Uzbekistan’s Water Management: challenges and opportunities for cooperation

Multi-Partner Human Security Trust Fund for the Aral Sea
• Climate – arid, continental (hot summers & cold winters), rainfall 110 mm, in mountains 1000 mm;

• Aral Sea Basin: Amu Darya & Syr Darya Rivers;

• Water resources: Amu Darya 79km³; Syr Darya 37km³ = 114 km³

• 5 countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan & Uzbekistan. Population – 70 mln.

• Upstream: Kyrgyzstan, Tajikistan;

• Downstream: Kazakhstan, Turkmenistan, Uzbekistan.
The transboundary nature and **limited water resources** in Central Asia make water a **key resource**, largely determining the further development of the region.

Modern challenges:
- population growth;
- increased demand for food and water;
- changing of the climate.
Cost of inaction or limited cooperation

• Costs of **limited cooperation** are very significant
• **Pressures** on water resources are rising
• Default means **increasing risks and costs**; but default is not destiny
• But **opportunities for improved cooperation** & its’ potential economic benefits are enormous!

Adelphi and CAREC. 2017- study funded by SDC
Water resources and its sectorial use in Uzbekistan

Average annual water use

51 billion m³

- Formed on the territory of Uzbekistan: 11.0 billion m³ (20%)
- Formed in the territory of neighboring countries: 40.0 billion m³ (80%)

From Amudarya and Syrdarya: 31.6 billion m³ (61%)
From small rivers: 17.2 billion m³ (35%)
From groundwater: 0.5 billion m³ (1%)
From collector-drainage: 1.7 billion m³ (3%)

Water use by sectors

- 89.5%
- 2.5%
- 1%
- 0.6%
- 4.7%

Agriculture
Energy
Communally domestic
Industry
Fishing
The shortage of water in the future is aggravated by the projected decrease in water resources, increasing demand for water resources due to population growth, development of industry and other sectors of the economy.
We are the witness of the biggest ecological and humanitarian catastrophe in the history of humankind which affected millions of people.
Consequences of the Aral Catastrophe

Last 50-55 years:
Water volume reduced more than 15 times
The Sea area reduced more than 8 times
The Sea level reduced more than 29 meters
Coastline retreated hundreds of kilometers

At present the Sea has following features (2018):
Water volume – 43.34 km$^3$
Sea area – 2 845 km$^2$
Aral in the past

Rich biodiversity
- 38 types of fish
- Saiga population over 1 million heads
- Floristic composition was 638 species of higher plants

Fertile lands of the Amudarya and Syrdarya deltas
- Highly productive pastures
- Growing agricultural crop
Strategic object in the development of the regional economy
- fisheries industry
- providing employment
  - 80% of the region population were employed in fish industry
  - Over 100 thousand people were employed in livestock, poultry, crop production
- formation of a sustainable social infrastructure

Climate control pond
- mitigate sharp weather fluctuations in the region
- favorable impact on the living conditions of the population, agricultural production, environmental conditions
The consequences of the Aral catastrophe

The Republic of Karakalpakstan and Khorezm region were directly in the zone of ecological disaster.

The area is **172.9 thousand km²**. Population—3, 652 mln. people.

More than **90 days storms** in a year

The area of the dried seabed (Aralkum desert) is **5.5 million hectares**.

Every year, more than 100 million tons of dust and toxic salts rise from the dried seabed of the sea.
Initiatives of Uzbekistan Government

• Development Strategy – the implementation principle is “the interests of people are of the highest priority”

• Adopted 30 laws and 250 regulatory and normative acts

• Adopted and being implemented Special State Program on Development of the Aral Sea Region for 2017 - 2021

• By the President's Initiative an Innovation Center for the Aral Sea Region was established in 2018
<table>
<thead>
<tr>
<th>Measures</th>
<th>No. of projects</th>
<th>Estimated budget (bln. sum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure and industrial development</td>
<td>9</td>
<td>2934</td>
</tr>
<tr>
<td>Water Resources Management</td>
<td>8</td>
<td>2101</td>
</tr>
<tr>
<td>Human health care</td>
<td>22</td>
<td>1279</td>
</tr>
<tr>
<td>Employment and increasing income of local people</td>
<td>12</td>
<td>1090</td>
</tr>
<tr>
<td>Biodiversity and ecosystems conservation</td>
<td>16</td>
<td>770</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>67</strong></td>
<td><strong>8174</strong></td>
</tr>
</tbody>
</table>
Measures taken by the Government of Uzbekistan

Introduction of water-saving technologies

- Land users are exempt from land tax for a period of 5 years
- Suppliers of drip and sprinkler irrigation systems are exempt from customs duties and fees.
- A draft decree of the Government on the introduction of drip irrigation in cotton on an area of about 450 hectares in the period 2019-2023 years
- Manufacturers of drip irrigation systems and other water-saving technologies on a preferential basis at the declared price are supplied polymer granule
Crop diversification

**Reduction of cotton (thousand ha)**

<table>
<thead>
<tr>
<th>Year</th>
<th>1990</th>
<th>2000</th>
<th>2008</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td>Value</td>
<td>2000</td>
<td>1650</td>
<td>1425</td>
<td>1071</td>
</tr>
</tbody>
</table>

**Increase in garden areas (orchards), (thousand ha)**

<table>
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<th>2000</th>
<th>2008</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>290,0</td>
<td>469,8</td>
<td>670,0</td>
<td>896,0</td>
</tr>
</tbody>
</table>

**Reduced water supply**

- 1990: 18 thousand m³ / ha
- 2018: 10.5 thousand m³ / ha

**Increased seeding of less moisture-intensive crops**

- 1990: 49 %
- 2018: 25 %
Measures to reduce water losses in irrigation systems

- concreting of large canals - 2500 km
- construction and restoration of the tray network - 500 km modernization:
- 424 hydraulic structures;
- large pumping stations 69 units.

In 2019 and the following years the volumes of these works increase even more.
To mitigate... sand and toxic dust storms
Forestation activities in 2018/2019 to stop sand storms from the dried bottom of the Aral Sea

- About 500 thousand hectares were planted by saxaul seeds;
- Prepared more than 1 mln. ha of land (furrows) for saxaul seedlings for sand and water accumulation;
- 1500 tons of seeds were collected with the help of local population and neighboring provinces;
- About 2,000 people from all over Uzbekistan and 1,500 special machinery and aviation were involved.
The President of the Republic of Uzbekistan, Shavkat Mirziyoyev, put forward a number of important initiatives that, if they are implemented, will be able to "dramatically improve the unfavorable environmental situation in our region."

1. To declare the Aral Sea region as a zone of environmental innovations and technologies
2. To combat sand storms start activities on covering dried bottom of the sea with forest plantations
3. To create transboundary natural protected areas in the Aral Sea zone for biodiversity conservation
4. To develop effective Central Asian regional scientific cooperation
At the 72nd session of the UN General Assembly, President of the Republic of Uzbekistan Shavkat Mirziyoyev noted:

“I would like to once again draw attention to one of the most acute environmental problems of our time - the Aral catastrophe. Overcoming the consequences of the desiccation of the sea today requires active consolidation of international efforts”.
UN support

Mr. Antonio Guterres—
“I appeal to donor countries to support the Multi-Partner Trust Fund on Human Security for the Aral Sea Region... I thank the government of Uzbekistan for its efforts to create this Fund. I am grateful to all of you who support this Foundation, and I promise a full partnership of the United Nations in this endeavor”.

(from the high-level event on the margins of the UN General Assembly, New York, 11/27/2018)
Establishment of Multi-Partner Human Security Trust Fund for the Aral Sea region

- November 12, 2018, MPTF, UNDP, UNICEF, UNESCO, and UNODC have signed an Agreement on the creation of an MPHSTF for the Aral Sea region in Uzbekistan under the auspices of the UN.

- November 27, 2018, a special high-level meeting on the presentation and launch of the Trust Fund for the Aral Sea region in Uzbekistan was held at the UN headquarters in New York.

- The Government of Norway has decided to allocate $1.2 million for the Trust Fund.

- January 8, 2019, Resolution of the President of the Republic of Uzbekistan “On measures to support the activities of the Multi-Partner Human Security Trust Fund for the Aral Sea region under the auspices of the UN, approved “Road Map” to support the activities of the MPTF for the Aral Sea region was adopted.

- A decision on co-financing of the Fund from the Uzbek side in the amount of 6.5 million US dollars was made.
Management architecture of the MPHSTF

The governance structure of the MPHSTF is an effective system of decision-making and oversight applied by the UN. Governance mechanisms are based on the principles of transparency and accountability, Proven to function in over 50 UN Trust Funds around the world.

Steering Committee
Responsible for the approval of the strategic line of activity of the fund, making a decision on the distribution of the fund among the executive agencies.

Administrator Fund
It is engaged in the mobilization of funds and distributes these funds among the executive agencies on the basis of the decision of the Steering Committee of the Fund.

Technical Secretariat
Responsible for program coordination, technical support of the Steering Committee, monitoring and evaluation of the implementation of projects under a single strategy.

Executive agencies
UN agencies, government agencies, non-government organizations involved in the implementation of projects in the framework of the Unified Strategy.
We welcome you for cooperation for the people of the Aral Sea!