Measures to combat desertification and drought in the Republic of Uzbekistan

B. Kuziyev – Head of Department to combating desertification and drought

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Mission

• protect land from the effects of excessive pressure of drought to maintain continued supply of food, save water and energy to future generations

• Reduce the impact of climate change
• Reduce land degradation
• Reduce conflict over natural resource use and promote sustainable development
Legal basis

- The Resolution of the President of the Republic of Uzbekistan "On Measures to Increase the Efficiency of Combating Desertification and Drought in the Republic of Uzbekistan" was adopted February 22, 2019
- This decision was made to entrust the State Committee for Forestry with additional functions:
  - Implementation of measures on prevention of desertification and increase areas covered by forests in the republic;
  - Fulfillment of the international obligations of the Republic of Uzbekistan on desertification and drought;
  - Effective collaboration with international and regional organizations on desertification and drought issues;
  - Coordination of the work of the ministries, agencies and local executive authorities, involved in the development and implementation of programs and projects for desertification and drought in the Republic of Uzbekistan;
The main causes of desertification and droughts in the Republic of Uzbekistan

• One of the main sources of desertification and drought in our republic is draining of the Aral Sea and its impact on the environment.

• Soil erosion and soil salinization resulted in land degradation.

• Wind erosion causing to the lost of the most productive layer of the soil (80 tones per hectare per season). Almost 50% of agricultural lands are affected by wind erosion at different levels.

• Soil salinization

• Climate change

• Anthropogenic impacts on the environment increases the desertification process.
Vulnerability to droughts

• Uzbekistan is located in arid and semi-arid areas vulnerable to frequent droughts (Gupta et al. 2009) and high inter-annual flow river variability (Dukhovny et al. 2008).

• The needs for irrigation water are growing rapidly, increasing the disbalance between the availability of water and growing water demands (Cai et al. 2003).
Drought impacts in Uzbekistan

• Over the last decade, Uzbekistan faced several occurrences of extreme hydrological droughts, with crop yield losses of 50% to 75% in the worst affected areas (FAO 2017).

• During the drought in 2000-2001, cereals production declined by 10%, cotton production by 17% and rice production by 60%, resulting in about 130 million USD of losses (World Bank 2006).

• The biggest losses occurred in the downstream areas in Uzbekistan, where about 600,000 people were in need of food aid to the value of 19 million USD (World Bank 2006, FAO 2017).
Strong Wind and Dust Storms

- 80% of the area affected by strong winds and dust storms especially in Karakalpakstan, Khorezm, Bukhara, Navoi, Surkhandarya and Kashkadaraya
  Strong wing frequently observed in Surkhandarya Region 19 times per year, with wind speed 5-7 meter per second

- Affecting agricultural sector (productivity losses 5-10%)
- Causing damages livestock
- Health Issue
Targeted Actions and Measures

At present there are 5 million degraded land in the foothills, our target is to cover these areas with pistachios trees in 2019 8000 ha will be planted with pistachios trees and with in 6-7 year degraded lands will be rehabilitated and turned to the
Targeted Actions and Measures

At present, the dried Aral Sea beds make up 5.5 ha out of which over 3 million ha in Uzbekistan.

Afforestation works were carried out in 500,000 hectares in 2019.
Land works was carried out in 1.26 million hectares, 1.5 thousand tons of seeds were prepared for the work in the period 2020-2021.
Targeted Actions and Measures

Tree planting in agricultural lands will improve the meliorative condition of lands and the yield of agricultural crops. In spring of 2019, 2495 ha was planted and in the Autumn it will be continued 1000 ha. In 2020, work planned carried out in 3000 ha.
Saksaul forest plantations on the dried bottom of the Aral Sea
Targeted Actions and Measures

- Afforestation fixes movement of sands, slows down desertification processes, wind speeds, stops dust particles in the air.
- Saksaul in the 7th year will stops winds, Saksaulus takes 1135 kg of carbon dioxide and discharges 835 kg of oxygen per year.
- It will serve to improve the air quality and prevent environment from the pollution.

<table>
<thead>
<tr>
<th>Area covered by forest (Saksaul)</th>
<th>Wind speed (m/sec)</th>
<th>Decrease sand movement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12,7</td>
<td>0,0</td>
</tr>
<tr>
<td>1 year</td>
<td>10,1</td>
<td>20,5</td>
</tr>
<tr>
<td>2 year</td>
<td>8,3</td>
<td>34,6</td>
</tr>
<tr>
<td>3 year</td>
<td>5,7</td>
<td>55,1</td>
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<tr>
<td>4 year</td>
<td>3,3</td>
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<td>5 year</td>
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<tr>
<td>6 year</td>
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<td>91,3</td>
</tr>
<tr>
<td>7 year</td>
<td>0</td>
<td>100,0</td>
</tr>
</tbody>
</table>
Harvesting, Pistachio plantation in Gallaorol District of Jizakh Region)
Благодарю за внимание!

Thank you for attention!

Кенул бурганыңyzдарга рахмат!