

Responding to Climate Change in Central Asia

Overview of the support provided by the German federal enterprise for international cooperation

How climate change is affecting the region

Climate change is affecting Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) in various ways and will have significant consequences for their development. The region is experiencing rising temperatures, causing the melting of glaciers and a decrease in water availability. Almost half of the major glaciers in Central Asia may disappear by 2050, which is a concern as they hold 60% of the region's fresh water. (WMO, 2021). Additionally, the frequency and intensity of extreme weather events, such as droughts and floods, are expected to increase. These changes are likely to have negative impacts on the energy sector, agriculture and human health.



Fig 1. Climate change impact in Central Asia – Water Stress, Source: Eurasian Development Bank, 2022

While all the countries of Central Asia are exposed to the negative impacts of climate change, GHG emissions vary significantly among the countries. Per capita GHG emissions of Kyrgyzstan (3.3967 tCO₂eq/cap/year in 2022) and Tajikistan (2.3214 tCO₂eq/cap/year) are relatively low in comparison to the global average. With 6.6733 tCO₂eq/cap/year, Uzbekistan's per capita emissions equal the global average. Instead, per capita emissions in Kazakhstan and Turkmenistan rank among the highest in the world (17.3295 and 20.7968 tCO₂eq/cap/year) (EDGAR, 2022).

Furthermore, there are challenges for the use of natural resources in Central Asia, such as population growth, which requires more efficient management of natural resources. There is also a conflict between water-intensive agriculture in downstream countries (Uzbekistan, Turkmenistan, Kazakhstan) and energy demand in upstream countries (Kyrgyzstan, Tajikistan). Other challenges include overgrazing and degradation of pasture, forest, and agricultural land, as well as inadequate regional coordination and relatively weak regional structures.

Frameworks for climate politics

There are several international and regional institutional frameworks that have been created to address climate change and environmental degradation in Central Asia:

- The United Nations Framework Convention on Climate Change (UNFCCC) and UN Sustainable Development Goals have been endorsed by all five Central Asian countries.
- The intergovernmental organization “International Fund for Saving the Aral Sea (IFAS)” and its sub-organizations - the Interstate Commission for Water Coordination (ICWC) and the Interstate Commission on Sustainable Development (ICSU) - coordinate the efforts of Central Asian countries to address environmental and socio-economic impacts and to implement obligations of the Central Asian States under environmental conventions of transboundary dimension.
- The Central Asia Regional Environmental Center (CAREC) promotes regional inter-sectoral dialogue on environmental issues in Central Asia involving the donor community; seeks to enhance the role of civil society in the field of environmental protection and sustainable development in Central Asia; and provides technical assistance.

- The EU's Central Asia Strategy aims to deepen and strengthen the relationship between the EU and the five Central Asian countries. As part of it, the Regional Team Europe Initiative on Water, Energy and Climate Change in Central Asia aims to support countries to increase their water cooperation, accelerate the transition to renewable energy and improve climate and environmental governance.

Germany's Green Central Asia Initiative

Germany has been collaborating with Central Asian countries for over 30 years. Close partnerships have been established with national governments and ministries, international and non-governmental organizations, academic and scientific institutions, businesses and local communities in the region.

The German government jointly with its Central Asian partners launched the German Green Central Asia Initiative in 2020. With a volume of more than 450 million Euro it is a contribution to the Team Europe Initiative "Water, Energy, Climate Change". The main objectives of the initiative are to promote the environmentally friendly use of natural resources, protect ecosystems and biodiversity, and reduce greenhouse gas emissions. On behalf of the German government, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH collaborates with its partners in Central Asia in the following areas:

Water Management: Given the impacts of climate change in Central Asia, effective and efficient water management is the basis for regional security. GIZ promotes transboundary dialogue and water management measures.

Green Economy: Collaborating with partners, businesses and entrepreneurs with the aim at promoting a socially just and environmentally friendly economic development with particular focus on reducing GHG emissions while attracting investments in 'green' technologies and infrastructures.

Climate Adaptation and Climate Risk Management:

Climate change impacts do not stop at borders. Therefore, German cooperation projects aim to foster intergovernmental exchange on climate related topics, establish cross-border partnerships, as well as promote national initiatives to address hydrological disasters and build a more resilient future. Among others, GIZ has supported the draft of the joint Regional Climate Change Adaptation Strategy.

Land Management & Biodiversity:

To counteract biodiversity loss and land degradation, for example of forests and pastureland, GIZ collaborates with different levels of governments in partner countries. For example, in Tajikistan's Tigrovaya Balka Nature Reserve, an innovative climate change adaptation planning processes was launched together with local residents to develop and test cost-effective strategies and appropriate measures.

Renewable Energy and Energy Efficiency:

GIZ supports climate-neutral coverage of the rapidly increasing energy demand with a complete decarbonization of the energy sector by 2050. Projects focus on raising energy efficiency in buildings and industries, supporting energy production with renewable sources and promoting hydrogen.

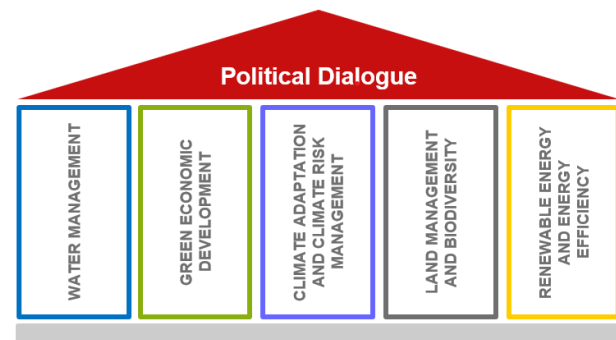


Fig 2. Germany's Green Central Asia Initiative, 2023

Ways forward

Central Asia needs a collective effort from all stakeholders to improve the resilience of communities and ecosystems in the region and to GHG emissions. Germany and Central Asian countries can lead the way in developing joint, innovative and local solutions to these challenges, building upon years of political and technical cooperation.

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