



Innovative Technologies for Developing Climate-Resilient Infrastructure in Uzbekistan:

Building Sustainable Solutions for a Changing Environment

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Agency for Innovative Development

BASIS

Agency of innovative development under the Ministry of higher education, science and innovation was established based on the Presidential Decree of the Republic of Uzbekistan No. PD-265 "On implementation of administrative reform in new Uzbekistan" dated on December 21, 2022 in order to accelerate social and economic development based on advanced foreign experience, achievements of science, innovative ideas and technologies.

MISSION

Introduce scientific achievements in priority sectors and foster long-term innovation strategies	Enhance regional intellectual and technological capacity, building infrastructure for science and innovation	Develop proposals for state programs supporting scientific and innovative activities	Coordinate training systems for staff with scientific degrees.	Engage youth in science and innovation, providing full support for their initiatives
Attract investments, private sector involvement, and venture financing for innovative projects	Conduct financial, economic, and technical assessments for projects with intellectual property	Identify economic sector needs and strengthen science-industry integration through sectoral research	Support commercialization and adoption of new developments and start-ups in industry	Strengthen international partnerships in science, innovation, and technology transfer

GOAL

To accelerate the nation's scientific and technological progress by building a sustainable ecosystem that supports innovation, integrates scientific research into key industries, and strengthens the economy through knowledge and global competitiveness.

ASSIGNMENTS

- Carries out practical measures in the field of innovative and scientific and technological development of the Republic of Uzbekistan, aimed at the comprehensive development of public and state life, increasing the intellectual and technological potential of the country.
- evaluates innovation activities based on indicators of its effectiveness, determines the main directions for the development of relevant industries and areas that require the primary introduction of advanced technologies
- coordinates the activities of government bodies, research and information and analytical institutions and other organizations on the implementation of innovative technologies, ideas and R&D;
- acts as a sole customer of state scientific and technical programs and projects conducted by scientific, educational and other institutions



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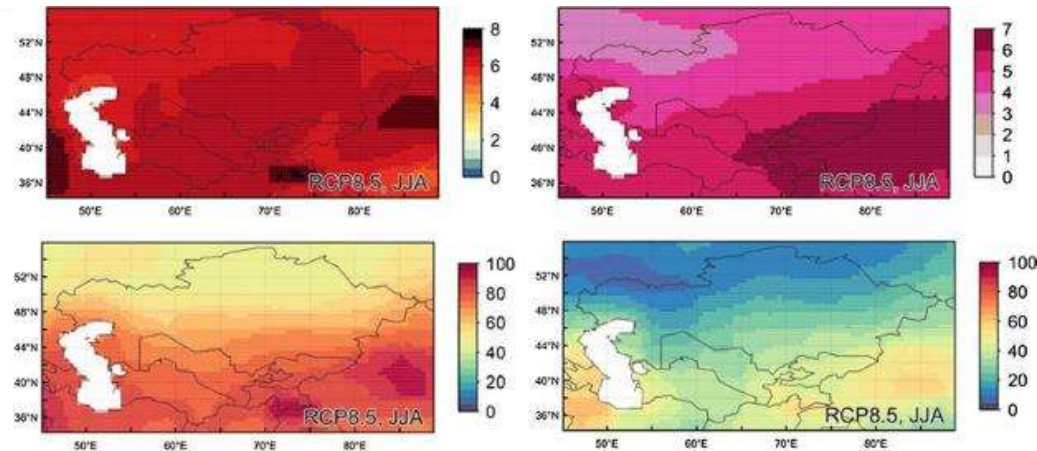
Introduction

Uzbekistan faces significant climate challenges: rising temperatures, prolonged droughts, and extreme weather events.

Key sectors affected: construction, energy, water supply, and agriculture.

Innovation is central to adapting infrastructure and building resilience.

The need for sustainable, climate-resilient infrastructure to ensure long-term growth.





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Adaptation of Infrastructure to Climate Change

Addressing climate volatility requires infrastructure that can withstand extreme weather.

The goal: integrate resource-efficient, sustainable technologies across sectors.

Focus on reducing environmental impact while promoting economic growth.

Strategic planning is essential for climate resilience.





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Key Areas of Innovation for Sustainable Infrastructure

Focus areas for innovation:
Construction,
Energy, Water
Supply, and
Agriculture

Each sector plays
a critical role in
adapting to and
mitigating
climate impacts

Collaboration
and investment
in these areas
drive climate-
resilient
solutions





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Innovations in the Construction Sector

Sustainable Materials:
Eco-friendly concrete,
recycled materials,
and thermal insulation
panels

Energy Efficiency:
Reducing energy use
and costs through
better insulation and
smart designs

**Resilient
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Transformation of the Energy Sector

Renewable Energy: Solar and wind energy are key to reducing dependence on fossil fuels



Ambitious Goals: By 2030, 40% of Uzbekistan's electricity will come from renewable sources (28,000 MW)



Energy Storage: Development of storage systems (4,200 MW) to stabilize supply, especially during variable weather conditions

Visuals: Solar panels and wind turbines, energy storage systems



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Water Resource Management and Water Supply

Water Scarcity: Climate change exacerbates water shortages in Uzbekistan

Modern Technologies: Satellite data, real-time monitoring, and forecasting improve water distribution

Infrastructure Upgrades: Modernizing reservoirs and canals to reduce water loss

Precision Agriculture: Drones and sensors optimize irrigation and water usage for agriculture





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Agro-Innovations

Drought-Resistant Crops: Developing crops that can withstand harsh, changing climates.

Precision Agriculture: Tools that optimize water usage, reduce chemicals, and increase yields.

Innovation Development Agency's Support: 103 agro-innovation projects funded, with 130 billion soums invested.





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Conclusion

- Uzbekistan is proactively addressing climate change through technology and innovation.
- The country is enhancing its resilience across multiple sectors: construction, energy, water, and agriculture.
- Strategic investments in these areas lay the foundation for a more sustainable, climate-resilient infrastructure.
- Ongoing efforts will improve economic growth, quality of life, and contribute to global environmental sustainability.





Thank you for your attention

