Policy Workshop
ADVANCING THE GREEN TRANSITION IN CAREC:
POLICY PATHWAYS FOR LOW-CARBON GROWTH
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PUBLIC-PRIVATE PARTNERSHIPS IN RESOURCE MOBILIZATION FOR GREEN TRANSITION FINANCING

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Green Economy Development in CAREC Countries

In the current conditions, there is a need to rely on additional sources for the targeted use of limited public resources. The implementation of such measures requires us to launch a number of initiatives. Namely, the development of a strategy, sectoral programs, institutional reforms, the introduction of modern technologies, the process of stabilizing investment attraction in key sectors of the "green economy" sector, strengthening and stabilizing the partnership of the state with the private sector, international partners, the creation of startups that, from the point of view of innovation and modern technology, will focus the interaction of the parties for the development of this sector.

"Green economy" is now considered one of the modern directions of economic science, and scientists are constantly developing their research in this area. The global community is gradually turning its attention to this important area. The opinion of scientists and practitioners on this area is very positive[1][2][3][4][5][6][7]. Some studies even predict the coverage of all sectors, emphasizing that the economic, social, and environmental sectors will be of primary importance.

The partnership between the public and private sectors in mobilizing resources for the green transition in the CAREC countries, in the example of the Republic of Tajikistan, is considered a leader in the region, especially among the CIS countries.

Tajikistan's Green Economy Progress

Favorable Conditions

The Republic of Tajikistan has good and favorable conditions for strengthening the "green economy" in various sectors and has the opportunity to develop the energy, agriculture, and production of environmentally friendly goods and services. As is known, thanks to hydropower, Tajikistan ranks first among the CIS countries in terms of clean energy production.

Recent Developments

It is worth noting that in recent years, the Republic of Tajikistan has paid attention to the modernization and construction of hydroelectric power plants and is constantly taking specific measures to develop a "green economy" with a capacity of at least 1,000 megawatts by 2030. Several projects are being implemented in the Republic of Tajikistan that will accelerate the implementation of the goals of the green economy.

Energy Projects

The implementation of projects for the construction of the CASA-1000 power transmission line and reconnection to the Central Asian energy system is underway to increase electricity exports by 10 billion kilowatt-hours in the next 7 years. In 2023, Tajikistan's energy capacity will exceed 6,000 megawatts and electricity production will reach 22 billion kilowatt-hours, which is 4.8 billion kilowatt-hours or 28 percent more than in 2017.

It is worth noting that the stages of implementing the green economy strategy in CAREC countries began in 2013 and were first adopted by the government in the Republic of Kazakhstan as a separate strategic document, namely the Concept of Transition to a "Green Economy", the goal of which is its phased implementation by 2050. The adoption of such a decision in this form is considered the first in the CIS

Strategy for the Development of the “Green” Economy in the Republic of Tajikistan for 2023–2037

In the Republic of Tajikistan, such a document, entitled "Strategy for the Development of the "Green" Economy in the Republic of Tajikistan for 2023–2037", was approved by the Resolution of the Government of the Republic of Tajikistan dated September 30, 2022, No. 482.

When developing the main indicators of the Strategy for the Development of the “Green” Economy in the Republic of Tajikistan for 2023–2037, which include goals and measures, indicators of expected results, financing requirements, financial resources, the private sector is reflected as a source of financing, as required. This strategy provides for the total amount of funds required for the first stage of 21,586.3 million somoni.

General Provisions	Interpretation
Analysis of the Situation and Opportunities	• The Trend of Transition to the “Green” Economy Process in the World • Possibilities for Implementing the “Green” Economy in the Republic of Tajikistan
Perspectives, Goals, Objectives and Target Indicators of the Strategy	• Long-term Perspective for the Development of the “Green” Economy • Objectives of the Strategy • Main Tasks • Target Indicators
Main Directions for the Development of the “Green” Economy in the Republic of Tajikistan	• Efficient Use of “Green” Energy and Ensuring Energy Saving • Implementation of the “Green” Economy in the Industrialization of the Country • Introduction of the Principles of the “Green” Economy in Agriculture • Improvement of Legislation for the Widespread Use of the “Green” Economy • Development of “Green” Employment
Main Stages of Strategy Implementation	• The Strategy is being implemented in 5 Stages with its Action Plan, approved by the Government of the Republic of Tajikistan.
Monitoring and evaluation system	• Focus on the results and priorities of the Strategy; • • Use of new monitoring and evaluation technologies;
Sources of financing for the implementation of the Strategy	• The implementation of the goals and objectives of the Strategy will be ensured within the framework of the republican budget, local budgets, international financial organizations, development partners, the private sector and other sources of financing not prohibited by the legislation of the Republic of Tajikistan.

Tajikistan's Green Economy Strategy (2023-2037)

The "Strategy for the Development of the 'Green' Economy in the Republic of Tajikistan for 2023–2037" was approved by the Government Resolution dated September 30, 2022, No. 482.

General Provisions & Analysis

- Global trends in green economy transition
- Opportunities for implementation in Tajikistan

Goals & Target Indicators

- Long-term development perspective
- Specific objectives and measurable targets

Main Directions

- Efficient use of "green" energy
- Green industrialization
- Agricultural implementation
- Legislative improvements
- Green employment development

Implementation & Financing

- 5-stage implementation plan
- Monitoring and evaluation system
- Multiple financing sources including PPP

Implementation Stages of Green Economy Strategy in CAREC Countries

Stage 1: Preparation (2025-2027)

Countries focus on policy development, green financing mechanisms, and capacity building. Kazakhstan is revising its green economy concept, while Tajikistan is implementing energy sector reforms.

1

Stage 2: Initiation (2028-2032)

Large-scale implementation of renewable energy projects begins. Kazakhstan focuses on solar and wind power plants, while Uzbekistan retrofits thermal power plants transitioning to gas and renewables.

2

Stage 3: Expansion (2033-2040)

Countries aim to increase renewable energy share to 25-40% of energy mix. Regional green projects like transport corridors are implemented to reduce emissions across borders.

3

Stage 4: Consolidation (2041-2050)

Full implementation of green economy results. Countries achieve export targets for green products and services, with Kazakhstan and Azerbaijan exporting green energy, while Tajikistan focuses on green agriculture.

4

Factors Influencing Public-Private Partnership in Green Economy Implementation

Political & Legal Factors

Developing national strategies on green economy and establishing sustainable policy monitoring frameworks

Economic & Financial Factors

Developing and introducing financing mechanisms for green investments

Technological Factors

Access to clean environmental technologies (clean technologies)

Institutional & Administrative Factors

Public-private partnership processes in implementing the green economy strategy and their coordination

Social & Cultural Factors

Launching training programs for stakeholders and developing a partnership platform for dialogue

Environmental & Climate Factors

Preventing environmental threats in the sectors of energy, transport, industry, and agriculture

Such an assessment includes:

Key indicators:

- Public investment
- Private investment
- Financial gaps
- Green economy policy and strategy

Collaboration Mechanism:

- Selection of collaboration models
- Project planning and implementation
- Monitoring and risk management

Key indicators:

Financial results:
Attracting private investment, reducing financing gaps
Environmental results: reducing emissions, increasing energy efficiency
Social results: creating new jobs,
Process of strategies and mechanisms for public-private partnerships based on the results achieved and the issues identified

Result:

ROI and environmental ROI
Indicators of the impact of the green economy and sustainability
Contribution of PPPs to the sustainable development of the region

- Feedback: Adjust strategies and mechanisms for public-private partnerships based on the results achieved and issues identified

Assessment of Public-Private Partnerships in Mobilizing Resources for the Green Transition in CAREC Countries As a single model in today's conditions, it should be based on a specific system of analysis and ensure the effectiveness, results achieved, and contribution of public-private partnerships to addressing gaps in financing sustainable sectoral projects.

ASSESSMENT FRAMEWORK FOR GREEN TRANSITION PPPS

A comprehensive assessment of public-private partnerships in mobilizing resources for the green transition in CAREC countries should be based on a specific system of analysis to ensure effectiveness and measure results.

Economic Analysis

Assessment of profitability and priority of existing projects, cost-benefit analysis, and return on investment for both public and private sectors

Environmental Analysis

Measurement of project contributions to reducing greenhouse gas emissions, increasing energy efficiency, and conserving natural resources

Social Analysis

Analysis of employment effectiveness, availability of environmental infrastructure, and improvements in standard of living

This assessment framework helps determine the effectiveness, results achieved, and contribution of public-private partnerships to addressing gaps in financing sustainable sectoral projects.

Kazakhstan: Leading in Renewable Energy PPPs

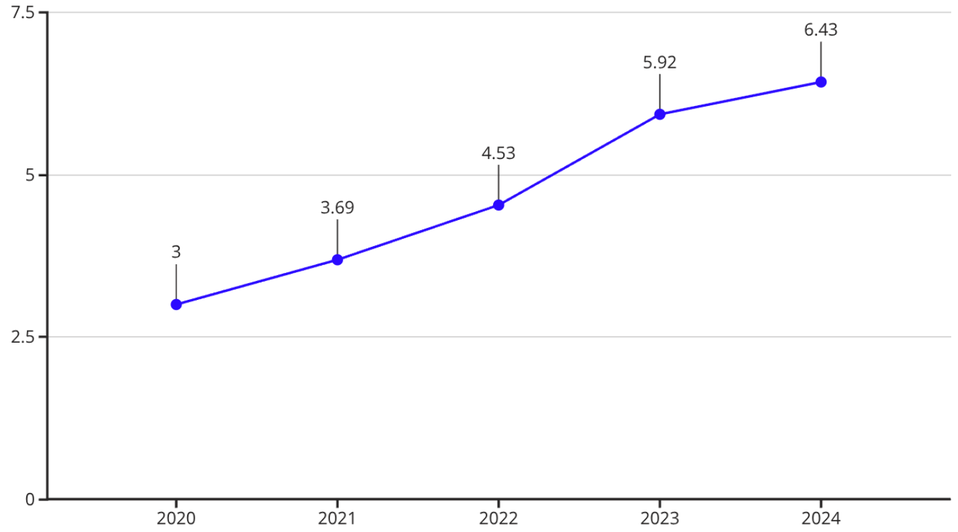
Kazakhstan is a leader in renewable energy among CAREC countries, with ambitious goals:

- Achieving carbon neutrality by 2060
- Attracting investment in solar and wind energy
- Ensuring energy balance through diversification

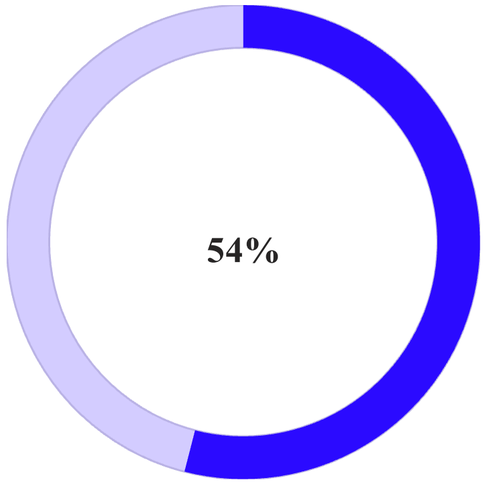
According to the Ministry of Energy, the share of electricity from renewable sources increased from 3% in 2020 to 6.43% by the end of 2024, showing consistent growth:

- 2021: 3.69%
- 2022: 4.53%
- 2023: 5.92%
- 2024: 6.43%

Kazakhstan has attracted about 260 companies from 13 countries to implement green economy strategies through PPPs, offering attractive conditions including 20-year power purchase agreements, tariff indexation, and investment incentives.

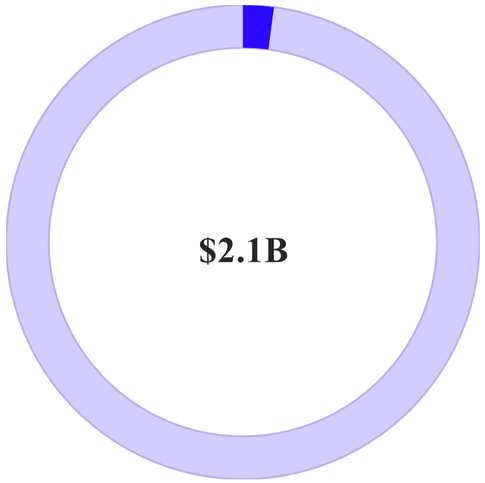


Uzbekistan: Ambitious Renewable Energy Goals



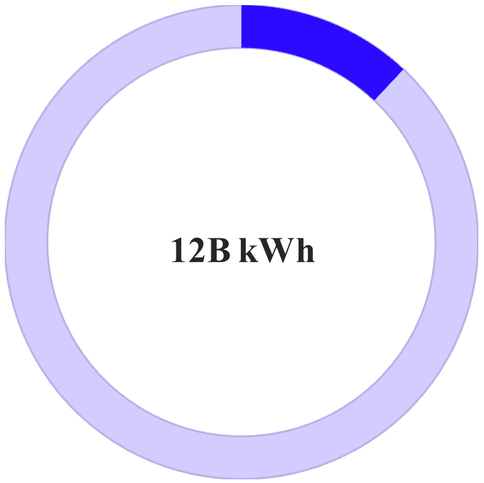
Renewable Energy Target

By 2030, the share of renewable energy sources in Uzbekistan's energy system will reach 54%, exceeding the previously projected 40%



Foreign Direct Investment

Already attracted to the renewable energy sector, with projects worth another $13 billion being implemented



Green Energy Production

By 2025, equivalent to the annual consumption of more than 5 million households

Uzbekistan has implemented successful social programs like "Solar House," providing citizens who install solar panels with 1,000 soums for each kilowatt of electricity. About 11,000 citizens have taken advantage of this opportunity, with additional benefits including customs privileges for importing solar equipment extended for five more years.

Within three years, 28 large solar and wind power plants with a total capacity of 8 GW will be put into operation, significantly advancing the country's green transition.

Kyrgyzstan & Tajikistan: Hydropower Focus

Kyrgyzstan

Kyrgyzstan is actively developing environmentally friendly energy production, focusing on small and medium-sized power plants built by domestic investors:

- Currently operating 39 hydroelectric power plants
- 18 small hydroelectric plants (78 MW) to be commissioned this year
- 13 more small plants (148 MW) planned for next year
- 14 additional plants (170 MW) planned for 2027
- Total plants will reach 84 after implementation
- 115% increase in plant numbers within 3 years

A 300 MW solar power plant is being built in Issyk-Kul region on 407 hectares with a $270 million investment through PPP.

Tajikistan

Tajikistan aims to fully provide electricity generation from renewable sources by 2032 and become a green country by 2037:

- 260-330 sunny days per year provide excellent solar potential
- Technical capacity of solar generation estimated at 25 billion kWh per year
- Can meet up to 80% of population's electricity needs for ten months
- Significant investment in solar and wind energy to reduce fossil fuel dependence
- Collaboration with Chinese companies for research and innovative projects

Despite great potential, solar and wind energy in Tajikistan are still at an early stage of development.

Key Indicators of PPP in Green Economy Across CAREC Countries

Country	GDP Growth per Capita	PPP in Green Economy Status
Tajikistan	4.0–5.5%	Focus on solar/wind energy; gradual implementation
Uzbekistan	4.5–5.0%	Major contracts with international investors; modern renewable technologies
Kazakhstan	1.5–2.0%	Strong regulatory frameworks enhancing sustainable development
Kyrgyzstan	2.5–3.5%	Small-scale projects moving toward larger implementations
Georgia	4.0–5.0%	Active hydropower plant construction with regulatory frameworks
Mongolia	3.0–4.5%	Focus on wind energy and sustainable transport

From this analysis, it's clear that most CAREC countries are implementing public-private cooperation in the green economy sector in a targeted manner, taking into account national characteristics. Kazakhstan, Pakistan, Uzbekistan, and Georgia show significant progress, while Tajikistan and Kyrgyzstan are in the startup phase, focusing on small hydropower plants and solar projects.

Barriers to PPP Development in Green Transition

Entry Barriers

- Restrictions on objects (goods) that can be brought into circulation
- Limitations on ownership forms: state-affiliated entities cannot act as private partners
- Restrictions on attracting investment due to sectoral characteristics

Financial & Economic Obstacles

- Bank guarantee requirements (5% of planned project financing)
- Reluctance of banks to lend without sufficient collateral
- High costs of project preparation, design, and expertise

Time & Process Limitations

- Undefined review and development timelines
- Review periods ranging from 60-120 days
- Lengthy competitive processes

Business & Operational Risks

- Project profitability uncertainties
- Technological process stability issues
- Price fluctuation risks
- Revenue decline possibilities
- Investment and credit risks

Removing these barriers could lead to higher economic growth and more sustainable development in the CAREC region.

Conclusions & Recommendations

Key Findings

- Public-private partnerships offer transformative opportunities to mobilize private sector resources alongside public sector oversight
- The private sector contributes approximately 40.47% of green transition funding in Tajikistan
- Kazakhstan leads in renewable energy PPPs with consistent growth in renewable energy share
- Uzbekistan has set ambitious targets of 54% renewable energy by 2030
- Kyrgyzstan and Tajikistan are focusing on hydropower development with gradual implementation of solar projects

Recommendations

- Develop clear regulatory frameworks to reduce entry barriers for private investors
- Create specialized financial instruments to address collateral and guarantee requirements
- Streamline approval processes with defined timelines for project reviews
- Establish risk-sharing mechanisms between public and private sectors
- Enhance regional cooperation to leverage complementary strengths across CAREC countries
- Invest in capacity building and awareness programs for stakeholders

Successfully addressing these challenges will allow CAREC countries to lead in green transition, establishing social stability and ecological balance while ensuring rational management of economic resources.

SWOT ANALYSIS - PUBLIC-PRIVATE PARTNERSHIP INVOLVEMENT IN GREEN ECONOMY STRATEGIES OF CAREC COUNTRIES

Strengths:	Weaknesses
• An influential regional platform that brings together experts, governments, and NGOs from Central Asia. • Experience in implementing cross-border environmental and climate projects. • Access to international partners and donors, including the European Union, UNDP, and the World Bank. • Expertise in sustainable development, climate change and green technologies.	• Limited financial and human resources. • Dependence on donor funding and project approach. • Lack of specific powers for the PPP mechanism (compared to special economic institutions). • Limited means of influencing government decisions (CAREC is an advisory body, not a regulator).
Opportunities:	Threats:
• Strengthen CAREC's role as a think tank for green transition and public-private partnerships in the region. • Attracting private investment in green infrastructure by creating a platform for government-business dialogue. • Participation in the implementation of international initiatives (EU Green Deal, CAREC Green Strategy). • Expanding cooperation with universities and scientific centers in the preparation of analytical materials.	• Political instability and differences in national priorities among CAREC countries. • Weak legal and regulatory frameworks for public-private partnerships in some countries in the region. • Climate change risks (drought, water shortages), which could reduce investor interest. • Competition with other international organizations for resources and leadership on the agenda.

SWOT- ANALYSIS

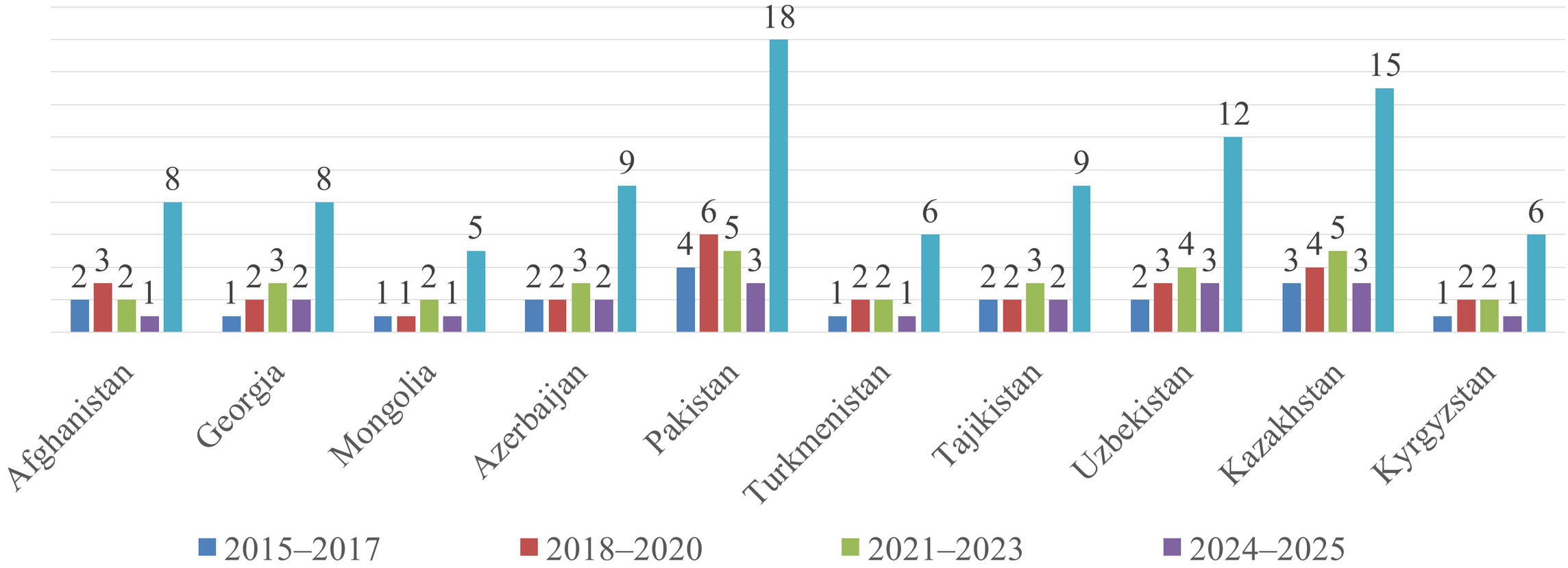
1 Strengths:

2 Weaknesses

Opportunities:

3 Threats:

NUMBER OF PROJECTS IN CAREC COUNTRIES RELATED TO PUBLIC-PRIVATE PARTNERSHIP DEVELOPMENT (2015–2025)



At the same time, the analysis of relevant data indicates that the leading countries in this area are Kazakhstan (22 projects) and Uzbekistan (20 projects), which have a stable infrastructure, good financial capabilities and relatively developed regulatory and legal documents in the field of public-private partnerships. In this process, countries with medium activity are Pakistan (18 projects), Azerbaijan (12 projects) and Georgia (10 projects), which are trying to integrate into regional markets. Mongolia (7 projects) and Kyrgyzstan (8 projects) have launched, which, compared to other CAREC countries, have limited activity in mobilizing resources for the green transition. At the same time, the countries with the smallest number of public-private partnership projects in the energy sector are Tajikistan (5 projects) and Turkmenistan (6 projects), the main problems are mainly related to the process of attracting investment. In Turkmenistan, the closed governance system and dependence on the state are an obstacle to attracting the private sector. Afghanistan is included in the group of low-performing countries due to political instability and security concerns.

FIGURE 1. POSITIVE IMPACT OF INCREASED ACCESS TO FINANCE ON PUBLIC-PRIVATE PARTNERSHIPS, TECHNOLOGICAL INNOVATION, GREEN FINANCE, AND ENVIRONMENTAL IMPACT

When assessing the quality of financing for public-private partnerships, technological innovation, green finance will support the development of key drivers of positive impact by providing financial and institutional incentives. It was found that effective public policy implementation in the public and private sectors plays a key role in mobilizing resources for the green transition in CAREC countries by prioritizing initiatives from the perspective of clean green finance. In addition, these key areas of cooperation contribute to strengthening energy security and create a common space for ensuring economic growth.

ECONOMIC INDICATORS OF CAREC COUNTRIES RELATED TO THE DEVELOPMENT OF PUBLIC-PRIVATE PARTNERSHIPS

Country	GDP growth (%)	GDP per capita ($)	PPP volume ($ million)	PPP projects (number)	Private sector contribution (%)	Inflation (%)	FDI ($ million)	Public debt (% of GDP)	Institute Index (0–100)
Afghanistan	-1.8	500	50	2	30	13.0	110	75	25
Georgia	6.5	7 300	2 500	45	60	4.2	2 300	40	65
Mongolia	5.2	5 100	1 800	30	55	9.5	2 100	63	50
Azerbaijan	2.8	10 500	4 200	40	50	8.0	4 500	25	60
Pakistan	2.4	1 600	6 800	85	40	27.0	1 800	72	40
Turkmenistan	6.2	8 900	3 600	25	35	8.5	2 000	45	35
Tajikistan	7.5	1 300	1 200	20	38	8.0	400	50	30
Uzbekistan	6.0	2 500	4 000	55	45	11.0	3 100	37	45
Kazakhstan	4.8	13 500	8 200	90	65	9.2	6 800	21	70
Kyrgyzstan	5.5	1 700	950	15	32	10.5	600	55	40

Based on the analysis and its results, we determined that in the period 2020-2024, a large number of projects will be implemented in CAREC countries. Kazakhstan ($12.3 billion) and Uzbekistan ($7.2 billion) are the leaders in public-private partnerships in the green economy. In almost all countries, the transport and energy sectors are prioritized, and important areas of cooperation are aimed at achieving the goals of green economy development. The growth of GDP growth in CAREC countries allows the real infrastructure base of this sector to be met in accordance with its purpose. Tajikistan has attracted a smaller amount of investment than others ($820 million), but the distribution of sectors is more balanced (40% business/energy, 45% transport).

THANK YOU

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