

CLIMATE CHANGE IN CENTRAL ASIA AND ITS EFFECTS ON THE GREEN ECONOMY

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Annotation

The article highlights the impact of climate change on Central Asia and its implications for the region's transition to a green economy. It explains how rising temperatures, glacial melting, water scarcity, and extreme weather events threaten the environment and socio-economic stability. The green economy is presented as a solution, focusing on renewable energy, sustainable agriculture, green infrastructure, and regional cooperation. The article also addresses the challenges of funding, dependence on fossil fuels, and political instability, offering insights into policy innovation and international collaboration.

Central Asia is experiencing significant climate change impacts, including rising temperatures, water scarcity, and land degradation, which threaten its environment and economy. This article explores how these challenges influence the region's shift toward a green economy. It identifies opportunities in renewable energy, sustainable agriculture, and green infrastructure while emphasizing the need for regional cooperation. Despite progress, barriers such as limited funding and fossil fuel reliance persist. By adopting effective policies and leveraging international support, Central Asia can achieve sustainable growth and resilience against climate challenges.

Climate Change in Central Asia and Its Effects on the Green Economy

Central Asia, including Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, and Tajikistan, is highly sensitive to climate change. The region's deserts, plains, and mountains make it vulnerable to rising temperatures and water shortages. These problems are changing the land and affecting people's lives and economies. To deal with this, the green economy can help reduce risks and support sustainable growth.

Here's the speech of the President of the Republic of Uzbekistan Shavkat Mirziyoyev at the UN Climate Change Conference (COP29)



"Climate change is now emerging as a major global threat, and directly influencing the escalation of geopolitical tensions.

It primarily exacerbates the problems of poverty eradication, food and energy security, as well as access to water and resources.

In Central Asia, we feel these problems especially acutely. Climate challenges are posing new barriers to improving the quality of life of our people and implementing national development strategies.

Our main goal under the Paris Agreement is to prevent the region from outpacing temperature rise, and to keep it within 1,5-2 degrees this century.

In this regard, we are resolutely pursuing extensive reforms in Uzbekistan to achieve carbon neutrality.

We have set a target to reduce greenhouse gas emissions by 35 percent by 2030. We are ready to extend this commitment by 2050.

We will increase the share of green energy to 40 percent. We are creating electric car and "green" hydrogen clusters, along with hubs for solar and wind energy generation.

We are drastically expanding green areas under the "Yashil Makon" (Green Space) Program.

Together with neighboring countries, we have embarked upon the implementation of a Regional Climate Strategy.

In the coming days we will sign a multilateral agreement on supplying green energy to the European Union".

Climate Challenges in Central Asia

The region's temperature is increasing faster than the world average, rising by 1.5°C in the last 100 years. This leads to:

1. Glacial Melting. Glaciers in mountains like Tien Shan and Pamir are shrinking. This reduces water for farming, energy, and drinking.

2. Water Scarcity. Less water is available, causing problems for countries that share rivers like Amu Darya and Syr Darya.

3. Extreme Weather. More droughts, heatwaves, and floods harm farms, roads, and local economies

4. Land Degradation. Poor farming, deforestation, and grazing damage the soil, making food production harder.

Green Economy and Climate Change

Although climate change creates challenges, it also provides opportunities for Central Asia's green economy.

1. **Renewable Energy.** The region has plenty of solar, wind, and hydropower resources. Countries like Kazakhstan and Uzbekistan are building solar and wind energy projects to reduce coal and gas use.

2. **Efficient Farming.** Agriculture uses most of the region's water. Using drip irrigation and sustainable methods can save water and increase crop output.

3. **Green Infrastructure.** Cities are building energy-efficient buildings and eco-friendly transport systems to cut pollution and improve quality of life.

4. **Regional Cooperation.** Countries can work together on renewable energy, reforestation, and water management to strengthen their economies.

Policies and Challenges

Governments in Central Asia are starting to act against climate change. For example: Kazakhstan aims for 50% renewable energy by 2050, Uzbekistan is building more solar plants and improving farming.

However, challenges remain:

Lack of Money: Green projects need more funding, dependence on Fossil Fuels: Oil and gas exports slow renewable energy progress.

Political Issues: Conflicts and instability prevent long-term planning.

Conclusion:

Climate change is reshaping Central Asia's environment and economy. Shifting to a green economy can reduce these problems and create opportunities. By focusing on renewable energy, sustainable farming, and cooperation, the region can turn challenges into strengths. With the right policies and support, Central Asia can lead in green economic development and secure a sustainable future.

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