

A satellite-style map of the Eastern Mediterranean region, showing the sea in dark blue and the land in shades of green and brown. The map covers parts of Europe, the Middle East, and North Africa.

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**Long-term Security Challenges
for the Eastern Mediterranean**

**Mediterranean Security, Stability and Cooperation:
Issue for Europe – Eastern Mediterranean Region**

*Session III: Political and Security Partnership
and its Influence on Stability in the Region*

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1. Middle East Conflict: Context of the Talk

Frank Pfetsch (2003) concluded based on Kosimo conflict data base:
Mediterranean is a conflict prone and conflict intensive region:

1945-2001: 140 events: 19 wars, 72 violent, 49 nonviolent conflicts,


2 of 4 conflict clusters are in the Eastern Mediterranean:

- ❖ Middle East (Israel – Arab neighbours, incl. Palestinians): 35 conflicts (42%)
- ❖ Cyprus, disputes between Greece & Turkey: 14 conflicts

National, international confl. prevail, water conflicts minor

- ❖ **Israel-Jordan:** 2 sev. crises (1959-67, 1969-76), latent conflict (1977-94)
- ❖ **Turkey, Syria, Iraq:** water crisis on Euphrates & Tigris (1990-1999)

Environmental impacts of conflicts & Env. scarcity as a conflict cause:

- UNEP PCAU: Studies on Balkans, Occupied Palest. Territories, Iraq
 - Focus: **Environment – security linkages as security challenges**
 - ❖ **wide security concept:** dimensions, referent objects, values at risk
 - ❖ **long-term environmental security challenges, vulnerabilities, and risks for the Eastern Mediterranean countries: 2015–2100**
- 

2. Narrow vs. Wide Security Concept

Arnold Wolfers (1962): objective vs. subjective security:

„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.“

Security perception depends on worldviews or traditions

- ❖ Hobbessian pessimist: *power* is the key category (narrow concept)
- ❖ Kantian optimist: *international law* and *human rights* are crucial
- ❖ Grotian pragmatist: *cooperation* is vital (wide security concept)

Security dimension ⇒ ↓ Level of interaction	Mili- tary	Political	Economic	Environ- mental ↓	Societal
Human individual ⇒				victim	
Societal/Community					
National	MENA region				
International/Regional					
Global/Planetary ⇒				GEC	

Narrow Security Concepts in the Middle East

Mediterranean: competing concepts of territory & security

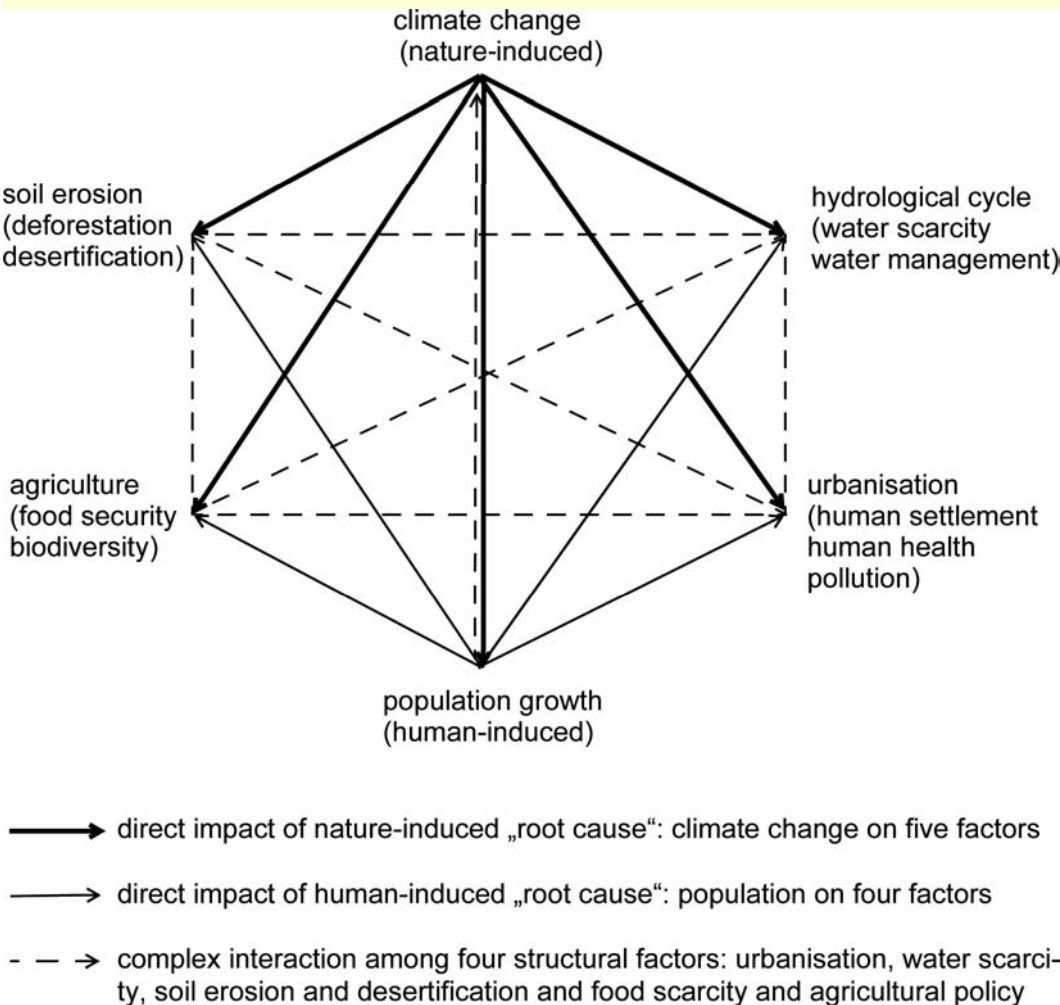
- ❖ Europe (EU): since 1990: **wide security concept (dimensions), process of de-territorialisation (post-modern, post-national constellation)**
- ❖ Middle East and in Eastern Mediterranean („modern“ **sovereignty**): **adherence to a narrow national political and military security concept:**
- ❖ **Commonalities: Selim: Masreq countries; Kam: Israel; Aydin: Turkey**

Thesis: The narrow Hobbesian security concept used by the elites in the Eastern Mediterranean is a major constraint.

Table: Expanded Concepts of Security (© Bjørn Møller, 2003)

Label	Reference object	Value at risk	Source(s) of threat
National security	The State	Territ. integrity	State, substate act.
Societal security	Societal groups	Nat. identity	Nations, migrants
Human security	Individ., mankind	Survival	Nature, state, global.
Environmental s.	Ecosystem	Sustainability	Mankind

3. Wider Security Focus: Non-military Challenges

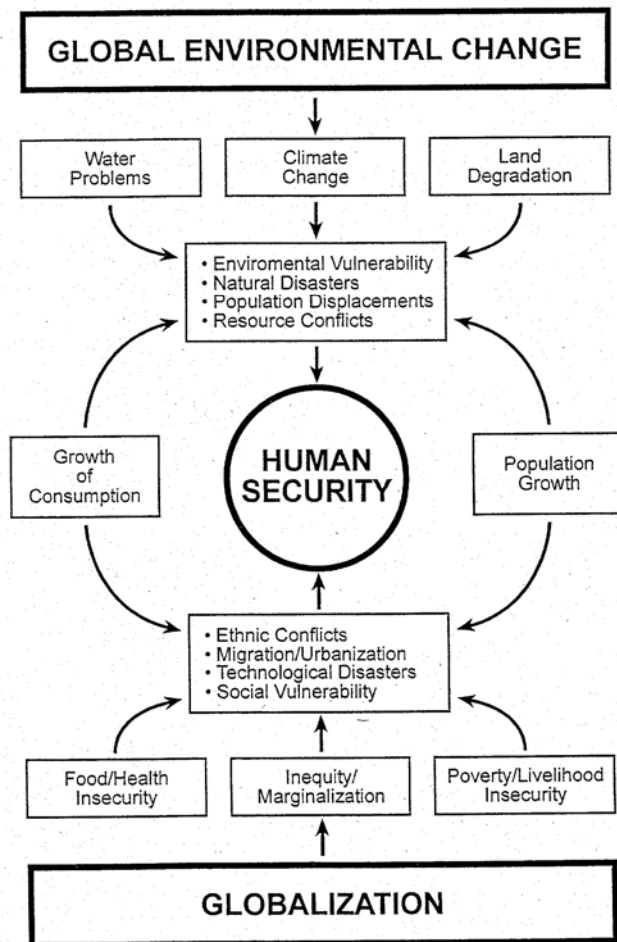


Environmental security in the Middle East is affected by **Global Environm. Change**

- **Human-induced factors**
 - ❖ **Population growth**
 - ❖ **Urbanisation**
 - ❖ **Food & Agriculture**
- **Nature & human-induced**
 - ❖ **Air: Global climate change**
 - ❖ **Soil: deforestation, degradation, desertification**
 - ❖ **Water: hydrological cycle, pollution, scarcity**
- **Economic production & consumption patterns (impacts of economic globalisation) on Global Environmental Change (GEC).**

4. Dual Global Challenge: GEC & Globalisation

Global Change and Human Security



- **Human Security Perspective**
 - ❖ referent: individual & mankind
 - ❖ value at risk: human survival
 - ❖ threat: nature, **GEC** & globalisation
- **GEC > environm. vulnerability > disaster > migration > scarcity**
- **Globalisation > inequity > social or societal vulnerability**
- **Key questions for Middle East**
 - How will GEC & globalisation affect the individual, society, countries?
 - Is human survival at risk, for whom?
 - Can the environmental security challenges (**GEC**) be solved by hard security concepts and means?

5. Model: Global Environmental Challenges, Environmental Stress & Fatal Outcomes

**Causes
(Hexagon)**

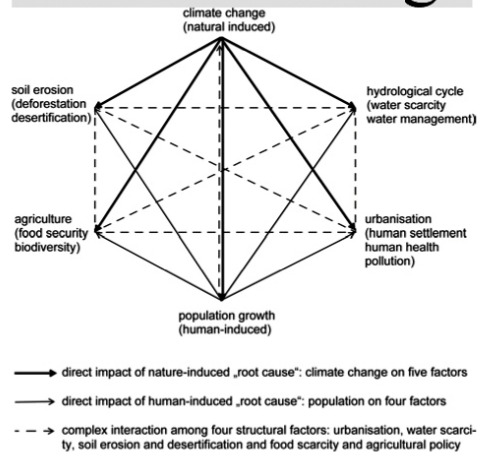
**Effect
(Interaction)**

**Environmen-
tal Stress**

**Probable
Outcomes**

↗ → → → → **Extreme Weather Events** → → → ↘

Climate change



environmental

→ **degradation**

(soil, water)

↓ ↑ →

→ **scarcity**

(water, food, housing)

global cond.



**Environ-
mental stress**



nation. cond.

disaster **conflict**
avoidance



Crisis



migration

conflict

5.1 Population Growth: Eastern Mediterranean

Table 3: UN Population Projection (Rev. 2000), mio.

Source: UN Populations Division: World Population Prospects, 2000 Rev.

	1850	1900	1950	2000	2025	2050	1950-2050	2000-2050
Jordan	0.25	0.3	1.24	4.91	7.19	11.71	10.47	6.80
Israel			1.26	6.04	8.49	10.07	8.81	4.03
OPT	0.35	0.5	1.01	3.19	7.15	11.82	10.82	8.63
Lebanon	0.35	0.5	1.44	3.50	4.58	5.02	3.58	1.52
Syria	1.5	1.75	3.50	16.19	27.41	36.35	32.85	20.16
Turkey	10.0	13.0	20.81	55.67	86.61	98,82	78.01	43.15
East. Med.	12.45	16.05	29.25	89.50	141.43	173.88	144.53	84.28
S. Europe	83.0	103.5	132.9	177.3		154.1	+21.2	-23.24

5.2 Urbanisation in the Eastern Mediterranean

Table 4: World Urbanization Prospects (Rev. 2001),%

Source: UN Populations Division: World Population Prospects (2002)

	1950	1960	1980	2000	2010	2020	2030
Jordan	35.9	50.9	60.2	78.7	80.1	82.2	84.4
Israel	64.6	77.0	88.6	91.6	93.0	93.9	94.6
Palestine	37.3	44.0	61.1	66.8	70.0	73.5	76.9
Lebanon	22.7	39.6	73.7	89.7	92.1	93.1	93.9
Syria	30.6	36.8	46.7	51.4	55.4	60.6	65.6
Turkey	21.3	29.7	43.8	65.8	69.9	73.7	77.0
West Asia	26.7	35.0	51.7	64.7	67.2	69.8	72.4
Asia	17.4	20.8	26.9	37.5	43.0	48.7	54.1

5.3 Food Security in the MENA Region

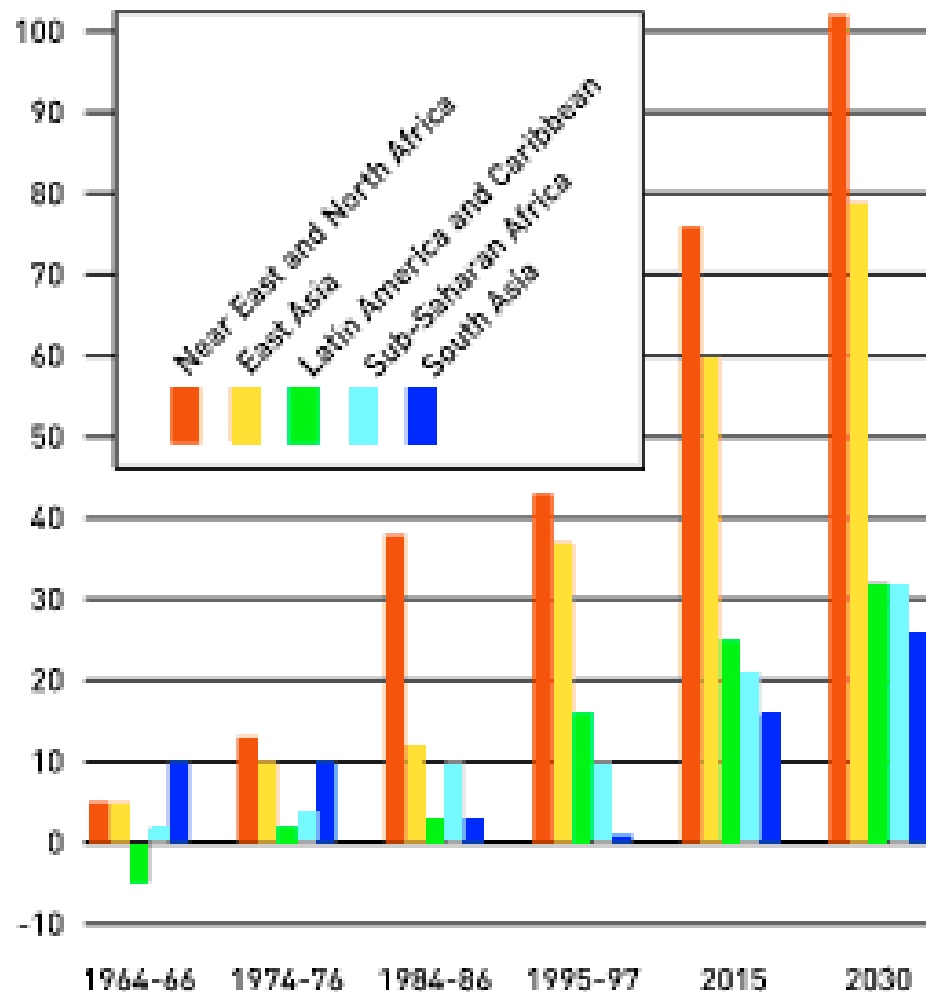
Table 5:Cereal balance for the MENA, all cereals (1964-2030).

19	Demand				Pro- duc- tion	Net tra- de	Self suf- fic. rate %	Growth rates, % p.a			
	Per caput (kg)		Total (mio.tons)					Time 19... /20..	Dem and	Pro- duc- tion	Po- pula tion
	food	All uses	food	All uses							
64/66	174	292	28	47	40	- 5	86	67-97	3.6	2.4	2.7
74/76	190	307	40	64	55	- 13	85	77-97	3.1	2.7	2.7
84/86	203	365	56	100	65	-38	65	87-97	2.1	2.0	2.4
95/97	208	357	75	129	84	-43	65	'95- 15	2.0	1.4	1.9
2015	209	359	108	186	110	-85	56	'15- 30	1.5	1.2	1.4
2030	205	367	130	232	131	-116	54	'95-'30	1.8	1.3	1.7

5.4 FAO (2000) Increase in Cereal Imports

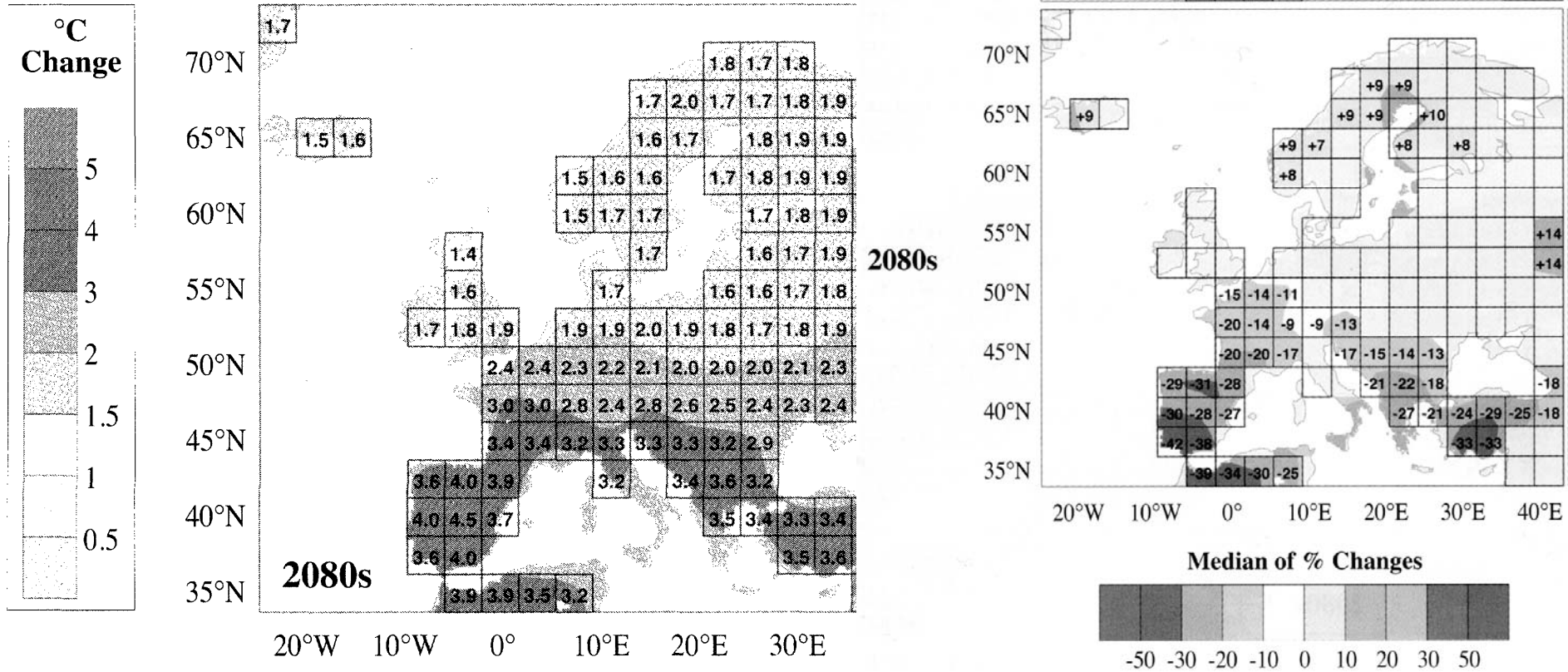
Net cereal imports in developing countries

millions of tonnes



- **FAO: 4 March 2003, Rome** World's population will be better fed by 2030, **but hundreds of millions of people in developing countries will remain chronically hungry.**
- Parts of **South Asia** may be in a difficult position and **much of sub-Saharan Africa** will not be significantly better off than at present in the absence of concerted action by all concerned.
- Number of hungry people is expected to decline from 800 million today to 440 million in 2030. **The target of the World Food Summit (1996) to reduce the number of hungry by half by 2015, will not be met by 2030.**

5.4 Climate Change Impacts in Mediterranean



Mean Temperature Change for Summer in 2080s (WG II, p. 651)

Mean Precipitation Change for Summer in 2080s (WG II, p. 652)

Source: IPCC: Climate Change 2001, WG II: Impacts (p. 651-652)

No specific climate change models for Eastern Mediterranean.

5.5. Effects of Climate Change for Egypt & Nile Delta

Population: 3 800 000
Cropland (Km²): 1 800



Population: 6 100 000
Cropland (Km²): 4 500



Climate Change Impacts for Egypt:

- Nile Delta: 50cm, 2 mio. persons, 214.000 jobs
- Temperature for Cairo to 2060: **+ 4°C**
- SSR (cereals): 1990-2060: **60% → 10%**
- Decline in yield of wheat (by 2050: **-18%**)

Climate trends in Mediterranean by 2080

- Higher temperature increase in summer
- Decline of precipitation in summer.

Population Growth in Med. (2000-2050):

- North (Südeuropa: P,E,F,I Gr): **- 23 Mio.**
- South (MENA-Region): **+ 181 Mio.**

MENA: Increase in Food Insecurity

- FAO 2002: 1995-2030: **+150%** (42 **>** 116 Mio.t)
- SSR: 1964: 86%, 1995: 65%, **2030: 54%**

Dramatic Increase in Cereal Imports

- Due to population growth & climate ch.

5.6. Soil Erosion and Desertification



Climate change impacts(2100)

- temperature increases (2.5-4.5°C)
- Sea-level rises (SLR)
- uncertainty on precipitation
- heat waves & droughts increase
- urbanisation increase temp.&SLR
- Desertification increase in max. temperat. & reduce precipitation
- climate change impacts may intensify desertification
- decline in agricultural yields (cereals)

High sensitivity of ecological and social systems to climate change in ME.

„There is clear evidence of potentially serious impacts throughout the Mediterranean region, with the most acute impacts being felt south of the socio-economic divide in Africa and the Near East.“

- High environmental and societal vulnerability of Eastern Med. region
- Low adaptive capacity and limited mitigation efforts (due to ME conflict)

UNEP warned in 1990: "[it] is likely that the impact of climate change will first be felt in the Mediterranean water resource system."

5.7. Water Scarcity in the Middle East



- **FAO:** of 21 c. water-scarcity, 12 are in NE
- 11 MENA c. fresh water: 220 m³/cap. Jordan, 330 m³/cap. OPT, 2,000 m³/cap. Turkey, Syria.
- **K. Khosh-Chashm:** Most extreme water crisis is Gaza (15 gallons, US: 800 gall. or 1: 53).
Estimate: a drop of 50% in ann. cap. Ren. Water: 1995 and 2025 in MENA countries.

Water	Israel	Jordan	West Bank
Supply	1987-1991 (million c.m)		
Normal	1,950	900	650
drought	1,600	700-750	450-550
Demand	Projected increase		
1987-91	2,100	800	125
2020	2,800	1,800	530

Source: Helena Lindblom 1995; Lowi 1992.

5.8. Water Demand Forecasts: 1990-2025

Water in Arab Masreq (-2025)

Total withdrawal p. cap. m³/yr/cap.

Countries	1990	C. 1	C. 2	C. 3
Egypt	1095	758	818	1782
Jordan/WB	112	74	90	139
Lebanon	274	188	201	459
Syria	270	139	162	304
Iraq	2367	986	986	2530

Source: P. Rogers: Water in the Arab World (1994: 306-7) projection for 2025

C 1: without income effects (bcm/yr)

C 2: with income effects (bcm/yr)

C 3: with inc. effects,+ 3% increase agric.

Water situation in Jordan

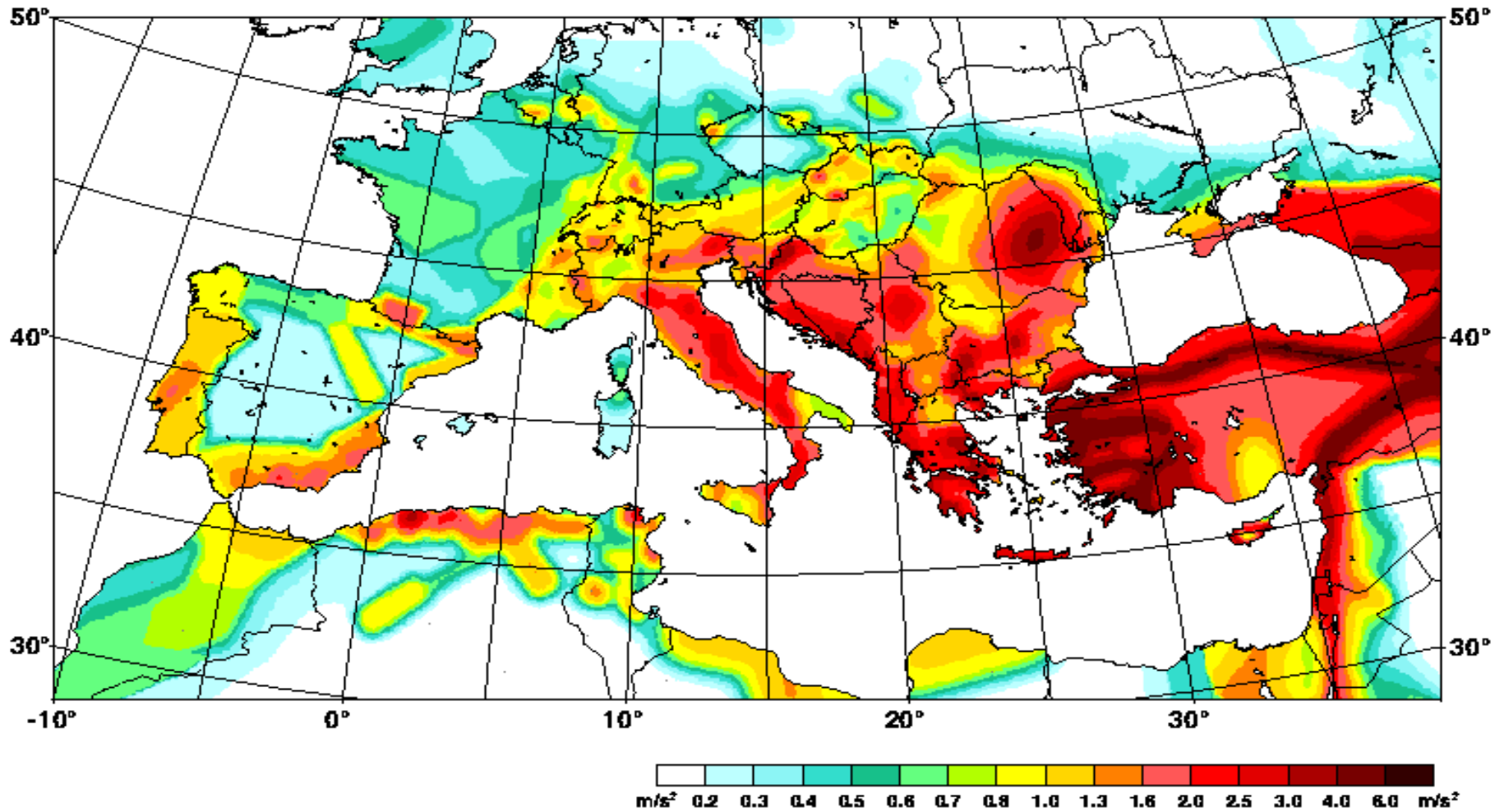
Year	Supply	Demand	Deficit (Mcm/y)
1995	882	1,104	222
2000	960	1,257	297
2005	1,169	1,407	238
2010	1,206	1,457	251
2015	1,225	1,550	325
2020	1,250	1,658	408

Source: Semide: Water in Jordan

Water resourc.: surface w. (Jordan), groundwater, waste water (for irrig.),

Future solution: desalination

6. Fatal Outcomes: Earthquakes in the Med.



6.1 Fatalities of Disasters in the Eastern Med.

Table 9: Fatalities of Natural Disasters (1975-2001)

	Total			Drought		Earthquakes		Floods		Storms	
	Ev	Killed	Affect (000)	Kill.	Aff. 000	Killed	Affect (000)	Kill.	Aff. 000	Kil	Aff.
Israel	11	31	2,029	-	-	-	-	11	1	3	410
Jordan	11	47	349,0	-	330	-	-	17	18,0	11	200
Leban.	4	45	105,6	-	-	-	-	-	1,5	25	104,
OPT	1	-	943	-	-	-	-	-	-	-	-
Syria	5	115	662,2	-	658	-	-	27	172	-	-
Turkey	63	27,375	2,580	-	-	26,087	2,377	450	92,2	31	3
East M.	95	27,613	3,700	0	988	26,087	2,377	505	112,9	70	104,
Total M.	485	43,728	22,145	0	10 m	35,735	35,735	4374	2,153,	608	3,697

6.2. Vulnerability of Cities to Earthquakes

City	1950	1960	1975	1990	2000	2010	2015
Athens	1.8	2.2	2.7	3.0	3.1	3.1	3.1
Istanbul	1.08	1.74	3.60	6.54	9.45	11.84	12.49
Ankara	0.54	0.87	1.71	2.54	3.20	3.85	4.08
Izmir	0.48	0.66	1.05	1.74	2.41	3.01	3.20
Cairo	2.41	3.71	6.08	8.57	10.55	12.66	13.75
Alexandria	1.04	1.50	2.24	3.21	4.11	5.05	5.53
Tel-Aviv	0.42	0.74	1.21	1.80	2.18	2.52	2.63
Amman	0.09	0.22	0.50	0.96	1.43	1.97	2.21
Beirut	0.34	0.56	1.06	1.58	2.06	2.37	2.47
Damascus	0.37	0.58	1.12	1.80	2.34	3.07	3.50
Aleppo	0.32	0.48	0.88	1.54	2.17	2.92	3.31

6.3. Migration Trends in the Mediterranean

Table 10: Net migration rates in the Med. (Zlotnik,2003:599)

Region	1950-60	1960-70	1970-80	1980-90	1990-2000
	<i>Net number of migrants per year (thousands)</i>				
Mediterranean	-2,765	-4,097	-2,127	-839	369
NW Mediter.	-1,521	-761	1,079	337	2,124
NE Mediter.	-823	-1,162	-71	-162	-888
East. Medit.	576	-406	-1,295	-506	921
South. Medit.	-997	-1,769	-1,840	-508	-1,788
	<i>Net migration rate</i>				
Mediterranean	-1.1	-1.4	-0.6	-0.2	0.1
NW Mediter.	-1.2	-0.5	0.7	0.2	1.3
NE Mediter.	-2.4	-3.1	-0.2	-0.4	-2.0
East. Medit.	1.7	-0.9	-2.3	-0.7	1.0
South. Medit.	-2.0	-2.8	-2.3	-0.5	-1.4



7. Security Relevance of these Challenges

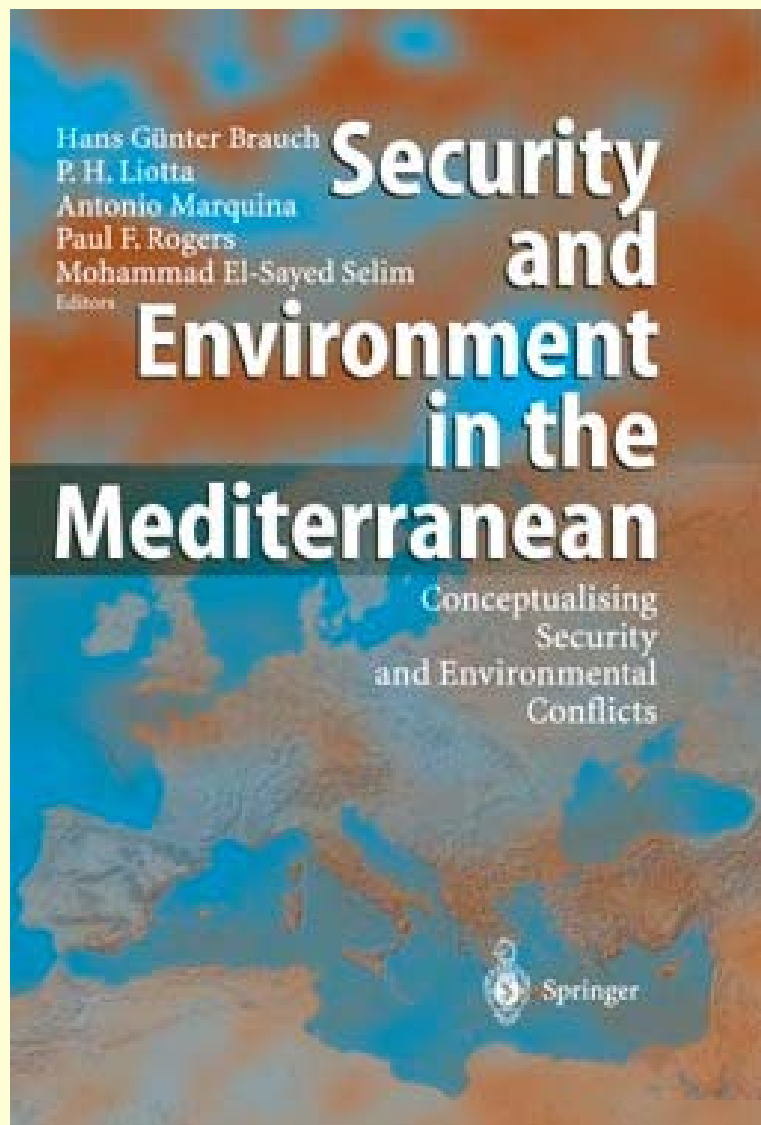
- **CIA Report: Global Trends 2015** (Dec. 2000) pointed for ME to 2 of these trends: **population growth & water scarcity** as U.S. national and international security threats.
 - **Policy relevance depends on worldview & security concept**
 - **Hobbesian pessimists** and narrow security concept ignore or downplay these environmental challenges.
 - **Kantians**: point to democratic, human rights deficits.
 - **Grotian pragmatist**: agenda-setting & cooperative strategy.
 - **Narrow national security perspective**: State, power and territorial integrity and ethnic & religious identity matter.
 - **Conclusion: Worldview & mindset of elites is a major impediment to perceive these non-military security challenges**
 - **These Challenges cannot be solved with power & „hard“ security & with military means. They require cooperation!**
- 

8. Policy Suggestions for the Eastern Mediterranean Region



- **Hexagon: Six structural early warning indicators**
- **Outcomes:** Earthquakes, heatwaves and drought
- **Unresolved conflicts:** impediment to cooperation
- **Climate Change:** global task of post-Kyoto regime
- **Population:** national task of reproductive health
- **Urbanisation:** planning
- **Soil, water & food: need reg., nat. & local sustainable policy efforts!**

Sources



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- **Download of previous talks by H.G. Brauch: (http://www.afes-press.de/html/download_hgb.html)**

Selected Additional Sources Used in this Talk

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