

In a nutshell

Is Uzbekistan becoming efficient in using natural resources and environmental services and what can policymakers do to accelerate the green transition?

- **Deploy more technologies in the energy sector to cut emissions.** Uzbekistan managed to decrease its carbon emissions per unit of GDP by around 75% in the last 20 years. However, the carbon intensity is still one of the highest in the world. The energy sector is responsible for 80% of the carbon emissions, resulting from gas combustion.
- **Increase the share of renewable energy in the electricity grid.** Despite considerable potential, renewable energy sources contribute only 9% to Uzbekistan's electricity generation. The country has limited industrial-scale solar power plants, even though conditions for solar generation are better than in countries with high installed solar power capacity such as Spain.
- **Invest in energy-efficiency.** Uzbekistan's energy intensity of GDP has been declining in recent years but remains one of the world's highest. It was the eighth most energy-intensive country in the world in 2022. Buildings (residential and commercial) consume 45% of the energy.
- **Continue improving water management, irrigation systems, water distribution infrastructure and water-saving technologies.** Water productivity in Uzbekistan's economy increased fourfold to USD 2 per cubic meter (m³) of water used in the past 30 years. Despite this progress, productivity remains one of the lowest compared to the European and Central Asia region average of USD 43/m³ and the world average of USD 21/m³.

Addressing carbon, energy and water intensity, fertilizer use and waste production

Uzbekistan has one of the most carbon and energy intense economies in the world. It should aim to:

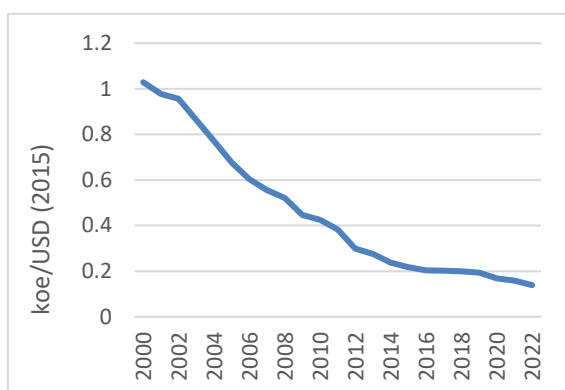
- Increase technology adoption in the energy sector to reduce emissions.
- Promote the integration of renewable energy sources into the electric grid system to reduce reliance on gas combustion.
- Focus on energy efficiency improvements, particularly in residential and commercial buildings, to address high energy intensity.

Increase water productivity. There is a need to invest in water management and water-saving technologies and modernise water infrastructure.

Prioritize the expansion and modernization of solid waste management systems to address the significant increase in solid waste production.

Reduce fertilizer use, which is significantly higher than the global average, and ensure more efficient nutrient management.

Energy intensity of GDP



Koe= kilo oil equivalent

Source: Statistics Agency, 2023

Share of renewables in electric generation



Source: Statistics Agency, 2023

- **Expand and modernize solid waste management and do awareness-raising on sustainable consumption.** In 2021, Uzbekistan produced ten times more solid waste than five years ago, generating six million tonnes of household solid waste or 165 kg per capita. Only a quarter of solid waste is recycled and regular waste collection services covered only half of the population in 2018.
- **Scale up sustainable agricultural practices that minimize fertilizer use.** Mineral fertiliser used per hectare (ha) of cropland increased in Uzbekistan, leading to a rise in excess fertiliser per ha of cropland. It has increased by more than 50% in the past 30 years and was 75% higher than the world average in 2020.

Background & Acknowledgements

The Organisation for Economic Cooperation and Development (OECD) green growth indicators track progress in greening the economy. They have been applied for the first time in Uzbekistan in 2023 to assess the country's paths towards a green transition and help policymakers take informed decisions to accelerate it. The findings of the study are presented in the report [Greening the Economy in Uzbekistan: State of Play in 2023](#). This nutshell highlights selected findings and develops policy messages, focusing on one of four areas of green growth, namely environmental and natural resource productivity.

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Disclaimers

Data presented in this nutshell come from the report [Greening the Economy in Uzbekistan: State of Play in 2023](#). All sources are available and acknowledged in the report.

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