

AZERBAIJAN

Climate Challenges & Technology Needs

Presenting Azerbaijan's climate vulnerabilities, active technology deployments, national commitments, and partnership needs for regional collaboration.

COP29 Host

Green Corridor Partner

CAREC Member



CLIMATE VULNERABILITIES

What Azerbaijan is already facing — and what is coming



Water Crisis

-20%

water reserves lost in 30 years

Expected further 15–20% decline by 2050. Azerbaijan is among the 13 countries with lowest per-capita water resources globally. Caspian Sea level projected to drop 9–18 m by end of century.

Source: UNEP Caspian Sea Report · EU4Climate 2023



Agricultural Disruption

1 in 3

jobs depend on agriculture

2020 drought caused 15% loss in agricultural output. Rising heat and soil degradation threaten the Kura-Araz Lowland. Average annual flood damage: \$58M, with losses rising annually.

Source: Azerbaijan Climate Centre · World Bank



Extreme Weather & Hazards

#24

globally in climate risk index

Ranked 24th of 191 countries in the 2022 INFORM Risk Index. Droughts, floods, and landslides increasing in frequency. 2010 floods caused over \$360M in infrastructure damage.

Source: INFORM Risk Index 2022

GREEN ENERGY TRANSFORMATION

From oil nation to regional clean energy hub

+80%

Renewable output growth in 2024 (YoY)

6.5GW

Solar & wind target by 2030

30%

Renewables share in electricity by 2030

292GW

Total renewable energy potential



Garadagh Solar
230 MW

Largest solar complex in Caspian & CIS. Commissioned 2023 with Masdar (UAE). Backed by ADB.



Khizi-Absheron Wind
240 MW

ACWA Power & SOCAR. Saves 220M m³ natural gas annually. Prevents 400K tons CO₂/yr.



Bilasuvar + Neftchala
445 MW + 315 MW

Masdar mega-projects. Financially closed at COP29. Output: 1.7B kWh/year.



Green Karabakh Zone
1.6 GW by 2030

38 hydro plants (307 MW) operational. Net-zero zone by 2050. World's first post-conflict green zone.

COP29 LEGACY & NDC COMMITMENTS

Azerbaijan hosted the world's climate finance COP

COP29 BAKU — November 2024

- **\$300B/yr** climate finance goal — tripled from \$100B/yr
- **\$1.3T/yr** overall target by 2035 (Baku to Belém Roadmap)
- **Article 6** carbon markets fully operationalized at COP29
- **Baku Adaptation Roadmap** launched for global resilience
- **Green Corridor MoU** signed: AZ · KZ · UZ + ADB + AIIB
- **COP29 Energy Pledges:** Grid & Storage, Green Energy Zones & Corridors

AZERBAIJAN NDC COMMITMENTS

-35%

GHG reduction by 2030
vs. 1990 baseline

-40%

GHG reduction by 2050
vs. 1990 baseline

- 30% renewable energy in electricity mix by 2030
- Karabakh & East Zangezur: net-zero zone by 2050
- Zero routine gas flaring by 2030 (SOCAR commitment)
- SOCAR upstream methane near-zero by 2035
- 7 GW renewables by 2030; 5 GW earmarked for export

TECHNOLOGY IN ACTION

Digital, AI, and smart solutions already deployed



Digital Ecology Platform (REIS)

Presidential decree — January 2025. Digitalizes all operations of the Ministry of Ecology & Natural Resources. Integrates satellite Earth Observation for real-time environmental monitoring. Fully connected to national e-Government infrastructure.



Government Digitalization

Ranked 74th globally in UN EGDI 2024 — entering 'Very High' category for the first time (+9 positions). Digital Bridge: 1B+ transactions/year. MyGov and SIMA platforms serve millions of citizens daily. 99.1% broadband coverage. AI Strategy 2025–2028 approved.



Floating Solar Innovation

ADB-supported floating solar pilot on Boyukshor Lake in Baku. Reduces water evaporation, maximizes urban land use, and accelerates grid decentralization. Replicable model for water-scarce CAREC regions.



Smart Agriculture

Satellite-based crop monitoring, drone pest detection, and precision irrigation systems deployed across 17 agro-parks (104,000 ha). IoT farm management platforms reducing water and fertilizer use.



Grid & Battery Storage

250 MW / 500 MWh battery storage under construction. World Bank-backed AZURE project: 500/300 kV substation integrating 1 GW of new solar and wind into national grid.



Green Corridor Digital Infra

Green Corridor Union joint venture: Azerbaijan, Kazakhstan & Uzbekistan. Digital metering, leakage prevention in gas distribution. 15+ remote monitoring systems across energy network.

Azerbaijan has built the foundations — the policies, the platforms, and the momentum. We now look to deepen engagement with CAREC partners across three dimensions:



Collaborate

Joint initiatives & regional programs

- Co-develop climate-smart technology programs with CAREC member governments
- Participate in CAREC cross-border pilot projects in green digital infrastructure
- Build on Green Corridor MoU with Kazakhstan & Uzbekistan as a regional anchor



Exchange

Knowledge, technology & best practices

- Share Azerbaijan's e-government, digital public services, and smart city models
- Exchange experience on green energy transition from fossil fuel to renewables
- Learn from CAREC partners' climate adaptation technologies and digital solutions



Connect

Startups, investors & tech ecosystems

- Connect Azerbaijan's IT park and startup ecosystem with CAREC innovation communities
- Facilitate cross-border investment into climate tech and digital sectors
- Build pathways for technology transfer between the region and global markets

FROM BAKU TO BISHKEK —

PARTNERING FOR A CLIMATE-RESILIENT REGION

We hosted the world's climate finance COP. We signed the Green Corridor with Kazakhstan & Uzbekistan — two CAREC partners in this room. We are building Karabakh into one of the world's first post-conflict green energy zones. We are not starting our transition. We are accelerating it.

We invite CAREC partners to collaborate on shared water challenges, smart agriculture, digital energy corridors, and carbon market infrastructure — turning COP29 commitments into tangible regional action.

Karabakh

Green Energy Pilot Zone
Open for regional tech deployment

3-Way MoU

Green Corridor Union
AZ · KZ · UZ + ADB + AIIB

COP29

Institutional Network
Ready to activate for CAREC