



## WATER CONSERVATION, REUSE, AND RECYCLING: PROCEEDINGS OF AN IRANIAN-AMERICAN WORKSHOP (2005)

In December 2002, specialists from the United States and Iran met in Tunisia for an interacademy workshop on water resources management, conservation, and recycling in arid and semi-arid climates. Attendees were selected by the National Academy of Sciences and the National Academy of Engineering of the United States and the Iranian Academy of Sciences of the Islamic Republic of Iran, but participated in their personal capacities. Several Tunisian specialists also attended the workshop at the invitation of the National Academies. All workshop participants had a common context of experience with water resources and interests in water management and sustainability.

The workshop was designed to encourage an open and candid exchange of information and ideas between the Iranian and American specialists. Papers were given that described successful and unsuccessful efforts to solve water problems in each country and identified water management problems that must receive high priority in the future. These presentations were followed by roundtable discussions during which comments were not recorded. Participants also went on site visits together to learn about Tunisia's efforts to address water conservation issues. This was the last of four such Iranian-American workshops that were held in 2002 on a variety of topics.

The proceedings include all of the papers given at the workshop, grouped in five categories:

- Water Management in the United States and Iran
- Treatment Technologies
- Agricultural Water Use and Drought Management
- Municipal Water Use
- Interbasin Water Transfer

In the course of the workshop, participants identified similarities between the water situation in Iran and that in the United States. The following points of similarity emerged:

- Population pressures on water resources grew rapidly in the last half of the 20<sup>th</sup> century;
- Rapidly urbanizing populations are changing the essentially agrarian nature of many areas;
- Economic growth is placing new demands on available water supplies;
- The geographical distribution of water does not match the geographical distribution of the population;
- Use of ground water is increasing rapidly with an increasing ground water overdraft;
- Storage and conveyance facilities have long been used to manage water scarcity;
- The need for new management regimes in an era of intensifying scarcity is recognized;
- The importance of stakeholder participation in fashioning solutions to water problems is acknowledged.

In addition to problems of water allocation, participants noted that efforts to manage droughts and floods are similar in the two countries and have had similar results.

At the conclusion of the workshop, participants agreed that the four most critical water problems facing both of their countries were:

- Forecasting and managing droughts.
- Developing technology for inexpensive recycling of urban wastewater without adverse impacts on public health.
- Improving the economic efficiency in using water in agriculture.
- Developing new and innovative institutional arrangements for managing water consistent with historical antecedents and traditions of each country.

#### COMMITTEE ON U.S.-IRANIAN WORKSHOP ON WATER CONSERVATION AND RECYCLING

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#### For More Information

Copies of *Water Conservation, Reuse, and Recycling: Proceedings of an Iranian-American Workshop* are available from the National Academies Press; (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area), or visit the NAP online at [www.nap.edu](http://www.nap.edu). For questions concerning the program, please contact staff at (202) 334-2644 or visit the DSC website at [www.nationalacademies.org/dsc](http://www.nationalacademies.org/dsc).