I. MENA'S LOOMING WATER CRISIS

Water shortages are a global problem. The world is rapidly moving toward shortages of freshwater. Global water use has increased fivefold this century, and today's per-capita availability is predicted to decline by a third over the next generation. Water shortages are rapidly emerging even in water-rich countries from the United States to China; recent droughts in Europe and North Africa have emphasized the precarious balance between water supply and demand.

The MENA region is the driest in the world. The region is poorly endowed with natural freshwater supplies *[Illustration 1]*. Three-quarters of the land mass is arid. And more than a third of the river supply flows from countries outside the region. Rainfall is low, erratic, and poorly distributed and droughts and deserts define the region.

Water demand in the region is growing fast. MENA countries, home to 5 percent of the world's people, contain less than 1 percent of the world's annual renewable freshwater. The population, having more than doubled in the past 30 years to about 280 million, could double again in the next 30 years. Cities growing at more than 4 percent a year, already contain 60 percent of the region's people. Water demand for

A. Worldwide Net Renewable Water Distribution by Region and Per Capita

	Net Annual Renewable Water Resources (billions of cubic meters)	Population (millions)	Per Capita (cubic meters)
Oceania	769	21	36,619
Latin America	10,766	466	23,103
North America	5,379	287	18,742
Eastern Europe and Central Asia (ECA)	7,256	495	14,659
Africa	4,184	559	7,485
Western Europe	1,985	383	5,183
Asia	9,985	3,041	3,283
MENA*	**355**	**284**	**1,250**

*Totals may not add due to rounding.

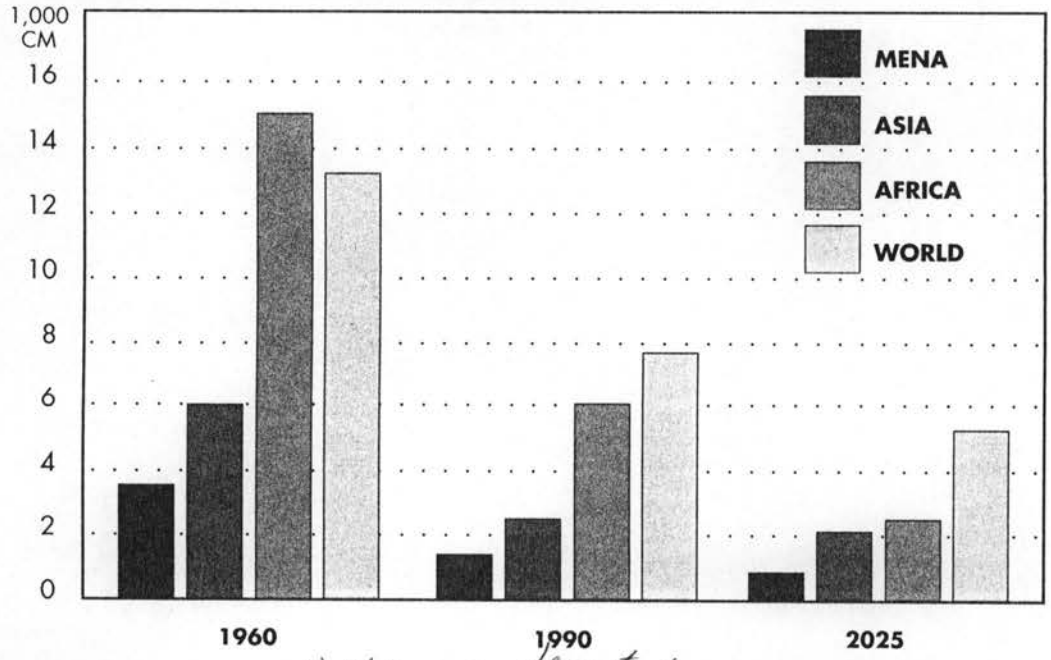
Sources: *World Development Report, 1995; World Resources, 1992-93;* Pacific Institute for Studies in Development, Environment and Security – Stockholm Environment Institute; and World Bank estimates, 1995; WB from Security etc.

domestic and industrial uses has exploded in recent decades. At the same time, tubewell technology and the development of agriculture have increased water use in rural areas.

Water availability is falling to crisis levels. About 45 million of the region's people — 16 percent — lack safe water, and more than 80 million lack safe sanitation. As populations have grown against a background of finite freshwater resources, so the water available to individuals has fallen dramatically. Annual per-capita availability, about 3,300 cubic meters in 1960, has fallen by 60 percent to about 1,250 cubic meters today, the lowest in the world and it is predicted to fall by another 50 percent to about 650 cubic meters by 2025 *[Illustration 2]*. This average covers all human activities — domestic, industrial and agricultural — and masks extreme local variability. For example, in Yemen and the West Bank and Gaza, per-capita availability today is less than 180 cubic meters, already far below the projected regional average 30 years from now *[Illustration 3]*.

Some countries are destroying their capital, mining groundwater. Groundwater resources throughout the region are overexploited *[Illustration 3]*. Jordan and Yemen withdraw 25 to 30 percent more from aquifers than is being replenished, and in Gaza aquifers are being mined even faster. Such over-exploitation risks further damage to underground water reserves through the intrusion of seawater or the leaking of pollutants. Though not yet as dramatic, shortages due to over-extraction of groundwater are imminent in the Maghreb countries.

2. *Projected Renewable Resources Per Capita by Major Region – Year 2025*



Source: *World Resources 1992-93*; World Bank, From Security to Security, 1996

3. Water Availability and Usage in MENA Countries

Country	Annual Renewable Resources BCM	Annual Withdrawals		Per-capita Renewable Availability in 1995 (CM)	Water Usage (%)		
		BCM	As a % of Annual Renewable Resources		Domestic	Industry	Agriculture
Algeria	18.4	3.0	16	655	22	4	74
Egypt	58.0	56.3	97	1005	7	5	88
Bahrain	n.a.	0.2	—	—	60	36	4
Iran	118.3	46.5	39	1826	4	9	87
Iraq	104.0	43.9	42	4952	3	5	92
Israel	2.1	1.9	90	375	16	5	79
Jordan	0.8	1.0	125	213	20	5	75
Kuwait	—	—	—	—	64	32	4
Lebanon	4.8	0.8	17	1200	11	4	85
Libya	0.7	2.8	400	130	15	10	75
Malta	0.03	0.02	67	—	76	8	16
Morocco	30.0	11.0	37	1083	6	3	91
Oman	2.0	1.3	65	1053	3	3	94
Qatar	0.02	0.15	750	—	36	26	38
Saudi Arabia	2.2	3.6	164	118	45	8	47
Syria	5.5	3.3	60	385	7	10	83
Tunisia	4.4	3.0	68	489	13	7	80
UAE	0.3	0.4	133	167	11	9	80
Yemen	3.0	3.9	130	176	5	2	93
[1]West Bank and Gaza	0.2	0.2	100	105	12	13	75
Total MENA	**355**	**183**	**52**	**1250**	**6**	**7**	**87**

1. As allocated between Israel and Gaza (1991), currently under negotiation.

Sources: *World Resources 1992-93;* Pacific Institute for Studies in Development, Environment and Security; Stockholm Environment Institute; and World Bank estimates, 1990-1995.