

# MARDIN FORUM STATEMENT

**1 October 2013, Mardin, Turkey**

## **Preamble**

The First World Irrigation Forum was held between 29 September and 3 October 2013 in Mardin, Turkey. The Forum was organised by the International Commission of Irrigation and Drainage (ICID) and the Turkish National ICID Committee (TUCID) in cooperation with an impressive number of International and National Partners. About 750 participants from 61 countries and 12 International Organisations attended the Forum.

The main theme 'Irrigation and drainage in a changing world. Challenges and opportunities for global food security' recognizes that for sustainable agricultural water management an in-depth understanding of the implications of population growth, changing demographics due to urbanisation, and more frequent extremes due to climate change on agricultural water management is required to ensure growth in Global Food Production matches demand. Agricultural water management, especially irrigation, will contribute to sustainable intensification of cultivable lands, within the resilience of ecosystems, and where applicable with rehabilitation of degraded ecosystems. To meet these aspirations under the increasing food demands in the 21st Century requires review, adaptation and modernisation of policies, technologies and management practices under the constraints of finite natural resources - both land and water - and competition among sectors.

Within the context of the Main theme, more than 186 papers, short communications and posters were presented and discussed under three Sub-themes: (1) Policy, Science and Society Interactions; (2) Challenges and Developments in Financing Irrigation and Drainage Sector; (3) Integrated Water Management Approaches for Sustainable Food Production. In addition to the thematic sessions there were: (i) three workshops: Water Wisdom and Sustainability, Developing Management Strategies for Coping with Drought and Water Scarcity, and Management of Water, Crops and Soils under Climate Change; (ii) two Round tables: Policy, Stakeholders; (iii) two Panel discussions: Farmers, Industry; (iv) 23 Side events; and (v) an Exhibition.

As a result of the presentations and discussions at the World Irrigation Forum, the following statements were agreed:

1. Development of civilization over the past 5,000 years is closely adjoined with water management problems that have shaped societies and their structures. In the course of the centuries, systems and methods worked out under the various conditions have conclusively demonstrated their pertinent sustainability. Today, the knowledge and structural remains of these methods are not only interesting archaeologically, ecologically and historically, but can also help to solve current problems. The Mardin area shows us an impressive proof of this.
2. As water is becoming an increasingly valuable and vulnerable resource, it needs to be acknowledged that generally water will need to be managed in a better way. This may require revision of water related policies at all levels. Regional water scarcities and environmental requirements need to be considered in developing such policies. Therefore, effective cooperation among the various stakeholders: government

authorities, research institutions, managers of irrigation systems, civil societies, local communities, NGO's, businesses etc. needs to be promoted. This will speed up the development and implementation of effective and sustainable water solutions. Water can be an element of cooperation between riparian countries and needs to be treated as such.

3. Irrigation water delivery is a service to users. High quality and reliable service is a condition for adoption of advanced farm practices by the farmers. Irrigation and drainage face many challenges, but also provide the foundation to maintain global food security. Modernization and improvement of irrigation is occurring worldwide at varying rates and degrees. Much is being accomplished through innovation and technical advances. However, technology alone will not resolve the issues of water and food security. Informed policies, financial management, reorientation of institutions, awareness of local communities and transparent governance require innovation and advances to respond to challenges.
4. Government institutions have central roles to facilitate interaction among the stakeholders in the sector and in providing the framework for agricultural water management activities. They need to assess the needs and roles of different actors, especially of the new generation professionals. If necessary, adjust legislation accordingly and arrange to collect relevant data.
5. In the planning and design of water management systems adequate attention needs to be given to how water management activities can most effectively be integrated with farming practices, recognizing the multiple uses to which such infrastructure is put and the broad spectrum of services that agricultural water management systems support. This recognition may also provide new opportunities for financing agricultural water management.
6. The agricultural sector is the principal water user. Therefore, use of equipment and techniques that enable effective use of water in agriculture need to be among the primary targets for ensuring food security of an increasing world's population. As presented in the short communications, side events and in the exhibition it is not only innovative modern technologies, but also proven traditional technologies that will play an important role in obtaining optimal benefit of the limited water resources. Information on these options needs to be made publicly available through effective extension services. Capacity building components at various levels need to be included in agricultural water management programmes.
7. Financial institutions need to give priority to countries/stakeholders which need agricultural water management schemes, and to support national and regional development with suitable financing mechanisms. A range of financing models have already been developed and tested for the agricultural water management sector. Some of these models have proven to be successful whereas failures have occurred in other cases. It is recommended that suitable models will be selected, further tested and evaluated for different local conditions.
8. The concept of sustainability cost as described in the position paper of ICID on Irrigation and Drainage Services: Some principles and Issues towards sustainability

(Tardieu, 2005) deserves wider application in practice.

9. The impact climate change may have on water resources, food and feed production is widely recognised. The change in rainfall patterns and increase in temperature may decrease river flows and reservoir storage, increase evapotranspiration and subsequently increasing water demand for agriculture. Risk analysis and vulnerability assessments on the occurrence of extreme events are needed to enable better management of water demand and supply. Adaptation to climate change by proactive approaches, including better prediction and early warning, reduction of water losses, application of highly efficient irrigation systems, cultivation of drought tolerant varieties, (re)use of low quality and waste water, improved land management and methods of cultivation, appropriate policies for water supply and demand management during extreme events, and concerted efforts to raise farmers awareness of the climate change impacts and the provision of guidelines for farmers on how to cope with changing climate conditions.
10. It is important that the Forum results are also made available to farmers, who are the managers of water in the lower distribution system and on-farm.

We hope that by the time of the Second World Irrigation Forum it can be reported that water management for global food production has been such that there is sufficient food for the expected World Population of almost 7.5 billion at affordable prices and that a significant reduction of undernourished people has been achieved.

The participants thank the Government of Turkey and the Turkish National ICID Committee (TUCID) for their initiative and hospitality, as well as the sponsors for their contribution in hosting this highly important First World Irrigation Forum.