazards in a changing and often deteriorating environment. UNU-EHS aims to improve the understanding of cause and effect relationships and to offer options to help reduce the vulnerabilities of societies. Interdisciplinary science-based and human-centred, the institute will support policy and decision makers with authoritative research and information within this mandate.

5.5. Conceptual Debate on Human Security in the Social Sciences

The policy debate on human security, triggered by UNDP (1994), the HSN (1999), and the CHS (2003), had a direct impact on the academic debate where, after 10 years, still no common definition on human security has emerged. Alkire (2004: 359) noted more than 30 definitions:

Some focus mainly on threats from wars and internal conflicts, sometimes including a focus on criminal and domestic violence; others focus on threats from preventable disease, economic hardship, or financial crisis – the threats of poverty and want; while a third group considers both types of threats – often described as ‘fear’ and ‘want’ ... as well as the processes by which people protect themselves and are protected. ... Human security shifts the focus away from the protection of the state borders to the protection of individual lives within them. Thus, the key struggle for human security is to identify priority issues without becoming dissipated.

Within the social sciences and in international relations, the human security concept has remained controversial. While many Hobbesian pessimists, neo- or structural realists, and the strategic studies community (Paris 2001), as well as state-centred peace researchers (Buzan 2002, 2004; Müller 2002) have rejected the human security concept, authors with Grotian, Kantian or liberal and constructivist perspectives and from peace research have rallied behind this concept. But some of the proponents are critical of a wide concept as “freedom from want”¹⁹ (Krause 2004, 2004a; Mack 2004, 2004a, Mc Farlane 2004), and have argued instead for “pragmatism, conceptual clarity, and analytic rigor” (Owen 2004: 375). On the other hand, many authors of a forum in *Security Dialogue* (2004: 345-371) supported a wide agenda that

¹⁹ Thomas and Tow (2002: 178) have proposed a narrow definition of human security suggesting three interlocking features: a) transnational threats to international norms from inadequacies of states’ systems make individuals and groups more vulnerable; b) often states and individuals cannot address these vulnerabilities effectively; and c) these states “require some form of international intervention to gain freedom from fear and want”.

includes “freedom from fear” (violence), and “freedom from want” (development).²⁰

Human security as an analytical and theoretical tool differs from human security as a political mandate. Uvin (2004: 352-353) uses the concept as a “conceptual bridge between the ... fields of humanitarian relief, development assistance, human rights advocacy, and conflict resolution” (Owen 2004: 377). For Hampson (2004) human security gives voice to the politically marginalised, while Acharya (2004: 355-356) interpreted it as a response to the globalising of international policy. For others human security is a response to genocide and limits of sovereignty justifying humanitarian interventions.

Newman (2001: 243-246) distinguished four interpretations of human security referring to 1) basic human needs; 2) an assertive or interventionist focus; 3) social welfare or a development focus; and 4) new or non-traditional security issues like drugs, terrorism, small arms, and inhumane weapons. The victims of *human security challenges* have been: “1) victims of war and internal conflict; 2) persons who barely subsist and are thus courting ‘socio-economic disaster’; and 3) victims of natural disasters (Suhrke 1999: 272) that create severe humanitarian emergencies. Thomas and Tow (2002: 183) distinguished general human security ‘threats’ such as hunger and disease, and specific ones, such as “single actions that have an immediate effect on the safety or welfare of victims and demand immediate remedy”, to which ‘peace-keeping’ emerges as a major response along with peace-enforcement measures. For humanitarian interventions, human security and traditional responses to crises overlap. They conclude that human security could be considered “a valid paradigm for identifying, prioritising and resolving emerging transnational security problems”, and that the model offers ways to respond to these challenges by “safeguarding and improving the quality of life” for individuals and groups.

Bellamy and McDonald (2002: 375) argued that this effort to make human security policy relevant “risks losing its emancipatory potential”. They preferred the approach suggested by Thomas (1999) where human security should stress “the security of the individual and that security is achieved only when basic material needs are met”. They suggest that

²⁰ See: Thakur (2004: 347-348), Axworthy (2004: 348-349), Hampson (2004: 349-350), Leaning (2004: 354-355), Alkire (2004: 359-360), Bajpai (2004:360-361) and Winslow/Eriksen (2004: 361-362).

*HUMAN SECURITY AS
AN ANALYTICAL AND
THEORETICAL TOOL
DIFFERS FROM HUMAN
SECURITY AS A POLITICAL
MANDATE.*

*“ADDRESSING THE
WELFARE OF THE MOST
DISADVANTAGED MEANS
ADDRESSING MANY OF
THE FUTURE SOURCES
OF ENVIRONMENTAL
DEGRADATION”
(BARNETT 2001: 127)*

the focus of human security should be humans (basic human needs) and their ability to “participate in collective endeavours” and the state “as the primary agent of human insecurity”. In their reply, Thomas and Tow (2002a: 379-382) argued that “state security and human security are interlinked” and that “state security is a means of providing human security”, but that “outwardly aggressive and inwardly repressive regimes can be a major source of human insecurity”. Mack (2002: 1-2) observed that “it is impossible to explore causal relationships between violence, on the one hand, and indicators of underdevelopment, on the other, if all are subsumed under the rubric of human insecurity”.

To overcome the dispute between the proponents of a narrow and a wide human security concept, Owen (2004: 381-385) suggested to combine the wide definition of UNDP (1994) with a threshold-based approach “that limits threats by their severity rather than their cause”. He suggested that each category of threats should be “treated separately for the purpose of analysis”. For Owen (2004: 383) “human security is the protection of the vital core of all human lives from critical and pervasive environmental, economic, food, health, personal and political threats” regardless whether people are affected by floods, communicable disease, or war but all those threats “that surpass a threshold of severity would be labelled threats to human security”, and therefore be included (2004: 382). After ten years of debates in the social sciences the conceptual discussion on human security remains inconclusive and the human security definition depends on the approach, preferences, and agenda of the respective author.

5.6. Towards a Human-centred Environmental Security Concept

Barnett (2001: 127) considered a “human-centred environmental security concept” as justified on moral and pragmatic grounds “because addressing the welfare of the most disadvantaged means addressing many of the future sources of environmental degradation” by protecting the rights of the most vulnerable members of society (Sachs 1996), and by enhancing “welfare, peace and justice” on which legitimate institutions should be built which are required “for human and environmental security” (Conca 1994, 1994a). Barnett (2001: 128) argued that a human-centred environmental security concept should stress the “need for cooperation and inclusion to manage the environment for the equal benefit of all people and future generations”.

For Barnett (2001: 129) “environmental security is the process of minimising environmental insecurity”, having humans as the major focus on security. With this definition, he “seeks to treat the underlying causes that create environmental degradation”. He defines environmental security also as an adaptive process “which is sensitive to change and seeks to manage change peacefully.” In his view environmental security requires nation states to “act domestically and in concert to curb global, regional, and local processes that generate environmental degradation and human insecurity”. It addresses the impact of environmental degradation on the individual and the people from malnutrition, lack of energy and clean water. His concept draws on ecology and hazard theory with the key notions of risk, vulnerability, and resilience.

In a conceptual synthesis, Dalby (2002: 102-104) tried to combine the interconnections of environmental security research with the dilemmas of human security:

First, we must recognize that rich and powerful urban elites have both (a) disproportionate impact on the earth’s natural systems, and (b) also make many of the policy decisions regarding resource-use and pollution. Second, global population is growing; and more importantly, it is becoming urbanized. ... Third, this process is happening in the context of rapid globalization – with its inherent dislocations – of an economy ever more dependent on petroleum products. Fourth, nation-states ... are frequently not the appropriate political entities to make decisions about many economic and environmental matters that flow across their borders in a highly uneven global economy.

Dalby proposed to support sustainable communities that do not harm environmentally distant places using technological and policy innovation that will enhance human security demands to minimise the ecological impact of new transportation systems and buildings, thus creating “human security payoffs for many people”. Linking Northern consumption patterns with Southern human security requires a fundamental rethinking of environmental security.

Environmental security thinking must focus explicitly on these ecological interconnections as a key component of both (a) environmental disruptions, and (b) wars over control of resource exports. Indeed, environmental security needs to take ecology much more seriously. While nation-states may provide administrative and legal structures within which policy is formulated and administered, such spatial categories do not even come close to capturing the flows of energy and materials through our lives. Thinking ecologically ... requires that researchers and policymakers (a) even more drastically reframe

*“THINKING ECOLOGICALLY ... REQUIRES THAT RESEARCHERS AND POLICYMAKERS (A) EVEN MORE DRASTICALLY REFRAME CONVENTIONAL CATEGORIES OF SECURITY, AND (B) INTEGRATE THE QUESTION OF WHOM IS SECURED INTO THEIR ANALYSES. ONLY THEN CAN THE CONTEXTS OF ENVIRONMENTAL INSECURITY BE TREATED WITH THE SERIOUSNESS THEY DESERVE”
(DALBY)*

*UNU-EHS CAN ENHANCE
THE MAINSTREAMING
EFFORTS WITHIN THE UN
SYSTEM THROUGH ITS
SCIENTIFIC FORUM
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WITH REGARD TO
“FREEDOM FROM HAZARD
IMPACTS”.*

conventional categories of security, and (b) integrate the question of whom is secured into their analyses. Only then can the contexts of environmental insecurity be treated with the seriousness they deserve (Dalby 2002: 106).

The reviewed pluralism of definitions of environmental and human security does not allow to recognise any single one as representative for the conceptual debate and empirical research that has occurred since the end of the Cold War.

6. Future Task for Conceptualising the Environmental Dimension of Human Security

Bogardi and Brauch (2005) suggested to focus on the environmental dimension of human security by trying to mainstream both (6.1), to contribute to the fourth phase of the environmental security debate (6.2), to develop a third pillar of the human security concept as “freedom from hazard impact” (6.3), to strengthen in this context the prospects of a learning society (6.4), and to strive towards improved human security.

6.1. Towards a Mainstreaming: Environmental and Human Security Concepts

A lot of conceptual work on the linkages between “environmental” and “human” security and on the “environmental dimension of human security” is still necessary. Mainstreaming efforts are needed on the scientific and political tracks with regard to:

- a) the environmental dimension of human security, i.e. the conceptualisation and debate within the scientific community; and
- b) the “paradigm shift” within the UN System from national towards a human security perspective on environmental threats, challenges, vulnerabilities and risks (Brauch 2005).

With regard to the work of international organisations, a dual mainstreaming may be needed:

- to incorporate a “human security” perspective into “environmental security initiatives”, such as the Kiev process of OSCE, UNEP and UNDP²¹, and into the “green diplomacy”

²¹ See the joint initiative of OSCE, UNEP and UNDP on: *An Environment Agenda for Security and Cooperation in South Eastern Europe and Central Asia*, at: <http://www.iisd.org/natres/security/envsec/>; www.osce.org/documents/sg/2003/01/324_en.pdf; and <http://www.oecd.org/dataoecd/53/3/33687392.pdf>.

of the European Union launched at the European Council in Thessaloniki in June 2003²²; and

- to include an “environmental security dimension” into the work of the HSN focusing primarily on “freedom from fear”, elaborating it further also in the context of the report of the CHS (2003) that has focused primarily on “freedom from want”.

Besides these strategic considerations, human security could be conceived as reflecting on:

- “Freedom from want”;
- “freedom from hazard impacts”; and
- “freedom from fear”.

UNU-EHS can enhance the mainstreaming efforts within the UN system through its scientific forum function and through human capacity building activities with regard to “freedom from hazard impacts”. However, the introduction and support of states to adopt vulnerability concerns in the human security concept in their respective environmental management plans and actions require the active involvement of other UN agencies and programmes.

6.2. Towards a Fourth Phase of Environmental Security Research

After two decades of research “environmental security discussions can now move to a fourth stage of synthesis and reconceptualisation” (Dalby 2002, 2002a: 96). This new phase of research on “Human and Environmental Security and Pace (HESP)” should combine the structural factors from the natural and human dimensions of GEC based on the expertise from the natural and social sciences with outcomes and conflict constellations. Such a fourth phase of social science research on HESP may aim at the following ten conceptual and policy goals:

Scientific Orientation and Approach

1. *Orientation*: An equity-oriented Grotian perspective may support multilateral environmental efforts in international organisations and regimes to avoid conflictual outcomes of global environmental change, environmental scarcity, degradation and stress.

²² See at: http://europa.eu.int/futurum/documents/other/oth200603_en.pdf. and http://europa.eu.int/comm/environment/international_issues/gd_conclusions_rome.pdf.

AFTER TWO DECADES OF RESEARCH “ENVIRONMENTAL SECURITY DISCUSSIONS CAN NOW MOVE TO A FOURTH STAGE OF SYNTHESIS AND RECONCEPTUALISATION” (DALBY).

**ENVIRONMENTAL SECURITY
STUDIES SHOULD CONTRIBUTE TO STRATEGIES
FOR REDUCING THE
IMPACT OF ENVIRONMENTAL STRESS,
DECREASING THE
VULNERABILITY AND
STRENGTHENING THE
COPING CAPACITIES
AND RESILIENCE.**

2. *Spatial Approach.* The analysis of environmental security issues on a regional level requires a spatial approach which may be called a *political geo-ecology*.²³
3. *Human Security Focus:* The reference for research and policy should be human beings, individual victims and communities of distress migration, disasters, crises and conflicts.
4. *Sustainable Development and Sustainable Peace:* A human security perspective to the analysis of environmental security issues may aim at an enduring "sustainable peace"²⁴.

Scientific Focus on Causes, Impacts and Extreme Outcomes of Global Environmental Change

5. *Causes:* The research should broaden the scope to include both environmental degradation and environmental scarcity and their impact on environmental stress and on nature and human-induced hazards. This requires close interaction between social and natural sciences and an interdisciplinary approach.
6. *Outcomes:* The research should include hazards, distress migration and environmental refugees as well as the complex interactions among these outcomes which may often lead to disasters, crises and conflicts.
7. *Policy Process:* Case studies should include the policy processes, e.g. how the state and the society have responded to the challenges and outcomes, they should emphasise the role the knowledge factor (learning, capacity building) has played in developing adaptive and mitigation strategies to reduce vulnerability and to strengthen resilience.
8. *Regional Orientation:* A regional perspective on the causes, the policy process and its outcomes is needed. This requires regional natural science models (climate, soil,

²³ Dalby suggested to use the concept of ecological geopolitics. Brauch (2003: 134, 2003a: 921-922) preferred the concept of political geoecology. Geoecology was introduced by Huggett (1995) as an interdisciplinary natural science. A political geoecology focuses from the perspective of international relations on the interactions between the geosystem and human activities, and especially on national and international political processes.

²⁴ See Kofi Annan's speech to the German Bundestag of 28 February 2002 on "Building Sustainable Peace", at: http://www.bundestag.de/aktuell/presse/2002/pz_0202283.html ; in which he stressed: "that the aim must always be to create a sustainable peace, just as we aim to achieve sustainable development – and indeed sustainable development itself is one of the conditions for lasting peace".

water), and comparative social science case studies on the policy processes at the regional scale.

Policy Goals

9. *Policy Goals on the Societal and Individual Level:* Environmental security studies should contribute to strategies for reducing the *impact* of environmental stress, decreasing the *vulnerability* and strengthening the coping capacities and *resilience*.
10. *Policy Goals on the Communal, Sub-national, National and International Level:* Strategies for coping with outcomes of environmental stress should be developed by improving disaster preparedness and response and by integrating disaster reduction into development planning. The resolution, prevention and avoidance of resulting violence should become a major policy goal.

Such a research agenda should be developed in the framework of a “culture of prevention” (Kofi Annan) with the goal:

- a) to reduce the exposure and impact of and vulnerability to hazards and to build resilience;
- b) to address the root causes of environmentally-induced distress migration that produce internal displacements and environmental refugees;
- c) to focus on linkages between disasters and distress migration and how they may trigger, contribute to, and intensify severe domestic socio-economic and political crises constellations;
- d) to analyse the causes and the processes that resulted in violent environmental conflicts; and
- e) to develop policy-relevant strategies to resolve environmental crises, to prevent that they escalate into violence by addressing long-term and slow-onset environmental root causes.

One policy strategy may be to use international environmental regimes and governance as a tool for conflict prevention. The realisation of these goals requires interdisciplinary cooperation of scientists from North and South, from the natural sciences (GEC), and the social sciences (policy process, outcomes), from environmental specialists, disaster and migration experts with the peace and conflict research community, and a development of policy relevant initiatives in close consultation and cooperation with policy-makers.

**ONE POLICY STRATEGY
MAY BE TO USE
INTERNATIONAL
ENVIRONMENTAL
REGIMES AND
GOVERNANCE AS A
TOOL FOR CONFLICT
PREVENTION.**

“FREEDOM FROM HAZARD IMPACT” WOULD IMPLY THAT PEOPLE CAN MOBILISE THEIR RESOURCES TO ADDRESS SUSTAINABLE DEVELOPMENT GOALS RATHER THAN REMAIN IN THE VICIOUS CYCLE OF THE SURVIVAL DILEMMA.

6.3. Towards a Third Pillar of Human Security as Freedom from Hazard Impact

A major conceptual and policy task for UNU-EHS (2004) could be to develop a component of the human security concept which may be called “freedom from hazard impact”, and to contribute to the implementation of this goal through capacity-building for early warning, developing vulnerability indicators, and vulnerability mapping.

While man-made and natural hazards cannot be prevented, the impact of these tragic events can be reduced by both measures of early warning and better disaster preparedness. “Freedom from hazard impact” would imply that people can mobilise their resources to address sustainable development goals rather than remain in the vicious cycle of the survival dilemma (Brauch 2004).

To achieve “freedom from hazard impact” requires four different types of hazard-specific policies and a combination of technical, organisational and political measures in case of:

- *Slow-onset hazards:* sea-level rise and temperature increase due to climate change require a) long-term strategies of reducing emissions of greenhouse gases, b) measures of adaptation (building of dams in areas affected by sea-level rise), and c) mitigation (restriction of housing in coastal areas affected by sea-level rise);
- *Rapid-onset hydro-meteorological hazards:* Climate change has already contributed to an increase of extreme weather events and may intensify such events as storms (hurricanes, tornados, cyclones etc.) causing floods and landslides, as well as droughts that require both better disaster preparedness (education, training, infrastructure) as well as disaster response on the national and international level. Different systems of early warning are needed for storms (early warning centres of meteorological services, early warning infrastructure), floods (e.g. vulnerability mapping etc.), forest fires (monitoring from space and from plains), and droughts (precipitation monitoring on the ground and from satellites);
- *Rapid-onset geophysical hazards:* earthquakes, volcanic eruptions and their possible extreme consequences (e.g. tsunami of 26 December 2004) require also improved early warning systems (e.g. improved cooperation among seismic and volcanic research centres, tsunami early warning systems) but also a better disaster preparedness

(vulnerability mapping), improved national and international disaster response as well as clear guidelines for post hazard reconstruction activities.

- *Man-made disasters*: technical (malfunctioning of technical systems, collapse of buildings, dams), industrial (e.g. chemical industry, nuclear reactors) and traffic accidents (road, railway, ships, airplanes etc.) or a combination of these.

“Human security as freedom from hazard impact” is achieved when people who are vulnerable to these manifold environmental hazards and disasters (floods, landslides, and drought) that are often intensified by other associated societal threats (poverty), challenges (food insecurity), vulnerabilities and risks (improper housing in highly vulnerable flood-prone and coastal areas) are better warned of impending hazards, prepared and protected against these impacts and are empowered to prepare themselves effectively to cope with the “survival dilemma”. Such extreme events often pose for the most vulnerable three “no-win” alternatives:

- a) to die;
- b) to be forced to move out and migrate; or
- c) to struggle for their own survival and that of their families, village, or tribal community.

6.4. Towards a Learning Society²⁵

A major goal of interdisciplinary research on linkages between environment and security, on environmental stress, and environmentally-induced extreme outcomes from a human security perspective is to contribute to early warning, the creation of knowledge, to reduce vulnerability, and to enhance resilience. Five stages are crucial:

- a) the early recognition of knowledge, relevant to societal, political and economic decision-makers;
- b) the creation of public awareness;
- c) scientific and political agenda-setting;
- d) anticipatory learning; and
- e) building coping capacities.

²⁵ The OECD addressed the goal towards a learning society in the mid 1990s (see at: <http://www.oecd.org/data-oecd/33/59/19507638.pdf>). UNESCO launched an initiative: “Towards the Connected Learning Society” (see at: http://portal.unesco.org/education/en/ev.php-URL_ID=18613&URL_DO=DO_TOPIC&URL_SECTION=201.html).

*AN EARLY RECOGNITION
OF THE LINKAGES
BETWEEN ENVIRON-
MENTAL STRESS,
AND EXTREME ENVIRON-
MENTALLY-INDUCED,
TRIGGERED OR
INTENSIFIED OUTCOMES
IS CRUCIAL.*

***TO IMPLEMENT EARLY
WARNING INTO
PREVENTIVE ACTION ALSO
REQUIRES THE POLITICAL
WILL AND FINANCIAL
RESOURCES THAT ARE
SCARCE AND OFTEN
LACKING IN DEVELOPING
COUNTRIES.***

An early recognition of the linkages between environmental stress, and extreme environmentally-induced, triggered or intensified outcomes is crucial. Research on human-induced as well as natural hazards and on distress migration is vital for humanitarian organisations and governmental agencies working on emergency planning, risk management and disaster relief. To recognise environmentally-triggered societal crises – based on early warning indicators – and to send messages on imminent crises has often failed to lead to proactive policy decisions. Often these warnings do not reach the policy-makers due to information overload in complex organisations.

To create awareness requires a transfer of policy-relevant knowledge to decision-makers. For rapid-onset hazards, the timeliness of the initiation of local responses is crucial to respond rapidly to save people. Due to satellite data and weather modelling, the warning time for most hydro-meteorological hazards has increased. Periods of drought can be recognised early and warning messages are conveyed to the affected and the international community. With regard to the tsunami of 26 December 2004 in the Indian Ocean, the existing technical and operational early warning systems for the Pacific had identified the earthquake and the danger of a tsunami early, but a major deficit was to forward these early warning indicators to the responsible policy makers in the affected countries who could have warned the public through radio and TV.

The long-term structural developments that may lead to crises have difficulties to catch the attention of both the media and of many policy-makers who usually respond to the most urgent crises. To implement early warning into preventive action also requires the political will and financial resources that are scarce and often lacking in developing countries.

The task of both natural and social scientists is to produce knowledge applying generally accepted methods that can be verified and tested. Haas (1990: 18-19) has distinguished between a) learning as a psychological process; b) tactical or trial-and-error learning; or instrumental learning; and c) learning by pursuing new objectives and by adopting new patterns of reasoning. The *Social Learning Group* (2001, 2001a) has reviewed the learning to manage global environmental risks in case studies of social responses to climate change, ozone depletion and acid rain. Clark, Jäger and van

Eijndhoven (2001) went beyond the learning of individuals and included learning within organisations and institutions that often “concentrates on the incorporation of new knowledge or experience into existing practices, causal models, and decision-making processes”. For them “some of the most important learning involves changes in the higher-order concepts including norms, goals and overall interpretative frameworks” or *policy paradigms* (Hall 1993: 279). They define learning as “processes that lead to better outcomes”. They counted as learning “those processes that deliberately utilize experience or information to bring about cognitive changes that are concerned with global environmental management”.

Anticipatory learning as a tool of crisis prevention is far more ambitious and difficult than the requirements of *crisis management* as a centrepiece of national emergency planning (Hart, Stern, Sundelius 1998: 207-8). One link between anticipatory learning and pro-active behaviour in disasters, distress migration, and environmentally-induced crisis is to build local capacities by enhancing the knowledge-base and experience of disaster managers by introducing new ideas and practices that are adapted to the local culture, experience, traditions and capabilities.

The ultimate goal of the *Human and Environmental Security and Peace* (HESP) project and of the related *HEXAGON book series*²⁶ is to induce policy-makers to anticipatory learning by accepting new paradigms leading to proactive environmental initiatives and behaviour that recognise and address the root causes of extreme outcomes of environmental stress before they result in crises which may escalate into violent strife. The strategies to be launched will differ from case to case and they must take the context, history, and conflict-proneness of each case into account.

**ANTICIPATORY LEARNING
AS A TOOL OF CRISIS
PREVENTION IS FAR MORE
AMBITIOUS AND DIFFICULT
THAN THE REQUIREMENTS
OF CRISIS MANAGEMENT
AS A CENTREPIECE OF
NATIONAL EMERGENCY
PLANNING.**

²⁶ See the editorial in the first volume by: Brauch/Liotta/Marquina/Rogers/Selim 2003. For details on the first volume see: http://www.afes-press.de/html/bk_book_of_year.html, see also the editorial at: http://www.afes-press.de/pdf/Sec_Env_Med_Hex_ed.pdf. In December 2004 three additional volumes have been agreed and additional volumes are being considered.

DEVELOPING THE ENVIRONMENTAL DIMENSION OF HUMAN SECURITY BOTH CONCEPTUALLY AND OPERATIONALLY, AND IN PARTICULAR TO CONTRIBUTE TO “FREEDOM FROM HAZARD IMPACT” REMAINS A CHALLENGE FOR THE WORK OF UNU-EHS IN THE YEARS TO COME.

7. Concluding Remarks

Developing the environmental dimension of human security, both conceptually and operationally, and in particular to contribute to “freedom from hazard impact” remains a challenge for the work of UNU-EHS in the years to come. UNU-EHS has contributed to the global efforts of the United Nations International Strategy on Disaster Reduction (UNISDR 2004) and to the preparation of the recommendations adopted at the World Conference on Disaster Reduction in Kobe in January 2005. At this conference three key documents were adopted:

- **Review of the Yokohama Strategy and Plan of Action for a Safer World** (A/CONF.206/L.1, 20 December 2004)
- **Final Document: Building the resilience of nations and communities to disasters Hyogo Framework for Action 2005–2015** (A/CONF.206/L.2/Rev.1)
- **Hyogo Declaration** (A/CONF.206/L.3/Rev.1 21 January 2005).²⁷

²⁷ All conference documents and the final declarations of the Kobe conference may be accessed at: <http://www.unisdr.org/wcdr/>. A detailed analysis and assessment as well as the conceptual contribution of UNU-EHS to this conference will be provided in a future publication of UNU-EHS by Brauch (2005).

Abbreviations

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|----------------|---|
| AFES-PRESS | <i>Peace Research and European Security Studies</i> |
| CASA | College of Associated Scientists and Advisers of UNU-EHS |
| CHS | Commission on Human Security |
| CSCE | Conference for Security and Cooperation in Europe |
| DEPI | Disaster Management Branch of UNEP |
| DEWA | Division of Early Warning and Assessment of UNEP |
| DIVERSITAS | Program on biodiversity science |
| DTIE | Ozon Action Programme of UNEP |
| DTIE | Ozon Action Program of UNEP |
| EB | Encyclopædia Britannica |
| ENVSEC | Environment Security Initiative of OSCE, UNEP, UNDP |
| EU | European Union |
| GEC | Global Environmental Change |
| GECHS | Global Environmental Change and Human Security |
| GMOSS | EU-Network of Excellence on Security |
| HESP | Human and Environmental Security and Peace |
| <i>HEXAGON</i> | Springer book series on Human and Environmental Security and Peace |
| HIV/AIDS | Aids, infectious disease |
| HSN | Human Security Network |
| HUGE | Human and gender security concept by Ursula Oswald (2001) |
| IEA | International Energy Agency |
| IGBP | International Geosphere-Biosphere Programme |
| IHDP | International Human Dimensions Program on Global Environmental Change |
| IPCC | Intergovernmental Panel on Climate Change |
| NATO | North Atlantic Treaty Organisation |
| OAS | Organisation for American States |
| OECD | Organisation for Economic Co-operation and Development |
| OECD/DAC | Development Assistance Committee of OECD |
| OSCE | Organisation for Security and Cooperation in Europe |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| UNU- EHS | Environment and Human Security Institute of the United Nations University |
| UNU | United Nations University |
| WBGU | Scientific Advisory Council on Global Environment Issues of the German Government |
| WCDR | World Conference on Disaster Reduction |
| WCRP | World Climate Research Programme |
| WEU | Western European Union |
| WHO | World Health Organisation |
| World Bank | International Bank for Reconstruction and Development (IBRD) |

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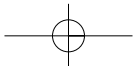
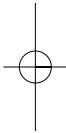
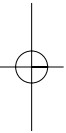
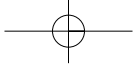
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