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

Shimon Tal

OSCE, PRAGUE May 2007

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

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.

Water Demand in the Region 2020
Population     24 M (Jordan, Palestinians, Israel)
Demand        5.1 BCM/Year                   2.6 BCM/Year   Agricultural
              2.1 BCM/Year   Domestic
              0.4 BCM/Year  Industrial
Resources      5.1 BCM/Year                 1.1 BCM/Year  Recycled effluents
              2.65 BCM/Year  Natural resources
              1.35 BCM/Year Manufactured water
              Additional 80 MCM/year

Sustainable Approach - Objectives, Plans, Actions
2010 Reliable Water Supply to meet needs
2010 Improvement the efficiency of water use
2010 Significant improvements towards conservation of the quality of natural systems
2010 Institutional, administrative and legal modifications to meet new

Red-Sea Dead-Sea Canal

Dead Sea -420 m BSL
Mediterranean Sea
JRD Destination Plant 850 mcm/y
ISR
ISR
ISR
ISR
ISR 800 km 2000 mcm/y
Red Sea
Production of Manufactured Fresh Water Resources in Large Scales

- In operation:
  - Hadera: 100 MCM
  - Ashdod: 45 MCM
  - Ashkelon: 108 MCM

- Under construction:
  - Shomrat: 30 MCM
  - Palmahim: 30 MCM
  - Shafdan: up to 200 MCM

- Tender process:
  - Jordan: Special site for P.A.

- Planned:
  - Shomrat: 30 MCM

Reuse of All Sewage Effluents

- Reuse of 510 MCM/Year in 2010 (340 today)
- Sewage effluents for Agriculture – 50% of allocations in 2010
- Tertiary treatment – unrestricted irrigation
- Nutrients and Salt Removal

Sustainability in Water Sector

<table>
<thead>
<tr>
<th>Year</th>
<th>Desalination MCM/Y</th>
<th>Sewage Effluents MCM/Y</th>
<th>Total MCM/Y</th>
<th>% of Natural Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0</td>
<td>280</td>
<td>280</td>
<td>18%</td>
</tr>
<tr>
<td>2005</td>
<td>120</td>
<td>340</td>
<td>460</td>
<td>30%</td>
</tr>
<tr>
<td>2010</td>
<td>365</td>
<td>510</td>
<td>875</td>
<td>56%</td>
</tr>
</tbody>
</table>

Institutional, Administrative and Legal Changes

- Water Commission → Water Authority
  - Management:
    - Many Regulatory Bodies → One Regulator
    - Fractions of Water Chain → Complete Water Chain
  - Decisions:
    - Political Level → Professional Level

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

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