



# CLIMATE CHANGE IN UZBEKISTAN

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Uzbekistan is one of the world's **most vulnerable** regions to current climate variability and to the impacts of future climate changes



Increasing extreme temperatures

Changing rainfall patterns

Increasing aridity

Increasing frequency of extreme weather events (such as dust storms, heavy rainfall, haze, heat waves and heavy winds)

increasing frequency and intensity of climate-related disasters (such as floods, droughts, mudslides, avalanches and landslides)



Unsustainable agricultural production and food security

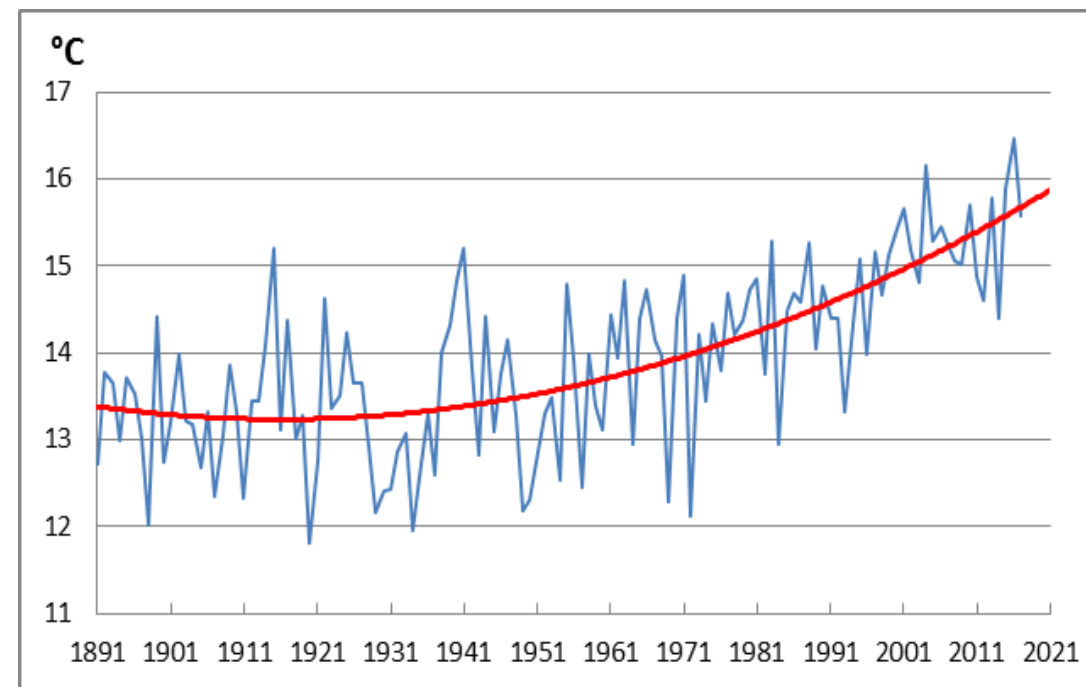
## WARMING FORECASTS

According to experts assessments, warming in Uzbekistan exceeds the global average.

During the observation period, the increase in the average annual temperature of atmospheric air was about  $1.6^{\circ}\text{C}$ .

According to experts' forecasts, the air temperature in the region may increase by  $1.5\text{--}3^{\circ}\text{C}$  in 2030-2050. The greatest increase in air temperature is expected in the Aral Sea region.

The Aral Sea catastrophe aggravated the climatic conditions in the region, increased aridity and extremely hot periods in summer, and lengthened cold and harsh winters.



Change in the average annual air temperature in Tashkent

# CONSEQUENCES OF CLIMATE CHANGE IN UZBEKISTAN

Climate change affects such sectors of the economy as agriculture, water management, energy, health, tourism.

Climate change will negatively affect ecosystems and biodiversity.



According to the World Resources Institute, Uzbekistan is among 25 countries in the world that are particularly prone to water stress, and the effects of climate change are exacerbating the problem of water scarcity.

Since the desert landscape and arid climate are typical for Uzbekistan, the country is highly dependent on water resources. No other economic activity in Uzbekistan is more climate dependent than water and agriculture. At the same time, these sectors of the economy are strategically important.

## UPDATED NATIONALLY DETERMINED CONTRIBUTION

In accordance with the Decisions of COP 1 / CP.21, 4 / CMA.1, 9 / CMA.1, 18 / CMA.1, **The Republic of Uzbekistan has updated its NDC** and in the long term, until 2030, expects ***to strengthen measures and actions to combat climate change*** to achieve the following goals:

### **Mitigation goal, NDC**

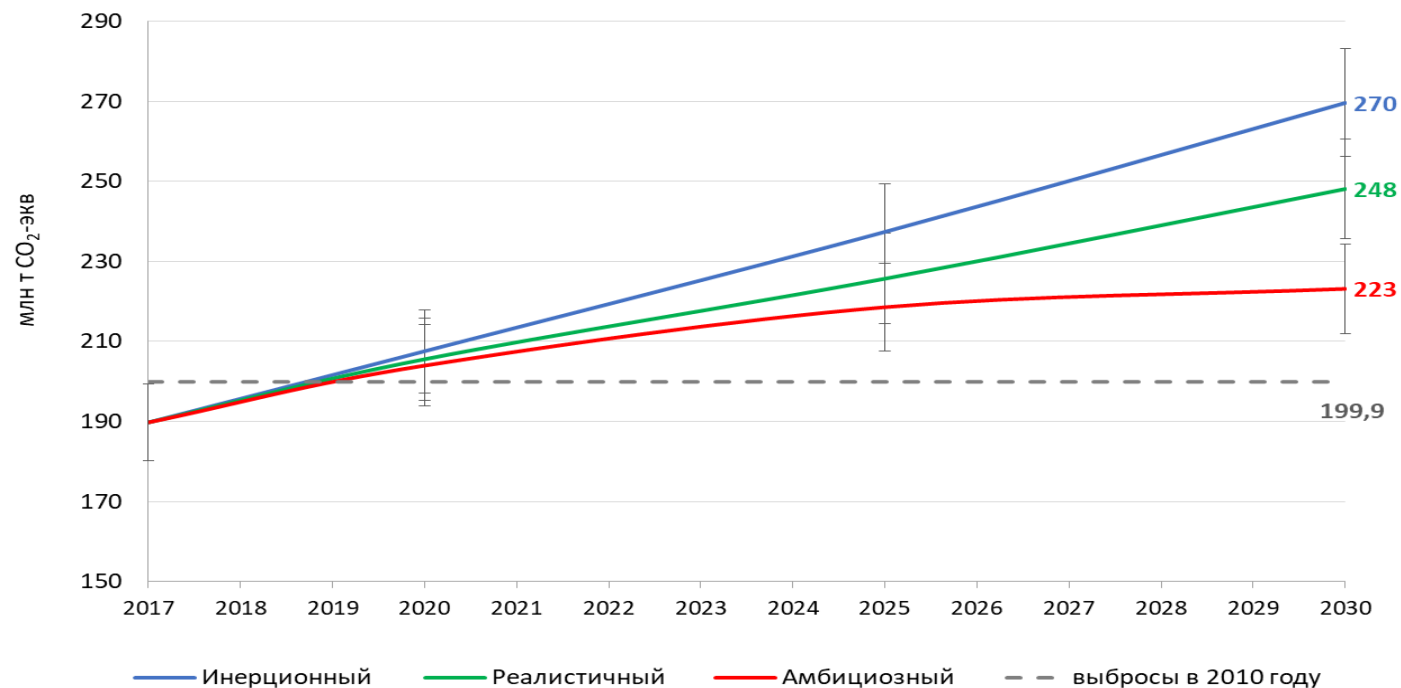
Reduce specific greenhouse gas emissions per unit of GDP by **35%** by 2030 from 2010 level

### **Adaptation goal:**

Uzbekistan will continue efforts to build up its adaptive capacity to reduce the risk of the negative impact of climate change in the sectors of the economy, the social sector and in the Aral Sea region.

Updated Commitments (NDC) are linked to the National Sustainable Development Goals (SDGs), social and economic development goals in accordance with modern national conditions.

# PROJECTIONS OF TOTAL GHG EMISSIONS UNTIL 2030



Projections have been developed using GACMO (Greenhouse Gas Abatement Cost Model) - UNEP/DTU

For all scenarios, an increase in total GHG emissions relative to 2010 is projected:

until 2025 by 9-19%

until 2030 by 12-35%

Scenario	GHG emission, mln t CO <sub>2</sub> -eq.		Change in GHG emissions, % compared to 2010	
	2010	2017	2025	2030
Inertial	199,9	189,2	19%	35%
Realistic			13%	24%
Ambitious			9%	12%

## Priority areas for mitigation until 2030:

- Modernization and renewal of generating capacities and energy-intensive industries as well as losses reduction in electrical networks;
- Development and implementation of renewable energy sources (including hydropower, small hydropower plants, biogas plants, etc.);
- Elimination of natural gas leaks in oil and gas industry;
- Introduction of energy-saving technologies in industry;
- Limiting emissions and reducing energy consumption in transport;
- Introduction of energy-saving technologies in water management;
- Improvement of the MSW management system;
- Expansion of forest areas and improvement of land fertility.



Adaptation to climate change is a *priority area* for Uzbekistan to reduce vulnerability and ensure the country's resilience to climate change.

### **The main directions of adaptation in Uzbekistan until 2030:**

- Adaptation of agriculture and water management
- Adaptation of social sector
- Ecosystem adaptation
- Adaptation of strategic infrastructure and production systems
- Conservation of biodiversity
- Mitigation of the consequences of the Aral Sea crisis

Uzbekistan faces the need to adapt to climate change in all sectors of the economy. Key adaptation measures of the Republic of Uzbekistan are defined in the Third National Communication (TNC), Nationally Determined Contribution (NDC) and other strategic documents.



## OVERCOMING THE CONSEQUENCES OF THE ARAL CRISIS

At the plenary session of the 75th session of the UN General Assembly on May 18, 2021, a special resolution proposed by the President of Uzbekistan Shavkat Mirziyoyev was unanimously adopted to declare the Aral Sea region a zone of environmental innovation and technology. The resolution emphasizes the importance of intensifying regional cooperation in implementation of joint measures to overcome the consequences of the Aral Sea crisis and stabilize environmental situation in the region.



# WAYS TO IMPLEMENT NDC

- Effective **implementation of the adopted long-term state and sectoral strategies and outlined plans until 2030;**
- **Development of scientific research, educational activities,** including research in the field of climate change, development of monitoring and forecasting system for climate change, development of methodologies for assessing climate change impacts, vulnerability and risks; studies for introduction of energy-saving technologies and renewable energy sources;
- Intensify **advocacy on climate change,** energy efficiency and resource conservation;
- Development of **training programs** and integration of climate change issues into curricula of secondary schools and universities;
- Creation and development of the state **integrated system of monitoring, reporting and verification (MRV),** the components of which are MRV of GHG emissions, MRV of mitigation actions, MRV of adaptation actions and MRV of received support.



## REGULATORY AND LEGAL FRAMEWORK TO SUPPORT IMPLEMENTATION OF NDC

- Law "On ratification of the Paris Agreement" ZRU-491 dated 02.10.2018
- Strategy for the transition of the Republic of Uzbekistan to a "green" economy for the period 2019 – 2030 (PP-4477 dated 04.10.2019)
- National goals and tasks for sustainable development until 2030 (SDGs) (PKM-841 dated 20.10.2018)
- Strategy of the Republic of Uzbekistan on solid waste management (PP-4291 dated 17.04.2019)
- Strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030 (UP-5853 dated 23.10.2019)
- Concept for water management of the Republic of Uzbekistan for 2020-2030 (UP-6024 dated 10.07.2020)
- Concept of environment protection of the Republic of Uzbekistan until 2030 (UP-5863 dated 30.10.2019)
- Strategy for further development of the electric power industry of the Republic of Uzbekistan (PP-4249 dated 27.03.2019)
- State program for the development of the Aral Sea region for 2017-2021

**Objective:** To achieve sustainable economic progress that promotes social development, GHG emissions reduction, climate and environmental sustainability by integrating green economy principles into ongoing structural reforms

Directions	Indicators
<p>1. Increasing energy efficiency of the basic economy sectors.</p> <p>2. Diversification of energy consumption and development of renewable energy sources.</p> <p>3. Climate change adaptation and mitigation, improvement of natural resource use and conservation of natural ecosystems.</p> <p>4. Development of financial and non-financial mechanisms to support the "green" economy.</p> <p>5. Development of the institutional framework, improvement of the regulatory framework for the introduction of "green" technologies, integration of the principles of "green" economy into education and science, capacity building and support for "green" investments</p>	<ul style="list-style-type: none"><li>– reduction of specific greenhouse gas emissions per unit of gross domestic product;</li><li>– doubling the energy efficiency ratio and reducing the carbon intensity of GDP;</li><li>– development of renewable energy sources, bringing their share to 25% or more of the total electricity generation;</li><li>– providing access to modern, inexpensive and reliable energy supply to 100% of the population and economy sectors;</li><li>– modernization of the infrastructure of industrial enterprises, by increasing energy efficiency by at least 20% and use of environmentally friendly technologies and industrial processes;</li><li>– expanding production and use of motor fuels and vehicles with improved energy efficiency, as well as development of electric transport;</li><li>– achieving land degradation neutrality.</li></ul>



# CLIMATE CHANGE STRATEGY UNTIL 2030



Climate Change Strategy until 2030 is currently being developed, within which much attention is paid to mitigating the negative effects of climate change and adapting to climate change.

The main goal of the Strategy is to ensure sustainable socio-economic development of the Republic of Uzbekistan under conditions of climate change.



# NATIONAL ADAPTATION PLAN

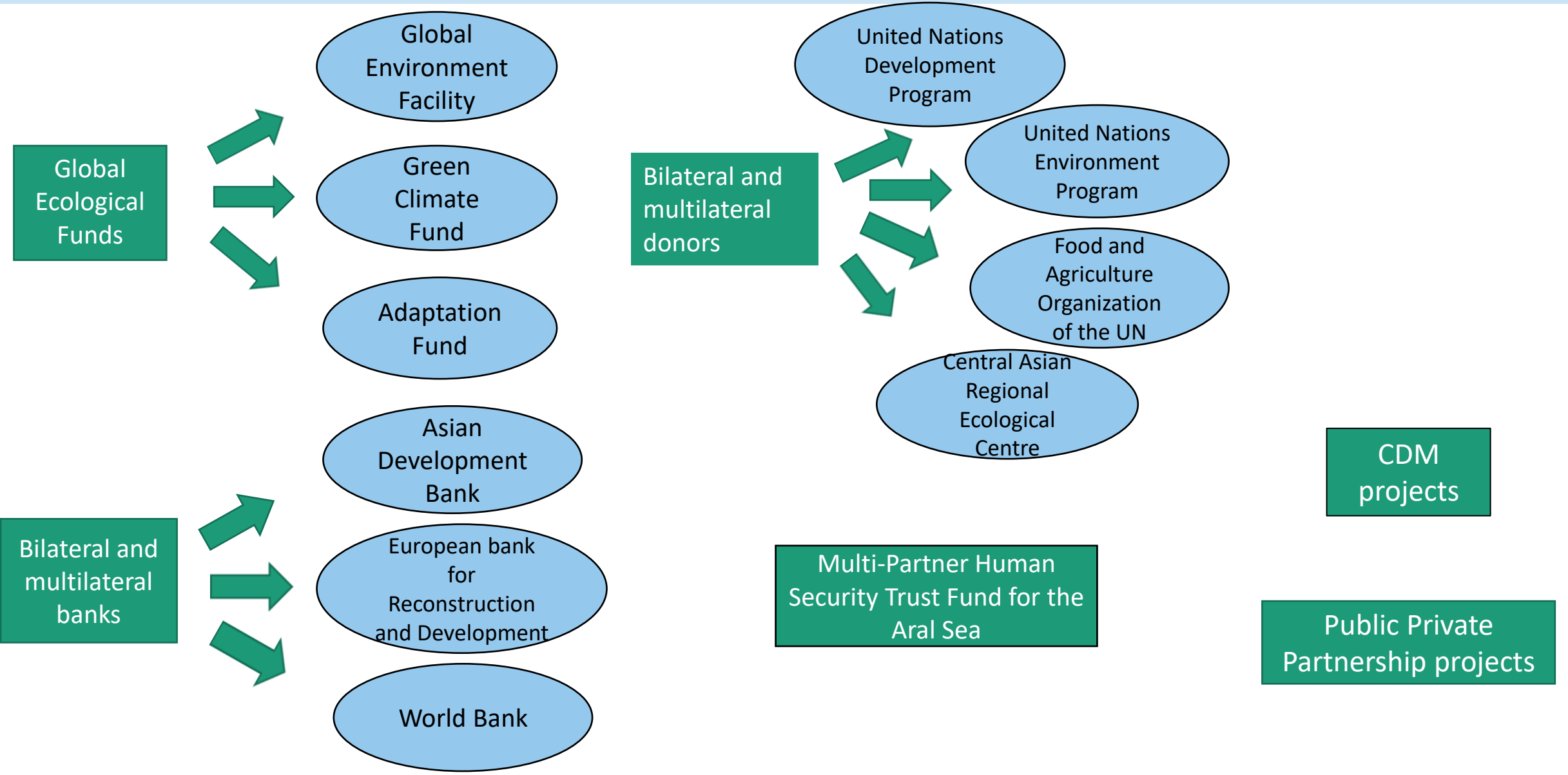


Jointly with UNDP and the Green Climate Fund, a National Adaptation Plan (NAP) is being developed.

It is aimed at the most vulnerable to climate change sectors of the economy and regions to promote medium- and long-term planning of adaptation measures and actions in Uzbekistan, such as

- 1) agriculture
- 2) water management
- 3) healthcare
- 4) disaster risk reduction
- 5) energy efficient construction

# CLIMATE FINANCE





# Thank you for attention!

