IMPACT OF GLOBAL WARMING AND NON-CONVENTIONAL WATER RESOURCES: A CONCEPTUAL CONTRIBUTION TO CONFLICT AVOIDANCE[1]

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ABSTRACT
The chapter argues that the conceptual ideas of David Mitrany, George Marshall, Jean Monnet, as well as of Mikhail Gorbachev were instrumental for 60 years of peace in Europe, for integration, overcoming the Cold War and contributing to the reunification of the continent. The chapter contrasts different security perceptions of narrow *national security threats* with a widened security concept that includes economic, societal and environmental dimensions and other levels of analysis and referents, with a special focus on *human security*.

In the second part, the regional impact of global environmental change and potential extreme outcomes are discussed for the Middle East (for Egypt, Israel, Jordan, Palestine) until 2015 and 2100. These environmental challenges are not yet perceived as common threats. A special focus is on water demand due to population growth, urbanisation and food needs, and on the changing supply due to the impact of climate change on precipitation, soil erosion, drought and desertification in the region. The chapter suggests that these *common challenges to human security* should become an object of functional cooperation within the region, and that these efforts may contribute to a long-term environmental conflict avoidance.

KEYWORDS: climate change, conflict resolution and avoidance, functional cooperation, security concepts, water resources

INTRODUCTION: RESEARCH QUESTIONS AND THESES

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[2] The views expressed in this paper reflect solely those of the author.

After centuries of conflicts, two world wars and the holocaust, since 1945 Europe has experienced 60 years of peace among EU members. The chapter addresses these questions:

1. Which role did the common military threat, functional cooperation, conditionalised aid, the community process and the "new thinking" play? What have been major conceptual ideas, and the political circumstances that made a major change in Europe possible?
2. Can we draw conceptual lessons from this experience of fundamental change in state and human behaviour that may be relevant for the conflict in the Middle East?
3. Which role can functional water cooperation play in addressing the impacts of global environmental change in the Middle East in the 21st century in avoiding violent conflicts over water and contributing to a spill-over for cooperation among conflict parties?

The article is based on the following three basic assumptions:

1. If reality and our knowledge of reality are socially constructed then our perceptions and the factors that determine or influence perception matter: our intellectual traditions, worldviews, mindsets, cultural heritage, national and individual traumas and experiences.
2. Security concepts and especially subjective security threats, challenges, vulnerabilities and risks are influenced by those factors that contribute to the perceived social reality.
3. Philosophical, religious, political and conceptual ideas matter and they have been instrumental throughout human history to initiate major changes in science, society, politics and in the relations among states. Ideas often inspired action both to the better or worse.

FOUR CONCEPTUAL PILLARS OF SIXTY YEARS OF PEACE IN EUROPE

After centuries of wars in Europe four key ideas have contributed to a basic change that have resulted in nearly 60 years of peace in Europe and to a reunification of the continent.

Pillar 1: David Mitrany's functionalist concept of a peace system

In the words of David Mitrany (1943), functionalism is concerned "with the ways of creating … a working peace system. It involves a diagnosis of the problems of disorder in international society and a prescription for ways of shaping a better world" (Taylor/Groom 1975: 1). Functionally oriented transboundary cooperation in international organisations and the non-political problem solution by experts has survived crises and has often contributed to confidence building processes. "Functionalists argue that there is no need for a fixed constitution written in advance because the framework is developed and (ideally) modified as the function being fulfilled changes" (Groom 1975: 94). Functionalists in the tradition of Mitrany argue "that a 'working peace system' will evolve that will tend to diminish conflict by allowing cross-cutting loyalties, by developing superordinate goals, by removing barriers to intercourse and by creating a sense of security through fulfilling a necessary function rather than through a threat system. … Functionalist organisation should start from those spheres in which welfare is maximised through transnational cooperation so that the domain of legitimised politics gradually expands while that of power politics gradually contracts" (Groom 1975: 94-95).

Pillar 2: George Marshall's concept of conditionalised aid

The idea of the Marshall Plan was developed in 1944 in a report of the Committee of Economic Development. The idea was not to punish the aggressor but to use conditionalised economic aid as a tool to open markets, to foster cooperation among those who won and lost World War II, and to build a common institution (OEEC) that later became the OECD (1960). The Cold War offered the legitimacy for its approval in the US Congress. The Soviet threat and US terms for cooperation resulted in an integration of Germany into the West and created favourable preconditions for European cooperation and integration.

Pillar 3: Jean Monnet's concept of functional institution-building

Jean Monnet was the most successful political visionary whose ideas fundamentally changed Franco-German relations after World War II. Monnet became the intellectual founding father of the European Union. In 1950, Monnet developed the Schuman Plan for a European Coal and Steel Community. He was convinced "that by altering the

conditions under which people lived they would necessarily adapt to the new reality". He believed that new ideas "should be advanced at moments when the contradictions of the *status quo* forced political leaders to question their own assumptions " (Ball 1994: 13). Monnet had the political instinct to fundamentally transform the political thinking in France and Germany. His ideas became instrumental for the building of lasting structures of supranational cooperation (Duchêne 1994).

Pillar 4: Mikhail Gorbachev's new thinking

The perception of the end of the Cold War differ according to the worldview of the analyst. For realists US military superiority provoked the implosion of the USSR, for liberals detente contributed to accommodation, and for cognitive psychologists cooperation facilitated a change in perceptions of a new generation of Soviet leaders. For Garthoff (1994: 756, 773) "the decisive factor in the end of the Cold War was a change in beliefs", where "Soviet leaders could discard a long-encrusted and familiar ideology only because of a powerful transformation in the way Gorbachev and some colleagues perceived reality, and because they were ready to adapt domestic and foreign policies to the new perception. ... The 'new thinking' … facilitated a learning process, as past failures prompted rethinking and new approaches."

These four ideas of Mitrany (UK), Marshall (USA), Monnet (France) developed during World War II, in the early Cold War, and during the Korean War, as well as of Gorbachev (Soviet Union) that emerged during a period of stagnation in the Soviet Union, changed the perception of reality and thus enabled fundamental changes of the political context. For the Middle East new conceptual ideas are needed to break out of the cycle of violence. Reviewing the impact of new ideas in Europe may contribute to a reassessment of the mind-sets, political strategies and tactics that have led to the deadlock that postpones taking joint decisions now to cope with the projected regional impacts of global environmental change in this century.

SECURITY PERCEPTIONS MATTER

According to Arnold Wolfers (1962): „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." The per-

ception of security threats depends on the traditions and mind-set of policy-makers. The English school has distinguished three basic traditions that of a:

- *Hobbesian pessimist* (realism) where *power* is the key category (narrow concept);
- *Kantian optimist* (idealism) where *international law* and *human rights* are crucial; and
- *Grotian pragmatist* where *cooperation* is vital (wide security concept).

With the end of the Cold War, many authors (Buzan/Waever/de Wilde, 1998) have observed a widening and a deepening of the security concept in postmodern OECD countries, while a narrow security concept prevails in the US (Brauch 2001). Selim (2003) and Kam (2003) have argued that the security discourse in Arab countries and in Israel has also focused on a narrow security concept, and was influenced by the perception of a "security dilemma" (Herz 1959).

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

Security dimension ⇒ Level of interaction (reference point) ⇓	Military	Political	Economic	Social	Environmental 🡻 (longer-term env. challenges)
Human ➔					Cause and victim
Societal/Community					🡻🡹
National (short-term threats)	Middle East discourses on "security dilemma"				„survival dilemma"
International/Regional					🡻🡹
Global/Planetary ➔					GEC

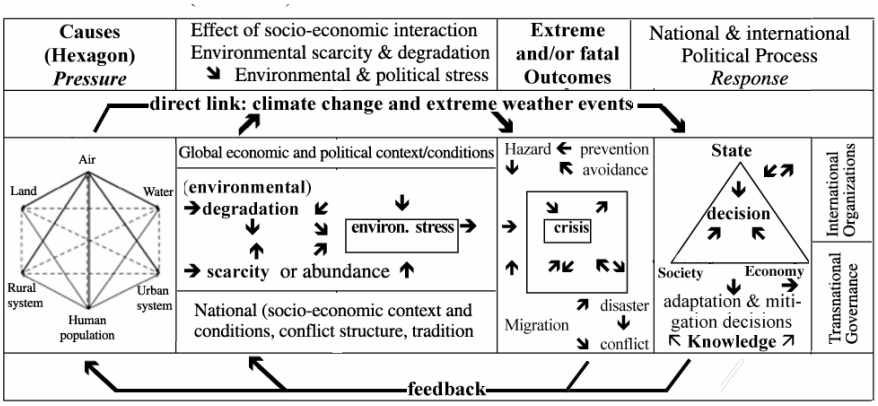
Møller (2003) distinguished a traditional "national" and three expanded security concepts of "societal, human and environmental security" that differ on the reference object, the value at risk and the sources of threat (table 2). Oswald (2004) added gender security and proposed a combined human and gender security concept (HUGE). Brauch (2003, 2005) and Bogardi/Brauch (2005) suggested to focus the human security discourse on the environmental security dimension. The human economic behaviour and global environmental change (GEC) may pose for people with a high degree of societal and environmental vulnerability a "survival dilemma" (Brauch 2004).

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

	Reference object	Value at risk	Source(s) of threat
National Security	The State	Sovereignty, Territorial integrity	Other states (Sub state actors)
Societal security	Nations, Societal groups	National unity Identity	(States) Nations, Migrants, Alien culture
Human security	Individuals Humankind	Survival Quality of life	State, Globalisation, Nature
Environmental security	Ecosystem	Sustainability	Humankind
Gender security	Gender relations, Indigenous people, Minorities	Equality, Identity	Patriarchy, totalitarian institutions (governments, churches, elites)

From a Hobbesian worldview environmental and human security challenges are not perceived as threats. From a Grotian perspective environmental security challenges increase the societal vulnerability (Brauch 2000, 2005). From a Kantian perspective international environmental treaties pose obligations for governments and individuals.
Brauch (2000. 2003, 2005) distinguishes between six factors contributing to global environmental change (GEC, figure 2) that interact in linear or chaotic ways and may contribute to environmental scarcity of soil, water and food that intensify environmental degradation and my result, taking the specific national and international context into account, in environmental stress. Depending on the system of rule and on the level of economic development, the interaction between state, economy and society differ, as will the role of knowledge to enhance the national coping capacities for adaptation and mitigation. Climate change may increase the probability and intensity of extreme weather events (drought, floods) and thus increase internal displacements and migration. Again both factors may contribute or cause domestic crises that may escalate to different forms of low-level violence.

We can project with some degree of uncertainty the six factors of a "survival hexagon" globally, regionally and for Israel and Palestine. Less is known on possible interactions among these factors that may result in surprises. The trend projections of the demand side, as well as of climate change and soil erosion directly interact with hydrological processes that result in changes of precipitation, groundwater resources, intrusion of saline water, increase in evapotranspiration that both impact on the future yields of agricultural products (figure 1).
Figure 1: Model combining GEC, Environmental Stress and Extreme Outcomes



However, to move from trends to foresight requires integrated regional modelling. These trends may pose major environmental and human security challenges that will seriously worsen the quality of life in the region, posing for those with a high societal vulnerability a threat to their livelihood and for some a "survival dilemma".

IMPACTS OF GLOBAL ENVIRONMENTAL CHANGE IN THE MIDDLE EAST

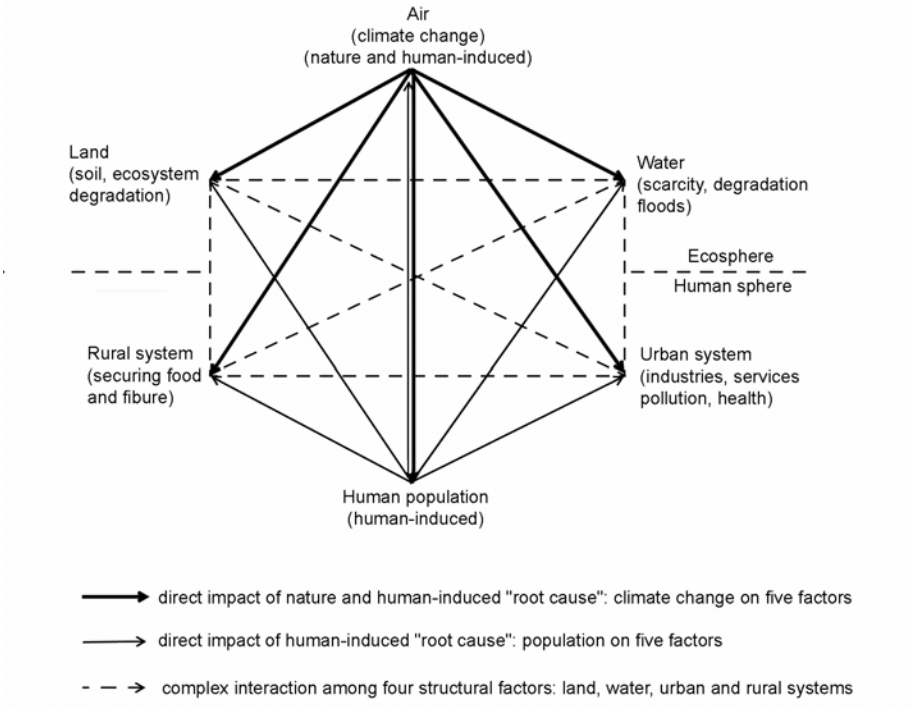
Which impacts of GEC can be foreseen for Israel and Palestine, as well as for Egypt, Jordan, Lebanon and Syria based on trend projections? Have they been perceived as environmental challenges in Israel and Palestine? Are the people in Israel and Palestine ready to support functional cooperation in coping with these challenges?

Issar and Zohar (2004) analysed the impact of natural variability of climate change, of warming and cooling and precipitation on the environment and civilisation in the Middle East for the past 10.000 years by integrating the knowledge of archaeology with that of climate change on the background of opposing paradigms. Issar and Zohar (2004: 232) stress that climate change: "may endanger the economy of many countries in the region is a foregone conclusion …, namely that a warm period is equated with a reduction of precipitation. …. Taking into account that … agriculture still plays a significant role in the economy of the Near East, a severe reduction in precipitation will most likely damage the economy of most countries in this region." Crises resulting from water shortages have "been averted or mitigated" by human innovation based on "scientific research, engineering and agronomic innovations, together with the education of farmers to adopt new technologies". These advances, "are interdependent

processes that can succeed only when the vicious cycle of poverty and ignorance, religious fanatism and aversion to innovation, is broken." (Issar/Zohar 2004: 232-233).

In figure 2 six factors contributing to GEC are combined in a "survival hexagon" (Brauch 2000, 2003, 2005): a) three *demand-side factors*: 1) population growth, 2) urbanisation trends, 3) agriculture (food security issues); and b) three *supply-side factors*: 4) climate change, 5) water degradation and scarcity; and 6) soil erosion, degradation and scarcity. While the demand side factors can be projected, the interaction among the factors of the earth system is more complex, especially the impacts of climate change on the hydrological cycle. Steffen et al. (2004 : 71) noted that "the behaviour of the Earth System is typified not by stable equilibria but by strong non-linearities, whereby relatively small changes in a forcing function can push the System across a threshold and lead to abrupt changes in key functions".

Figure 2: Interactions in the Survival Hexagon



They argue that "the potential for abrupt change is a characteristic that is extremely important for understanding the nature of the Earth

System”(71) and that “the understanding of the natural rhythms and patterns of Earth System functioning is essential to understanding the impacts and consequences of global change” (72).

Since 1945 the interactions among “population, technology and socio-political organisation has changed dramatically” as have “the scope and degree of human alteration of the Earth System” (Steffen et al. 2004: 83). The syndromes approach may be a promising approach to assess critical developments in the Earth System. They concluded that “the last 50 years have without doubt seen the most rapid transformation of the human relationship with the natural world in the history of humankind” (Steffen et al. 2004: 131). They admit that at present it is not possible “to make any projection on how global change will progress over the next few centuries” (134).

Human action has specifically affected a) the carbon cycle, b) the nitrogen, phosphorous and sulphur cycles, c) the hydrological cycle and d) the climate system. Steffens et al. (2004: 196) concluded that “the human-environment relationship has changed fundamentally in the last few centuries, and particularly in the last 50 years. On the effects of climate change on the hydrological cycle and on water resources for humans, Steffens et al. (2004: 222) claimed that such an effect “may already be discernible above natural variability” and they stressed that “rainfall has likely decreased by about 3% over much of the sub-tropical land areas”, and in agreement with the IPCC they noted an “increase in extreme precipitation events over the past century in the Northern hemisphere”. But they caution that “the effect of climate change on water resources in the future is difficult to estimate” (222).

As the IPCC, they point out that the scenarios suggest a decrease in runoff in the Mediterranean and that the reduced streamflow and groundwater recharge may lead to a reduction of water supply by 10% or greater by 2050. “Water supplies will decrease in many countries that are already water stressed and in-crease in others. … Second, extreme events – floods and droughts – will increase. Thirdly, currently deleterious impacts on water quality will be amplified rather than damped by climate change”. The latter can be traced in the Middle East for the past 6.000 years.

The changing demand side: population growth, urbanisation, agriculture and food

The Mediterranean region and especially the Middle East and North Africa (MENA) have experienced major demographic changes since 1850. While in the five South European countries (France, Greece, Italy, Portugal, Spain) the population has grown from 83 million (1850) to 177 million in 2000, the population may drop to 154 million by 2050 according to the medium projection of the UN Population Division's 2000 assessment. In the MENA the population has grown from 25,6 million in 1850 to 232,3 million in 2000 and the population is projected to grow to 413,2 million in 2050 (Brauch/Selim/Liotta 2003: 972; UN 2001, table 3).

Table 3: Population Growth in the Near East Countries, 1850-2050 (UN 2001, Brauch 2002)

Real population development							Proj.	Changes	
	1850	1900	1950	1980	2000 (2000 Rev.)	2025	2050 (2000 Rev.)	1950-2050 (2000	2000-2050 Rev.)
Egypt	5.5	10.0	21.834	43.749	67.884	94.777	113.840	92.006	45.956
Jordan	0.25	0.3	1.237	2.923	4.913	8.666	11.709	10.472	6.796
Israel			1.258	3.879	6.040	8.486	10.065	8.807	4.025
Palestine	0.35	0.5	1.005	?	3.191	7.145	11.821	10.816	8.630
Lebanon	0.35	0.5	1.443	2.669	3.496	4.581	5.018	3.575	1.522
Syria	1.5	1.75	3.495	8.704	16.189	27.410	36.345	32.850	20.156
Eastern Med.	12.45	16.05	29.247	62.613	89.497	142.899	173.776	144.529	84.279
North Africa	13.1	22.3	44.099	91.362	142.802	199.832	239.426	195.327	96.624
Total (MENA)	25.83	38.77	74.152	154.910	233.473	344.048	414.512	340. 360	181.04
South Europe	83.0	103.5	132.91	167.265	177.304	172.492	154.065	21.152	-23.24

In its 2004 World Population Data Sheet, for mid-2004 the U.S. Population Reference Bureau (PRB 2004) estimated the population of Israel at 6.8 million (annual increase 1.6%), of the Palestinian Territory at 3.8 million (3.5%), of Jordan at 5.6 million (2.4%), of Lebanon at 4.5 million (1.7%), of Syria at 18 million (2.4%) and of Egypt at 73.4 million (2.0%). Based on UN (2001) figures (table 3) the population in Israel has increased from 1.26 million in 1950 to 6.04 million in 2000 and may grow until 2050 by 4 million to 10.065 million (PRB: 10.6). For Palestine (Occupied Palestinian Territories, OPT) the UN stated an increase from 1.01 million in 1950 to 3.19 million in 2000 and it projected an increase to 11.82 million (PRB: 11.9) until 2050. From 2000 to 2050, the medium 2000 rev. projects for Jordan an increase from 4.9 to 10.47 (PRB: 10.2) million, for

Lebanon from 3.5 to 5 million (PRB: 6.9), for Syria from 16.2 to 36.35 million (PRB: 35) and for Egypt from 67.9 to 113.84 (PRB: 127.4) million people. The UN population projection until 2300 projects for Israel a population decline to 9.37 million and for Palestine an increase to 13.5 million. All countries have experienced severe water scarcity, and due to the demand increase the water stress (scarcity, degradation) will further increase as will the competition between "blue" drinking and "green" water for irrigation.

The urbanisation rate (table 4) in the countries in the Near East has been above the average for Africa and West Asia. The growth of mega-cities (table 5) has also been significant from 1950 to 2000 and they will grow further to 2015 (UN 2002) what has significantly increased their vulnerability to earthquakes and hydro-meteorological hazards (drought, flash floods).

Table 4: Changes in Urbanisation Rates in the Near East, 1950-2030 (UN 2002)

	1950	1960	1970	1980	1990	**2000**	2010	2020	**2030**
Egypt	**31.9**	37.9	42.2	43.8	43.6	**42.7**	44.0	48.2	**54.4**
Jordan	**35.9**	50.9	56.0	60.2	72.2	**78.7**	80.1	82.2	**84.4**
Israel	**64.6**	77.0	84.2	88.6	90.3	**91.6**	93.0	93.9	**94.6**
Palestine (OPT)	**37.3**	44.0	54.3	61.1	64.0	**66.8**	70.0	73.5	**76.9**
Lebanon	**22.7**	39.6	59.4	73.7	84.2	**89.7**	92.1	93.1	**93.9**
Syria	**30.6**	36.8	43.3	46.7	48.9	**51.4**	55.4	60.6	**65.6**
Western Asia	**26.7**	**35.0**	**44.4**	**51.7**	**62.0**	**64.7**	**67.2**	**69.8**	**72.4**

Table 5: Growth of Urban Centres in the Mediterranean, 1950-2015 (UN 2000)

City	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2005**	**2010**	**2015**
Istanbul	1.08	1.74	2.79	4.40	6.54	9.45	10.81	11.84	12.49
Cairo	2.41	3.71	5.33	6.86	8.57	10.55	11.61	12.66	13.75
Alexandria	1.04	1.50	1.99	2.52	3.21	4.11	4.59	5.05	5.53
Tel-Aviv	0.42	0.74	1.03	1.42	1.80	2.18	2.37	2.52	2.63
Amman	0.09	0.22	0.39	0.64	0.96	1.43	1.70	1.97	2.21
Beirut	0.34	0.56	0.92	1.21	1.58	2.06	2.24	2.37	2.47
Damascus	0.37	0.58	0.91	1.38	1.80	2.34	2.69	3.07	3.50
Aleppo	0.32	0.48	0.72	1.07	1.54	2.17	2.54	2.92	3.31

According to Bruinsma (2003) the self-sufficiency rates for cereals for the MENA region has declined from 86% (1964-1966), to 65% (1995-1997), and it has been projected to drop further to 56% by 2030. Simultaneously, the net cereal imports have risen within 30

years from 5 million tons in 1964-1966, to 43 million tons in 1995 to 1997 and they have been projected to rise to about 102 million tons by 2030. According to FAO by 2030 the cereal import needs of the MENA region will be larger than those of Latin America and the Caribbean, Sub-Saharan Africa and South Asia combined. Increase in food demand, decline in crop yield due to climate change (temperature increase, evapotranspiration), the likely decline in precipitation and increasing demand for drinking water will be a key driver for growing food imports.

The changing supply side: climate change, hydrological changes and soil erosion

For the 21st century the climate models assessed by the IPCC (2001) in its Third Assessment Report suggest for the Mediterranean Basin "warming greater than the global mean warming" and for the summer season, "this warming is in excess of 40% above the global average warming". With regard to precipitation, the model consensus is "that there will be little change in winter and drying for the summer" and for some models a large decrease is predicted. Based on GCM models the projected mean temperature for the Eastern Mediterranean for the 2080s between July and September may increase between 3.0 and 5.0°C . The Third Assessment Report of the IPCC (2001: 651-652) projected mean temperature and precipitation changes for summer in the 2080s, that will be quite severe for the MENA region compared with Europe.

Complex interactions between climate change and hydrological cycle (water scarcity)

The Near and Middle East has been water stressed for millennia, but with progressing population increase since 1850 to 2050 the available water per person has steadily declined. Water degradation due to overpumping and intrusion of seawater has increased. The water projections until 2020or 2050 due to both population (demand) growth and precipitation (supply) decline resulting from regional warming for Israel, Palestine and Jordan are very severe.

UNEP-GRID states: "The regions most vulnerable to domestic water shortages include those where access to water is already limited, the population is growing rapidly, urban centers are spreading, and the economy is burdened by financial problems and a lack of skilled

workers. … The impacts of climate change … are expected to have varying consequences for the availability of freshwater around the world. … An increase in the rate of evaporation will also affect water supplies and contribute to the salinisation of irrigated agricultural lands. … Current indications are that if climate change occurs gradually, the impacts by 2025 may be minor. … Climate change impacts are projected to become increasingly strong during the decades following 2025".[3] However, for the Near East the impact will already be significant by 2025 for "green water" availability for food production.

According to Hayek (2004) the available water per person in the Arab world declined since the 1950s to the present by two thirds, from 3000 m^3/y to 1000 m^3/y. For Jordan by 2010 the water demand may rise to 1436 mcm/y and by 2020 to 1647 mcm/y from the presently available water supply of 780 mcm/y. Hayek projected until 2020 a water deficit of 400 mcm/y or a decline to 140 m^3/y per person. According to the Water Commission of Israel the agricultural water use has declined since 1998 while the domestic water use has increased due to the immigration (Israel 2002: 75)**.** The water demand in Gaza may increase from 114 mcm (2000) to 228 mcm (2010) to 285 mcm (2020) and in the Westbank from 155 mcm (2000) to 394 mcm (2010) to 584 mcm (2020) (UNEP 2003).

Martin Parry et al. (1999) have indicated major yield declines for an unmitigated emissions scenario of –2.5 to –5% for the Middle East while the European Union, Japan, China and Canada may experience yield gains. With a 750 ppm stabilisation scenario there may be less reduction in yield in semi-arid subtropical regions. Under the 550 ppm stabilisation scenario the pattern is less obvious: lower CO_2 levels and their associated climate changes suggest less reduction in yields than in the 750 ppm scenario in southern Africa, eastern Europe, the northern Middle East and Australia. The soil in many parts in the Eastern Mediterranean is already highly eroded.

Complex interactions between climate change, hydrological cycle and soil erosion

What will be the interaction among the factors of the survival hexagon (figure 2) by 2025, 2050 or 2100? If one assumes linear interactions the impact for human and environmental but also economic se-

[3] See for details at: http://www.grida.no/climate/vital/37.htm.

curity (of Arab countries with a high degree of the population living from agriculture) will be very severe. Obviously these serious trends have not been conceptualised as issues of national and regional security and survival in the MENA and Near East region.

David Newman (2004) has recently argued that "environmental issues have not occupied a prominent place in the Israeli public agenda" . He noted that "the redefinition of notions of security which have taken place throughout the world, to include energy, food, health, livelihood, rights or global environmental change, are not considered part of the 'security' discourse as such inside Israel, where the term 'security' retains a narrow and highly focused interpretation." This assessment applies also to neighbouring Arab Masreq countries where security has been conceptualised primarily as narrow national security (Selim 2003).

To put the regional implications of global environmental change on the agenda of the security discourse, a widening of the prevailing concepts of military and demographic security is needed. However, such a political agenda-setting would require an improved area specific knowledge of climate change impacts, i.e. both higher resolution regional circulation models, local and sub-regional climate case studies, as well as integrated climate models (e.g. Strzepek/Onyeji/Saleh/Yates 1995) that take other factors of the "survival hexagon" into account based on different economic growth rates. Water supply and demand will be severely influenced by the impacts of these factors until 2050.

RELEVANCE OF THE EUROPEAN EXPERIENCE FOR THE NEAR EAST?

Only the breaking out of the cycle of violence after 1945 made a fundamental change possible in Europe. The conceptual ideas of Mitrany, Marshall and Monnet mattered. The Soviet threat helped and required a cooperation among former enemies. However, the analogies between Europe and the Middle East are limited. The four intellectual pillars, created by conceptual thinkers, political visionaries and pragmatists from the four allied power in dealing with the "German problem" made a fundamental difference in Central Europe.

The environmental challenges confronting the new generation of Arabs and Israelis during their lifetime may become severe undermining the welfare, health and even the survival of the poor. Monnet and Marshall were political realists with clear political interests and the political skill to realise their visions that fundamentally changed Europe and the perspectives of most Europeans from confrontation to cooperation. Developing a "small hope" (Dajani 2004) in the region may gradually change the context towards cooperation. If the environmental challenges confronting the livelihood of human beings in the region during the 21st century are real for those who are now attending school, why are they not being taught on these challenges? Why are these challenges not being discussed in the civil societies, in the press and in parliaments? Why have they remained a concern only for scientific specialists?

Elsewhere, I have translated the functional concepts of Mitrany, Monnet and Marshall into a conceptual proposal for the Near East (Brauch 2005a). The proposal is based on a reconceptualising of security in relation to peace, environment and development. The first proposal is probably the most difficult: to gradually shift from a narrow "national military security" to a "human, societal and environmental security" concept. It would require a basic shift from the state or the respective political group to the individual as a victim of violence. Without a fundamental change in the mind-set of policy-makers, elites, communicators but also in the threat perception of the people in the streets a gradual shift from the focus on the ongoing conflict to the longer-term mutual environmental challenges that may threaten the livelihoods may not be feasible. At present in both communities environmental concerns have a low priority.

A basic shift in the perception of security threats, challenges, vulnerabilities and risks necessarily implies a shift away from the "Hobbesian fear", the action-reaction patterns of zero-sum games, of thinking in terms of a security dilemma to a pragmatic thinking that focuses on functional cooperative potentials, on non-zero-sum games to enhance the coping capacities in dealing with the emerging challenges for individuals and their families. This may lead to two policy goals: a) *sustainable development* by optimising resource efficiency and b) *sustainable peace* focusing on human, societal and environmental secu-

rity and political peace with prosperity. The latter may be utopian for the present and the future.

What can we learn from the end of World War I and II in Europe? The Versailles Peace Treaty of 1919 may be interpreted as a combination of Hobbesian punishment, and of Wilson's vision of a better world based on democracy and the League of Nations. While after World War II a more realistic attempt was made for a "UN with teeth", the world was divided into two camps where the perceptions of the "Soviet threat" helped to overcome the fear of "German resurgence". Marshall and Monnet succeeded during the postwar crises with their proposals for cooperation among former enemies. American policy-makers skillfully used the Marshall Plan to overcome objections. They succeeded to change mutual perceptions in and of Germany. This context permitted a new generation to grow up where common European concerns gradually become more important than purely national ones. May any lessons be drawn from the end of the Cold War for the Near or Middle East? The lessons depend on the worldviews, mind-sets, and theories of the observer. It was the breaking out of the arms race by conceptual innovation and learning that made the first global peaceful change in modern history possible. Gorbachev's new thinking fostered a readiness for change from the top that overcame the fear of the people to peacefully protest and to change their system of rule.

As long as the political leadership and the people in the region seem to adhere to a narrow hard security concept and perceive the basically asymmetric conflict as a zero sum game the spiral of violence, of human misery producing permanent wounds on both sides may never end and the opportunity to address common challenges for the young generation may be lost. At present, neither "objective security" as the absence of threats to acquired values nor "subjective security", i.e. the perception that these values are not threatened, exists in the region. This remains a task of a regional peace settlement. But such a settlement may never be possible as long as the "big dreams" prevail on either side. Crises have often produced new ideas and policies. Thus, there may be a need for a fundamental shift in the thinking on security in the region away from national security concepts to a human-centred environmental security concept that permits a focus on joint challenges of regional, national and individual survival.

One major task is a gradual overcoming the Hobbesian zero-sum games. None of the new environmental challenges can be solved with this perspective. The daily experience of violence makes confidence and partnership building measures more difficult but at the same time more timely. During the Cold War, independent thinkers in East and West who analysed the consequences of a failure of deterrence and the reality of a nuclear war in Central Europe started to work jointly on modest steps of military confidence building measures, on non-offensive defence and less threatening military doctrines. In the 1980s, these concepts were analysed by Gorbachev's policy advisers and then were taken up, at least as declaratory policy goals.

Functional Cooperation on Regional Impacts of Global Environmental Change

The recognition of new environmental challenges that affect both communities and cannot be solved with military means is a major step. This is a task of educators, motivated by an ethics of responsibility (*Verantwortungsethik*) for the next generations. This *joint recognition* requires common frameworks and institutions for research. The next step is *agenda-setting* for this long-term educational agenda, for the public and policy makers on both sides.

In the Near East there may be a need for cross-border environmental partnership building measures by addressing both the urgent and longer-term joint environmental challenges by cooperation on freshwater, wastewater, solid and hazardous waste, conservation and biodiversity. A second step may be to gradually build mutual trust by functional cooperation addressing the challenges to survival by water, soil and food specialists from Israel, Palestine, Egypt and Jordan. A third step may be to contribute to an *anticipatory learning* to adjust and to mitigate against the six projections and their possible linear or chaotic interactions.

Functionalists in the tradition of Mitrany have argued that a network of functional cooperation may gradually spill-over to the political realm. Although many political scientists have challenged this hypothesis, nevertheless functional cooperation may contribute to subjective security, to a gradual decline of the fear that basic values will be attacked by the other. Subjective security also requires satisfying basic human needs and overcoming the perception of humiliation and

creating respect for the dignity of the other. Only from a wider „human security“ perspective environmental security challenges to humans matter and may be perceived as threats to human livelihood and survival. This requires a wider security concept that recognises soft “security” challenges and an understanding that they can be solved only by cooperation. Such strategies must build on existing forms of cooperation, like those of water specialists. The increasing water scarcity and degradation of joint aquifers have made the cooperation of water managers, specialists on conservation and distribution a matter of mutual survival. Can this functional cooperation be broadened by addressing: a) cooperation on reuse of wastewater for irrigation, b) cooperation on desalination, c) desertification strategies to combat soil erosion by sharing the mutual experience, as well as new methods in combating desertification, and d) on agricultural and food issues by an increased exchange of knowledge on farming in arid and semiarid areas, on cooperation in research, training and capacity building?

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