



THE REPUBLIC OF UZBEKISTAN
HYDROMETEOROLOGY
SERVICE CENTER

FIRST BIENNIAL UPDATE REPORT OF THE REPUBLIC OF UZBEKISTAN UNDER THE UNFCCC

Sharm El-Sheikh
Egypt
12 November 2022

FACILITATIVE SHARING OF VIEWS



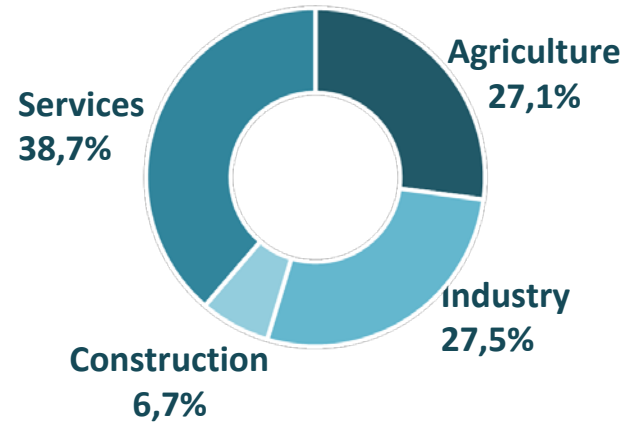
NATIONAL CONTEXT

Uzbekistan is the developing country with rapidly growing economy



Total area **448,9** ths km²

GDP Structure 2020



FUEL AND ENERGY COMPLEX

- electric power
- heat power
- oil and gas industry

MAIN CONSUMPTION OF ENERGY RESOURCES

energy sector – **33,6%**
industry and construction – **22,3%**
population – **20,6%**
transport – **16,9%**
agriculture – **0,1%**

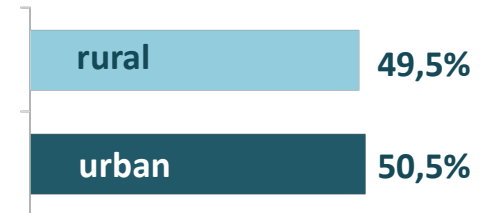
Climate: dry, sharply continental, with large seasonal and daily air temperature ranges, with hot and long summers, relatively humid springs and unstable winters.

Uzbekistan is one of the most vulnerable countries to climate change.

The average growth rate of air temperature is **twice** the rate of global warming. Relative to the 1930s, the temperature increased on average **2.4 °C** in the flat area and **1.8 °C** in the mountainous area

34,56 mln people (2021)

Population



INSTITUTIONAL ARRANGEMENTS RELATED TO THE PREPARATION OF FBUR

Key ministries:

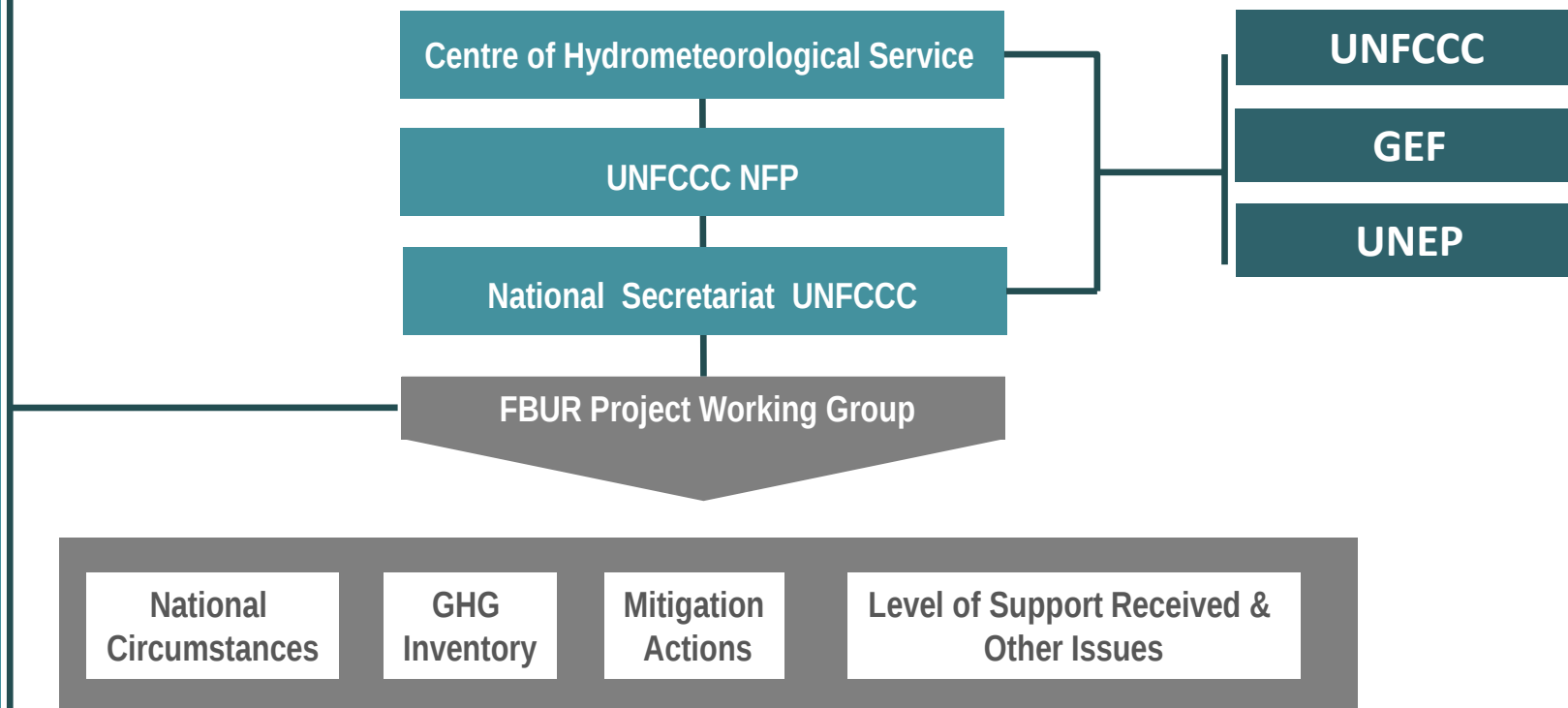
Ministry of Economic Development and Poverty Reduction
Ministry of Finance
Ministry of Agriculture
Ministry of Water Resources
Ministry of Housing and Communal Services
Ministry of Transportation
State Committee on Statistics
State Committee on Ecology and Environmental Protection
State Committee on Forestry
State Committee for Veterinary Medicine and Livestock Development

JSC

Uzbekenergo, Uzbekneftegaz, Uztransgaz,
Khududgazta'minot, Uzkiyosanoat, Uzbekugol,
Association Uzpromstroyaterialy, Uzbekiston Havo Yullari,
Uzbekiston Temir Yullari

National Research Institutes and Universities

Research Hydrometeorological Institute, State Agrarian University, Research Institute of Forestry, Academy of Science



The national MRV system is currently under development

GHG INVENTORY 2017: MAJOR IMPROVEMENTS

Emissions

CO_2

CH_4

N_2O

HFCs

Removals

CO_2

According to 2006 IPCC Guidelines

- Information on GHG emissions for 2013-2017 has been presented
- GHG emissions estimates for 1990-2012 have been updated

Following improvements performed

- 1  1996 IPCC **Guidelines** → 2006 IPCC **Guidelines**
- 2  **GHG** emissions estimations → 2006 IPCC **Software**
- 3 Values of national emission factors in key categories have been updated
- 4 In 2021 r. Uzbekistan passed a voluntary assessment of the National GHG inventory quality performed by UNFCCC experts. As a result recommendations for long term prospective were prepared
- 5 Under the UNFCCC Technical Assistance the draft NIIP has been prepared. Currently it is being updated to meet the ETF requirements

IPCC sectors

Energy

IPPU - Industrial Processes and Product Use

AFOLU -Agriculture, forestry and other land use

Waste

21 number of key categories

5 categories used **TIER 2** methodology:

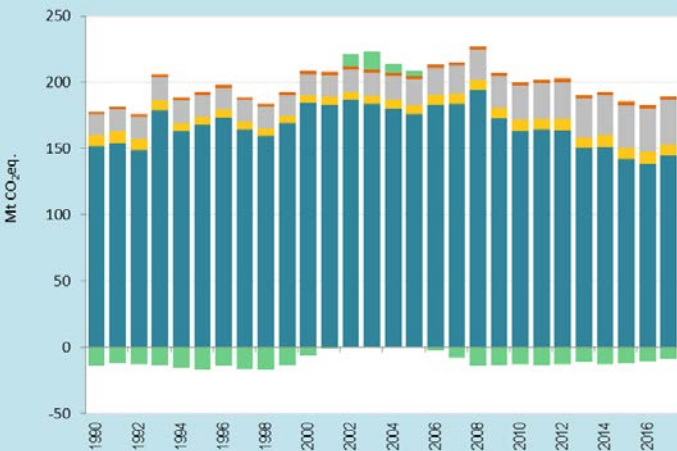
Energy "Natural Gas"

IPPU "Cement Production," "Ammonia", "Nitric Acid"

Waste "Solid waste Disposal"

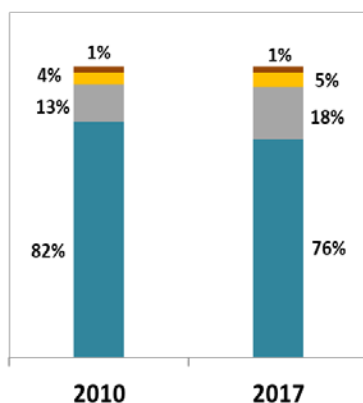
GHG INVENTORY 1990-2017: KEY OUTCOMES

**Dynamics of GHG Emissions
1990-2017**



■ Energy ■ IPPU ■ Agriculture ■ Waste ■ FOLU

**Contribution of IPCC Sectors
into Total Emissions**



Total GHG Emissions, Mt CO₂-eq
without FOLU

1990 г.

177,4

2017 г.

189,2

Total GHG Emissions, Mt CO₂-eq
with FOLU

163,3

180,6

per capita, t CO₂-eq/person

8,6

5,8

1990-2017 гг. GHG Emissions growth + 6,7%

2010-2017 гг. GHG Emissions reduction - 5,4%

Main Sources of GHG Emissions

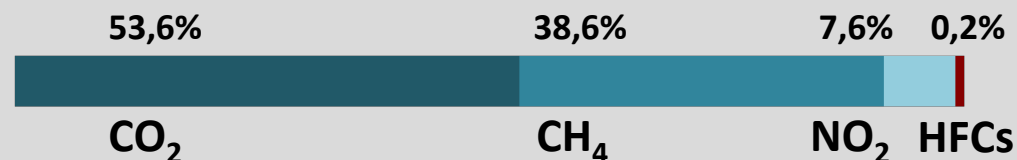
CH₄

- Fugitive emissions from fuels – natural gas
- Enteric fermentation

CO₂

- Fuel combustion activities
- Energy industry
- Industry and construction
- Residential sector

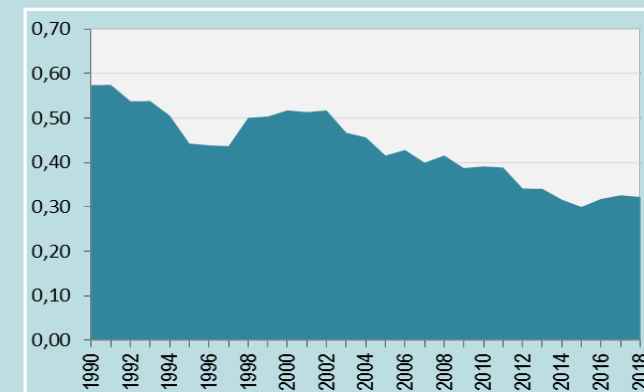
Distribution by Gases, 2017



Uzbekistan's contribution to the global CO₂ emissions from fuel combustion:

1990 г. – **0,57%**

2018 г. – **0,32%**

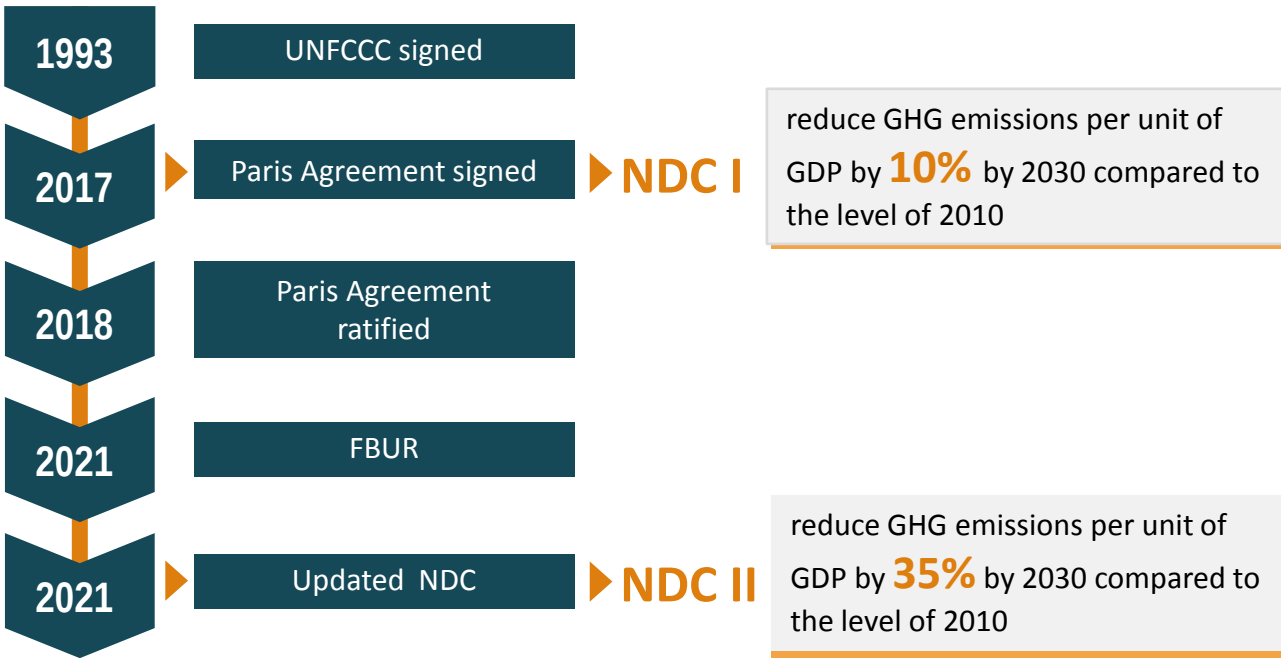


2018

35th position Global IEA ranking
by CO₂ emissions

2nd position among Central Asian
countries

MITIGATION PRIORITIES



INDICATORS

2 times increase in the energy efficiency and decrease in the carbon intensity of GDP

Development of RES, bringing their share to **25%** or more of the total amount of electricity generation by 2026

Ensuring access to modern, inexpensive and reliable energy supply for up to **100 %** of the population and sectors of the economy

LAWS

“On the Ratification of the Paris Agreement” -2017

“On the use of renewable energy sources” - 2019

“On public-private partnership” - 2019

LEGAL FRAMEWORK IN SUPPORT OF MITIGATION MEASURES

National Sustainable Development Goals and indicators for their achievement until 2030- 2018

Strategy for the Transition of the Republic of Uzbekistan to a "Green" Economy for the period 2019-2030 - 2019

Concept of Providing the Republic of Uzbekistan with Electric Energy for 2020-2030

Development Strategy of the New Uzbekistan for 2022-2026 -2021

PP № 5063 “On Measures for the Development of RES and Hydrogen Energy of the Republic of Uzbekistan” -2021

Sectoral strategies and development plans

Currently are being developed:

Strategy of the Republic of Uzbekistan to combat climate change for the period 2021-2030

National Climate Change Adaptation Plan

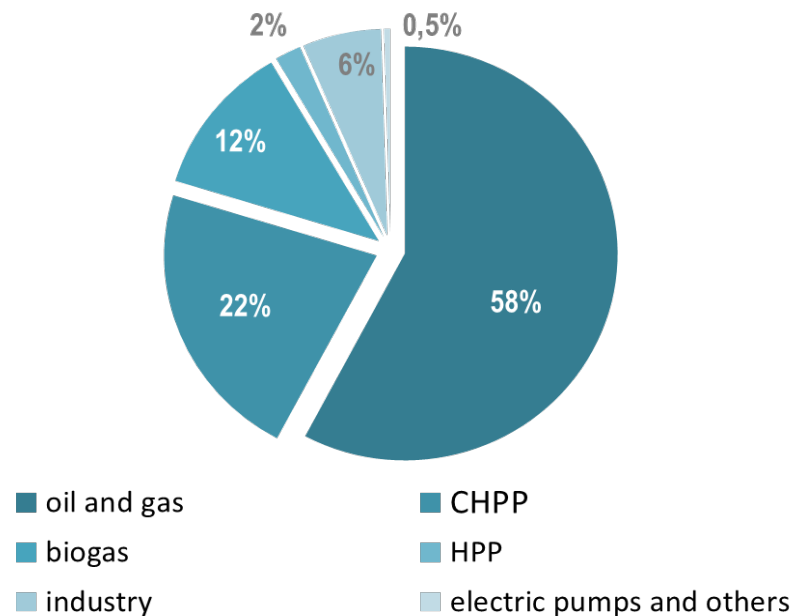
KEY CLIMATE CHANGE MITIGATION ACTIONS

Climate change mitigation package being implemented in Uzbekistan includes technical measures for

- reduction of direct GHG emissions,
- improving energy efficiency in all sectors of the economy,
- carbon sequestration in agriculture and forestry.



Structure of GHG emission reductions by category of implemented projects



ENERGY

- modernization and renewal of generating capacities and energy-intensive industries and reduction of losses in electrical networks;
- development and implementation of RES (including hydropower, small hydroelectric power plants, biogas plants, photo power plants, wind power stations);
- elimination of natural gas leaks in the oil and gas industry;
- introduction of energy-saving technologies in industry and agriculture;
- limiting emissions and reducing energy consumption in transport, promotion of alternative fuels;
- introduction of energy-saving technologies in water management.

AFOLU

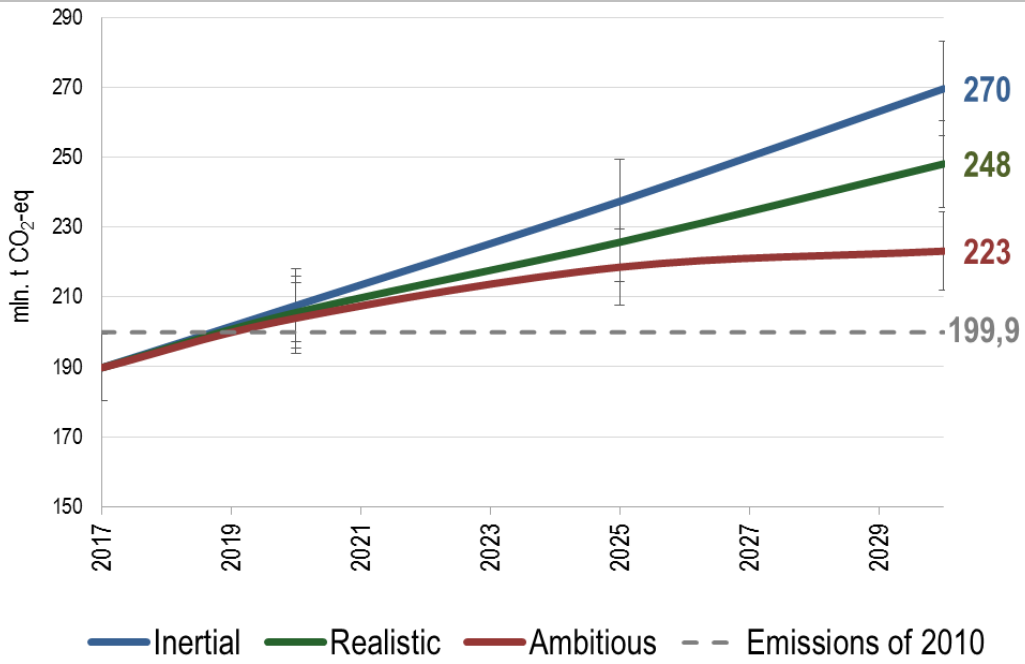
- afforestation and reforestation
- improvement of fertility agricultural soils
- manure management systems improvement
- restoration of degraded pastures

WASTE

- improvement of the solid waste management system

ESTIMATION OF GHG EMISSIONS REDUCTION POTENTIAL AND GHG PROJECTIONS UNTIL 2030

GHG projections until 2030



GHG projections have been developed using the Greenhouse Gas Abatement Cost Model (GACMO) model by UNEP/DTU

Inertial

- GHG emissions growth rate remains at the current level;
- energy consumption in the sectors of the economy grows in proportion to the growth of GDP and population

without additional measures

Realistic

- considered GHG emissions reductions as a result of implementation **measures with guaranteed funding** which are
- ongoing;
 - of high priority;
 - planned for near future

21,4
Mt CO₂-eq

Ambitious

- considered GHG emissions reductions due to implementation of activities related to
- transition to "green economy";
 - improving energy efficiency;
 - realizing the maximum potential to reduce greenhouse gas emissions

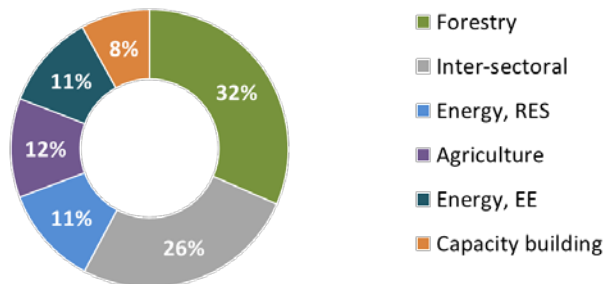
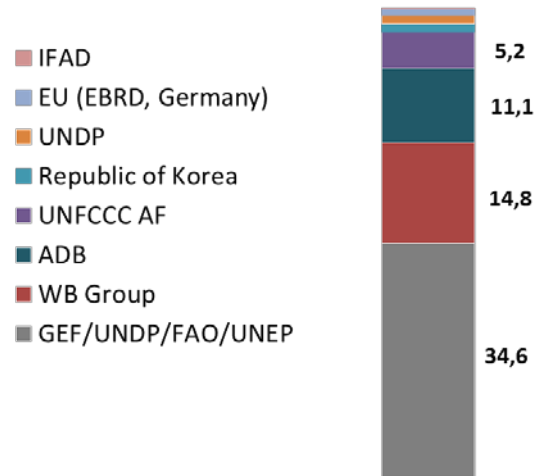
38,4
Mt CO₂-eq

Scenario	GHG Emissions, Mt CO ₂ -eq		Change in GHG Emissions, % to 2010	
	2010	2017	2025	2030
Inertial			19%	35%
Realistic	199,9	189,2	13%	24%
Ambitious			9%	12%

INFORMATION ON RECEIVED FINANCIAL AND TECHNICAL SUPPORT RECEIVED

Grant Support from International Organizations

Total (mln USD) 69.4



Main sources of funding:

Green Climate Fund, GEF, IDA and IBRD funds (World Bank), Climate change Fund and Clean Energy Financing Partnership Facility (Asian Development Bank).

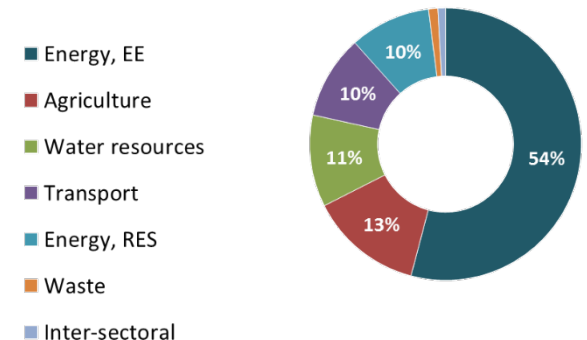
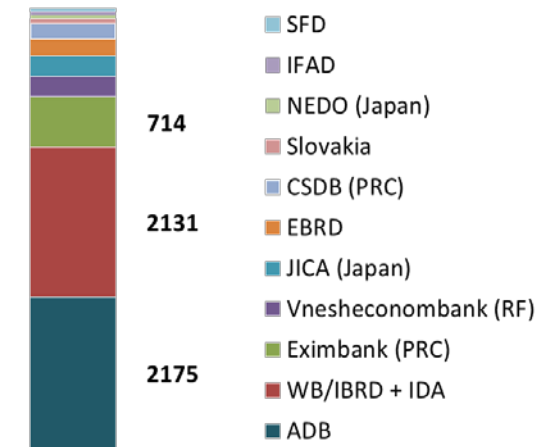
The share of support received is more than 80%.

Main activities supported:

- promoting the energy efficiency,
- development of clean energy,
- sustainable management of forests,
- intersectoral synergy of mitigation measures with other development priorities, such as the development of a sustainable rural housing market, etc.

Funding from IFIs

Total (mln USD) 6,277.1



ETF TRANSITION AND IMPLEMENTATION

Transition to ETF is supported by following on-going initiatives and regulatory acts:

- **Climate Change Strategy** of the Republic of Uzbekistan until 2030 (discussion)
- **National Adaptation Plan** for 2020 - 2023 (in progress)
- **Carbon Neutral Electricity Transition Plan** until 2050
- Development of a regulatory document and Roadmap implementation for the **establishing the MRV system**
- Implementation of the project on MRV system development supported by FAO within **CBIT initiative** (2022-2025)
- Strengthening the institutional and expert capacity within the Central Asian component of the **ICAT initiative** (2021-2024: ReCATH, Regional Center for Climate Action Transparency in Central Asia)
- Developing request to apply for GEF funding for BTR1, and NC5 combined with BTR2 – **supported by UNEP**



Written questions and answers exchanged through FSV Portal

A total of 12 questions were received from following Parties: United States of America, Thailand, United Kingdom of Great Britain and Northern Ireland, New Zealand, Japan, European Union

Topics covered:

GHG Inventory:

- 2006 IPCC Guidelines;
- leak detection Emission Factors, Research Needs;
- GHG Emissions in Forestry

Other information

- the most useful capacity building workshop for the BUR preparation

Mitigation actions and their effects

- examples of pilot projects created through Green Economy strategy
- future emissions projections to 2030
- mitigation measures in the transport sector
- CH₄ leakage control measures from natural gas production, processing, transport
- progress of mitigation measures in Agriculture sector
- gaps and constraints related to MRV system development
- central heating energy efficiency project
- reducing methane emissions from the energy sector

THANK YOU

