

## Israel and Jordan – a Future of Water Technology Cooperation

Israel and Jordan have a common interest in water, facing a permanent shortage of this precious and essential resource.

The Arava Institute for Environmental Studies (AIES) along with the Jordan University of Science & Technology (JUST) initiated a Water Seminar for water professionals, to explore the mutual water problems and look for possible solutions, in finding advanced technologies and wider cooperation. The seminar included participants from Israel, Jordan and the Palestinian Authority (PA). It was organized and lead by Dr. Clive Lipchin from the Arava Institute, Dr. Same Talozzi, from the Jordan University of Science & Technology and Dr. Avraham Israeli.

Jordan is considered to be one of the 10 poorest countries worldwide in water resources, and has a population growth rate of about 2.3% (2006). The available renewable water resources are dropping drastically to an annual per capita share of 160 m<sup>3</sup> in recent years, compared to 3600 m<sup>3</sup>/cap/year in 1946. Jordan's National Water Master Plan, approved by the Jordanian government in 2004, defines water as a national resource, which should be carefully managed and developed. The Master Plan calls for development of a variety of additional water resources to ensure water security and economic prosperity. Jordan has recognized that one of the most hindering factors for its continued growth is the scarcity of water. In 2006, a total of 1150 mcm of water was supplied in Jordan; 375 mcm short of the total demand in that year. In February 2008, a Royal Water Committee was set-up highlighting the priority Jordan gives to the water sector. Underling the need to study and develop alternative water projects, such as desalination and treatment to enhance water sources, the King urged the committee to benefit from the international experience in this regard.

Israel's plans for water security involve investment in desalination and wastewater treatment technology, increasing the use and treatment of waste water for irrigation and improving the insitutional and economic capacities for water management in the water sector. Successfully implementing these plans also requires developing robust mechanisms for cooperation over water with Israel's closest neighbors: Jordan and the Palestinian Authority.

The thirst for water, which has brought Israel to a leadership position in the adoption of improved technologies, is common to both countries. Israel has identified, at the government level, the great potential of water technologies to increase exports and its GDP.

The Israeli Government decided on June 2006 to give high priority to the water related industry and allocated budget for further develop and implement advanced water technologies, with the objective of doubling the revenues from exports by 2010. This

program was given the name NewTech (Novel Efficient Water Technologies), emphasizing new technologies in areas, such as desalination, wastewater reuse, water management, irrigation, etc..

Israel and Jordan have found much common ground in their cooperation on water issues. The understandings reached during the years are essential and –one can risk to state – almost inevitable. Similarly, both Israel and Jordan, as well as the Palestinian Authority, can greatly benefit from an expanded cooperation on water, by supporting and encouraging water technology and water management cooperation.

As opposed to the inevitability of the cooperation on water resource sharing, the importance of cooperation on water technology enterprises is less obvious. Israel is looking to develop new technologies and expand its markets. At the same time as part of its Master Plan, Jordan emphasized Research and Development in water related issues. Using its latent academic talent, Jordan can increasingly absorb the use of new technologies and trigger new innovations. Israel can benefit from an expanded market for its emerging technologies, including great parts of the Arab world. Jordan can leverage an expanded relationship with Israel, by encouraging indigenous solutions, based on the accelerated adoption of new technologies.

The ideal way to realize this cooperation is by academic and *private sector* cooperation. The TRIDE Fund, established in 1996 for Jordan-Israel-US industrial cooperation is focusing efforts in realizing joint water technology projects. As part of this effort, TRIDE helped fund the tri-lateral Water Seminar (additional funding was by the German Development Agency or GTZ).

The seminar, brought together for the first time, water professionals from Israel, Jordan and the PA, representing academia, the private sector, government and NGOs. A main goal of the seminar was to provide a framework whereby the different experiences of working in the water sector in the three countries could be shared and discussed. A unique challenge for the water sector in this region is the relatively large socio-economic differences between Israel on the one hand and Jordan and the Palestinian Authority on the other. For example, water losses in Jordan's water network can sometimes exceed 50% whereas in Israel it is around 12%. Also, the city of Amman receives piped water only once a week making water storage and conservation an important part of daily life in the city. The participants discussed the development of a framework for integrated water resources management. A highlight of the seminar was a Field Trip where the participants had the opportunity to engage directly with the diverse issues of water management in the region. The Field Trip encompassed the entire Jordan river watershed and included visits to sites and meetings with experts in Israel, the West Bank and in Jordan.

This seminar is an important initiative to provide applicable and realistic solutions to the region's water problems through building trust and understanding between people. It also

provides a great opportunity to identify present and future cooperation opportunities in water technologies, with the active involvement of the private sector.



Professor Khalil Ereifej (center) and Dr. Samer Talози (left) from the Jordan University of Science and Technology present an award to Dr. Clive Lipchin (right) from the Arava Institute for Environmental Studies

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