



**Organization for Security and Co-operation in Europe  
Secretariat**

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22 May 2007

ENGLISH only

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**Conference Services**

**Fifteenth OSCE Economic and Environmental Forum - Part 2:  
“Key challenges to ensure environmental security and sustainable development in the  
OSCE area: Land degradation, soil contamination and water management”  
Prague, 21 - 23 May 2007**

**Session IV  
Challenges to the management of water resources and to countering desertification in  
the Mediterranean region**

Please find attached the presentation by Mr. Shimon Tal, founder and CEO of “Tal Content - Consulting & Enterprise Ltd”, former Water Commissioner of Israel.

### The Extent of Water Shortage

Availability of Freshwater in 2000  
Average River Flows and Groundwater Recharge

**200 m³/y/capita – 40% of “Shortage Red Line” of UN**

**2025 – Domestic and Municipal needs only**

**Complicated Operation**

Source: World Resource 2000-2001: People and Ecosystems: The Fragging Web of Life. World Resources Institute (WRI), Washington DC, 2000.

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### Sustainability in Water-Stressed Environments in Israel and its neighbors

SHIMON TAL CONSULTING & ENTERPRISE LTD. CONSULTING & ENTERPRISE LTD.

Shimon Tal

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### Regional Relationships and Solutions

**Redistribution of scarce natural water resources is not a solution in Water-Stressed Environments.**

**Water should be a catalyst for cooperation and not a cause for arguments and disputes.**

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### Water Demand in the Region 2020

Population	24 M	(Jordan, Palestinians, Israel)
Demand	5.1 BCM/Year	<ul style="list-style-type: none"> <li>2.6 BCM/Year Agricultural</li> <li>2.1 BCM/Year Domestic</li> <li>0.4 BCM/Year Industrial</li> </ul>
Resources	5.1 BCM/Year	<ul style="list-style-type: none"> <li>1.1 BCM/Year Recycled effluents</li> <li>2.65 BCM/Year Natural resources</li> <li>1.35 BCM/Year Manufactured water</li> </ul>

Additional 80 MCM/year

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### Sustainable Approach - Objectives, Plans, Actions

- all → 2010 *Reliable Water Supply* to meet needs
- water → 2010 *Improve the efficiency of use*
- natural systems → 2010 *Significant improvements towards conservation of the quality of water resources & water*
- approach → 2010 *Institutional, administrative and legal modifications to meet new*

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### Red-Sea Dead-Sea Canal

Map of Drainage Basins and Watersheds

Surface water in the region ultimately flows to the Mediterranean Sea, the Red Sea or the Dead Sea. In the desert watersheds, water flows on rare occasions during floods, and most of the water evaporates or penetrates into the ground. Ephemeral streams are marked by a broken line. We can see that most streams in the region are ephemeral.

Red Sea

Dead Sea -420 m BSL JRD

Desalination Plant 850 mcm/y

200 km

2000 mcm/y

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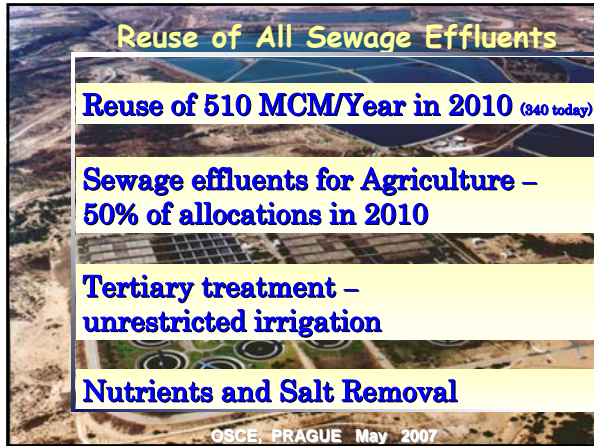
## Reuse of All Sewage Effluents

**Reuse of 510 MCM/Year in 2010 (840 today)**

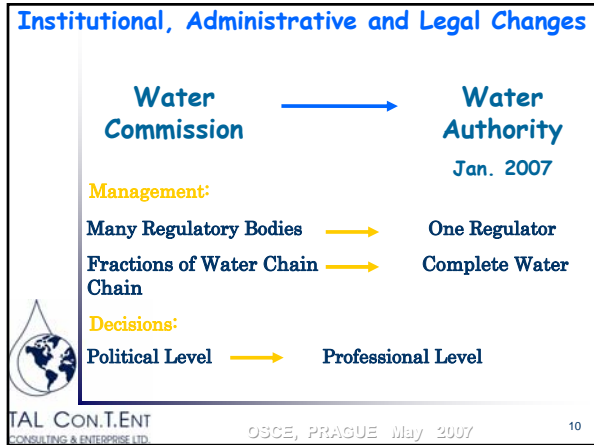
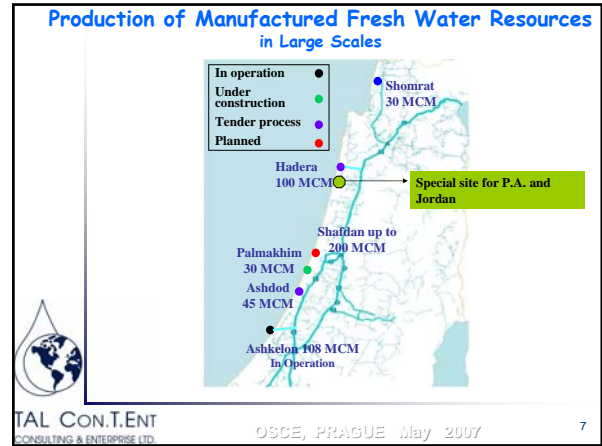
**Sewage effluents for Agriculture – 50% of allocations in 2010**

**Tertiary treatment – unrestricted irrigation**

**Nutrients and Salt Removal**




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## Sustainability in Water Sector

Year	Desalination MCM/Y	Sewage Effluents MCM/Y	Total MCM/Y	%of Natural Resources
2000	0	280	280	18%
2005	120	340	460	30%
2010	365	510	875	56%



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Israel is willing to share knowledge and experience with other countries:

- Workshops and courses, academic studies
- Exchange of experts
- R&D



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