Improvement of the Condition of Irrigated Land and Efficiency of Water Use is a Guarantee of Sustainable Development

Sh. Khamraev, Deputy Minister of Agriculture and Water Resources, Republic of Uzbekistan

Participation of UzNCID in ICID activities
Uzbek National Committee on Irrigation and Drainage

Uzbekistan is an official member of ICID since September 1993

The Uzbek National Committee on Irrigation and Drainage was established at the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan (UzNCID).

Uzbek National Committee on Irrigation and Drainage

UzNCID actively promotes:
- implementation of the single scientific-technical water policy, which is aimed to develop the water sector of the Republic;
- improvement of the condition and productivity of irrigated land;
- adoption of modern irrigation technique and technologies to ensure better water management and environmental improvement;
- communication of best irrigation and drainage practices collected all over the world by sharing research and technical information with other national committees, disseminating up-to-date scientific and practical materials, and contributing information to ICID publications.
Achievements of Uzbekistan in the water sector

- IWRM principles implemented on a wide scale;
- Modern water-conservation technologies;
- Automated water distribution control and monitoring systems;
- Improved conditions of water management infrastructure;
- Reclaimed irrigated land;
- Diversified agricultural production, etc.

Implementation of IWRM

Uzbekistan is a well-recognized pioneer in implementation of IWRM in the region.

More than 130,000 ha covered in the Fergana Valley.

Disseminated in other provinces on an area of 250,000 ha.
Improvement of water management infrastructure

Cleaned and repaired annually:
- 5,000 km main canals;
- 100,000 km irrigation and ditch network;
- 10,000 hydraulic structures and gauging stations.

Built and reconstructed over the last 10 years:
- 1,500 km canals;
- 400 large hydraulic structures;
- 200 pumping stations;
According to the Decree of the President of the Republic of Uzbekistan in 2007, the Fund for Reclamation of Irrigated Lands was formed.

The State Program for Irrigated Land Reclamation was implemented during 2008 - 2014 and totaled more than US$ 672 M.

For reclamation measures:
- State leasing company "Uzmeliomashlizing" established
- 49 state unitary enterprises established.

Measures for reclamation of irrigated land

Repair and reconstruction over 2008-2014:
- 88,903 km collector-drainage network
- 6,189 vertical drainage wells
- 233 pumping stations
- 7,445 pipe regulators with crossing
Measures for reclamation of irrigated land

Equipment bought for reclamation purposes over 2008-2014

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>of which:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>excavator</td>
<td>bulldozer</td>
<td>other equipment and mechanisms</td>
<td></td>
</tr>
<tr>
<td>1,688</td>
<td>655</td>
<td>200</td>
<td>833</td>
<td></td>
</tr>
</tbody>
</table>

Measures for reclamation of irrigated land

- Reclaimed irrigated land on 1.5 Mha.
- Maintained good condition of land on more than 1 Mha.
Measures for reclamation of irrigated land

- Reduced area of strongly and medium saline land on 113,000 ha.

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>163</td>
</tr>
<tr>
<td>2009</td>
<td>141</td>
</tr>
<tr>
<td>2013</td>
<td>113</td>
</tr>
</tbody>
</table>

Implementation of the State Program for Irrigated Land Reclamation contributed to better land productivity.
Program for 2013-2017

Build and reconstruct:
2,333 km of irrigation network;
143 pumping stations.

Repair and rehabilitate:
29,258 km of irrigation network;
21,146 gauging stations;
45,549 hydraulic structures.

Adopt:
drip irrigation on 25,000 ha
flexible hose irrigation on 34,000 ha
film for irrigation on 45,600 ha

Build and reconstruct:
5,109 km of collector-drainage network;
35 pumping stations;
907 vertical drainage wells.

Repair and rehabilitate:
83,589 km of collector-drainage network;
3,639 vertical drainage wells;
126 pumping stations.

New equipment for land reclamation – 836 units
Incl.: 303 excavators
109 bulldozers
424 units of other equipment and mechanisms
Application of water conservation technologies

The total area of drip irrigation system – over 10,000 ha

Flexible hoses and film for irrigation applied on about 8,000 ha

Area under drip irrigation

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,114 ha</td>
</tr>
<tr>
<td>2011</td>
<td>5,008 ha</td>
</tr>
<tr>
<td>2014</td>
<td>10,200 ha</td>
</tr>
</tbody>
</table>
Diversification of agriculture

The share of cotton and other water-intensive crops in irrigated agriculture

**Before 1990s**

- Cotton: 46.5%
- Other water-intensive crops: 19.3%
- Less water-intensive crops: 30%
- Rice: 4.2%

**After 2000**

- Cotton: 27%
- Other water-intensive crops: 2%
- Less water-intensive crops: 70%
- Rice: 10%

**Diversification of agriculture**

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>rice</strong></td>
<td>189</td>
<td>40</td>
</tr>
<tr>
<td><strong>cotton</strong></td>
<td>2000</td>
<td>1200</td>
</tr>
<tr>
<td><strong>orchards</strong></td>
<td>290</td>
<td>670</td>
</tr>
<tr>
<td><strong>cereals</strong></td>
<td>1150</td>
<td>220</td>
</tr>
</tbody>
</table>

(All values in thousand ha)
Dynamics of water diversion

Changes in irrigation water diversion per hectare

- 1990: 18,000 m³/ha
- After 2008: 10,500 m³/ha
Program for 2013-2017

From 2013 to 2017
Long-term preferential state credits for land users and farms for:
- adoption of drip irrigation on 25,000 ha;
- application of flexible hoses for irrigation on 34,000 ha;
- application of film for irrigation on 45,600 ha.

These farms are exempted from land tax and other taxes over the period of 5 years.

Application of water conservation technologies

- Encouraging water conservation;
Application of water conservation technologies

- Adoption of new irrigation technologies and methods:

Application of water conservation technologies

- Adoption of new irrigation technologies and
Application of water conservation technologies

- Adoption of new irrigation technologies and methods;
Issues related to transboundary water use

- Energy-generation regime
- Irrigation-environmental regime

Relations with neighboring countries in the sphere of water

Uzbekistan joined the following international conventions:

- Convention on the protection and use of transboundary watercourses and international lakes, Helsinki, 17.03.1992
Transboundary water cooperation in the Aral Sea basin

Uzbekistan took the lead in establishing in Central Asia:
- the Interstate Commission for Water Coordination in 1992;

Uzbekistan, during its presidency in IFAS and Executive Committee, will make all efforts to strengthen the regional cooperation.

We consider it necessary to attract countries and donors to successful implementation of the Aral Sea Basin Program 3, which was approved by all the countries in the region.
Thank you for attention