

MONITORING OF RUSSIA'S ECONOMIC OUTLOOK

trends and challenges
of socio-economic development

Gaidar Institute



21(226) SEPTEMBER 2026

RIO MARKERS IN CENTRAL ASIAN COUNTRIES: MONITORING INTERNATIONAL FINANCIAL FLOWS TO COMBAT CLIMATE CHANGE

Alexander Knobel, Doctor of Economic Sciences, Senior Researcher, International Trade Department, Gaidar Institute

The Rio Markers are a key tool for assessing the extent to which international development finance addresses climate change mitigation and adaptation goals. This analysis is particularly relevant for Central Asia – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – as the region faces high climate vulnerability, challenges regarding water and energy policy and significant investment needs. While the Rio markers facilitate project-level analysis of development finance, they do not provide a precise measurement of the total volume of climate finance. They classify whether climate change adaptation or mitigation is a principal, significant, minor or non-existent objective of donor projects. Thus, the analysis reveals the extent to which climate goals are integrated into development portfolios.

In recent years, the climate component of international development cooperation has expanded considerably. The institutional frameworks established following the 1992 Rio Earth Summit – the Rio Convention on Climate Change (UNFCCC), the United Nations Framework Convention on Climate Change and the international climate finance system (UNFCCC)¹, the Convention on Biological Diversity (1993) and the UN Convention to Combat Desertification (1994) – laid the foundation for the systematic monitoring of environment-related development finance. Climate finance differs from traditional Official Development Assistance (ODA), notably through a stronger emphasis made on long-term, sometimes high-risk investments in low-emission technologies, adaptation measures, climate information systems and the development of national institutional capacity.

This issue is of particular importance for development policy in Central Asia. The five countries differ significantly in terms of income levels, economic structure, institutional capacity and access to international financing. At the same time, transboundary water resources, agriculture, energy supply and infrastructure are closely interconnected. As part of the analysis, it is important to determine: which goals are being funded, whether adaptation or reducing CO₂ emissions is the priority, which donors and financial instruments are dominant,

¹ United Nations Framework Convention on Climate Change and the international climate-finance framework.

Monitoring of Russia's economic outlook

and whether the allocated funds correspond to the actual climate-related challenges faced by the recipient countries.

Tracking methodology

OECD Development Assistance Committee (DAC) statistics track development finance activities at the project level.¹ Two indicators are used for climate objectives: one for climate change mitigation and the other for adaptation. A three-level scoring system distinguishes between the following values: 2 is equal to main goal, 1 to significant goal and 0 to not a main goal. The main goal exists when the climatic goal is fundamental to the project activity, and the activity would not be carried out in this form without this goal. A significant goal exists when the climatic goal is explicitly considered, but is not the main reason for the activity. A score of 0 means that the activity was considered, but does not significantly pursue the relevant climatic goal (*Table 1*).

Table 1

Methodological interpretation of Rio markers

Score	Designation	Explanation	Significance for analysis
2	Main goal	The climate goal is fundamental and paramount	Clear evidence of activity primarily linked to climate change
1	Significant goal	The climate goal is important but secondary	Demonstrates the mainstreaming of climate initiatives; the overall amount does not necessarily constitute climate finance
0	Not a main goal	The activity is not aimed at achieving a climate-related goal	Not linked to climate change

Source: own compilation.

A key methodological limitation is that Rio markers measure the intended focus rather than the precise climate finance component. For instance, if a large infrastructure project is marked as “significant,” it does not automatically mean that the project’s entire cost should be regarded as climate finance. The OECD explicitly states that Rio markers are descriptive in nature. Donors sometimes apply their own coefficients for monetary valuation; for activities marked as “significant,” these coefficients are often substantially below 100%.²

When analyzing Central Asian countries, it is particularly important to distinguish between bilateral development finance and financing provided through multilateral development banks (MDBs). While sovereign donors within the OECD DAC systematically use Rio markers, MDBs primarily employ a generalized methodology specific to MDBs.³ The two systems address different issues. The MDB methodology facilitates to determine the specific share of an operation directly aimed at climate change adaptation or mitigation; consequently, the reported climate component can vary from nearly 100% to a small fraction of a broader development project. Rio markers indicate the extent to which climate goals are integrated into international development

1 OECD. RioMarkers: Aid (ODA) Activities Targeting Global Environmental Objectives. OECD Data Explorer / Creditor Reporting System (CRS), database accessed for methodological reference in 2026.

2 OECD (2024). Climate and Development Finance. Paris: OECD.

3 World Bank Group (2024). Development Banks' Joint Roadmap for Climate-Health Finance and Action. URL: <https://www.worldbank.org/en/events/2024/06/12/scaling-investments-climate-health-finance-action-roadmap>

Rio Markers in Central Asian countries: monitoring financial flows

assistance,¹ whereas climate components are aimed at quantifying the specific share of climate-related funding (*Table 2*).

Table 2

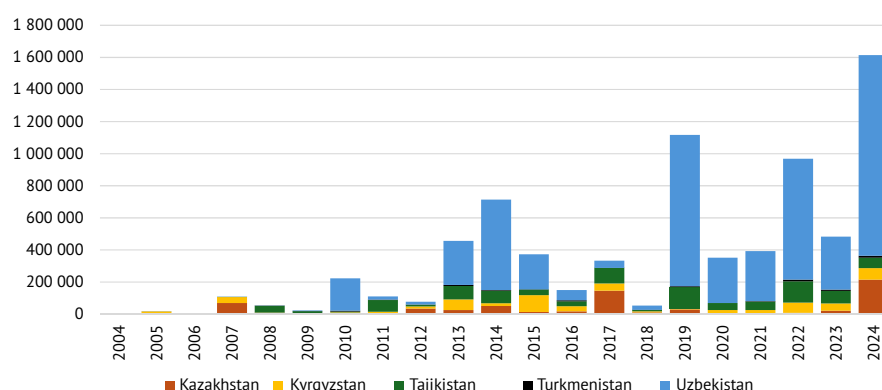
OECD DAC and MDB Methodology for Tracking Climate Finance

Definitions	OECD DAC Rio marker	Components of MDB climate projects
Main purpose	Political target orientation / Integration	Quantitative assessment of components of climate change related projects
Typical users	OECD bilateral donors; some multilateral institutions	Multilateral development banks
Unit of measurement	Score 0/1/2	Monetary amount or share
Aggregation risk	Total project amount may overstate the estimated funding for combating climate change	Methodologically closer to climate-oriented financing

Source: own compilation.

Bilateral, multilateral and private climate-related aid

Between 2004 and 2024, climate change-related projects were implemented by 29 OECD DAC member countries, 14 multilateral institutions,² and 2 private donors.³ Uzbekistan is the largest recipient of climate finance. During this period, external donors allocated \$5.3 bn to climate-related development cooperation projects. At the same time, the country remains the largest recipient of Official Development Assistance (ODA), totaling \$13.52 bn over the same period. Next come Tajikistan (\$980.5 mn), Kyrgyzstan (\$599.42 mn) and Kazakhstan (\$671.08 mn), where the share of climate finance in total ODA was equal to 13.21%, 9.18%, and 13.05%, respectively. Turkmenistan remains the smallest recipient of both ODA and climate finance (\$67.91 mn), with a share amounting to 16.35% of its total ODA (*Fig. 1*).



Note. Climate-related development finance includes commitments for climate change mitigation and adaptation. Amounts are expressed in current US dollar prices (2024) in thousands.

Fig. 1. Climate-related development finance for Central Asian countries from OECD countries, multilateral organizations and private donors, 2004–2024

Source: according to OECD DAC.

- 1 OECD (2019). *Aligning Development Co-operation and Climate Action: The Only Way Forward*. Paris: OECD Publishing.
- 2 Adaptation Fund, Climate Investment Funds, Food and Agriculture Organization of the UN, Global Environment Facility, Green Climate Fund, UNCDF, International Labor Organization, OPEC Fund for International Development, UN Peacebuilding Fund, UNDP, UNEP, UNFPA, WTO – International Trade Centre, European Commission.
- 3 Open Society Foundations, Wellcome Trust.

Monitoring of Russia's economic outlook

A significant share of climate finance in *Uzbekistan* is related to the energy sector and large-scale infrastructure projects. For instance, the OECD highlights major power plant projects in Turakurgan and Navoi sponsored by Japan. Consequently, Japan emerged as a key bilateral provider of climate-related development finance in the region in 2013–2014. Currently, renewable energy, energy efficiency and power grids, as well as projects in water supply and agriculture play a major role, too. This explains why Uzbekistan stands out so prominently in the time series: individual, large-scale infrastructure and energy projects can substantially boost annual commitments.

Although *Tajikistan* ranks second in terms of the volume of climate finance, it implemented the highest number of projects in this sector (716) during the 20-year period in question (*Fig. 2*). Especially noteworthy are the activities of donors aimed at building national capacity to combat climate change (particularly those of Switzerland and Germany)^{1,2} and the addressing of issues related to water resources, irrigation, agriculture, rural resilience and disaster preparedness. Also noteworthy are the Climate Investment Funds programs in Tajikistan, which focus on adaptation in rural areas and the energy sector.

In *Kyrgyzstan*, the project portfolio is largely focused on climate change adaptation. Water resource management, agriculture, rural development and climate-resilient infrastructure are of high importance. Energy projects, including hydropower and energy efficiency, constitute a second major group of projects. It is noteworthy that climate finance in this context serves less as a tool for decarbonizing the large-scale industrial sector and is instead closely linked to the vulnerability of agriculture, water resources and rural livelihoods.

In *Kazakhstan*, the primary focus is made on mitigating the impacts of climate change and modernizing the energy and infrastructure sectors, encompassing energy efficiency, renewable energy sources and low-emission infrastructure. This aligns with Kazakhstan's economic structure: climate finance there covers not only traditional environmental adaptation projects, but also the transformation of capital-intensive infrastructure. Multilateral development banks (the EBRD, the World Bank Group, the Asian Development Bank, and the EIB) play a leading role in this effort.

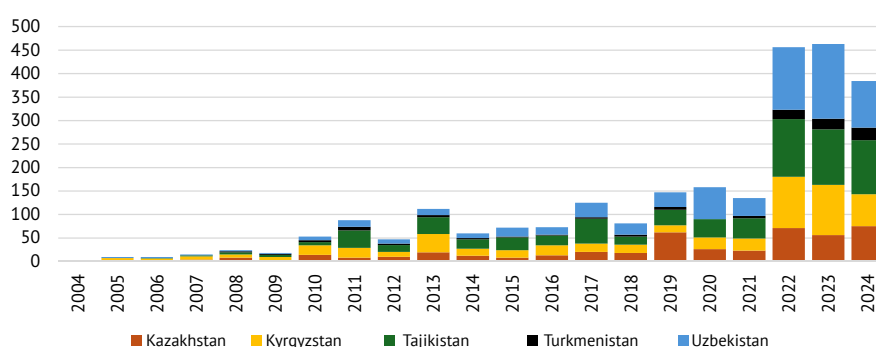


Fig. 2. The number of climate-related development financing projects in Central Asian countries funded by OECD countries, multilateral organizations and private donors in 2004–2024

Source: according to OECD DAC.

- 1 Project by the German Federal Ministry for Economic Cooperation and Development to mobilize Tajik youth in rural and urban areas to combat climate change.
- 2 Tajikistan UNDRR – Strengthening Resilience to Natural Disasters and Climate Change in Tajikistan, Swiss Agency for Development and Cooperation.

Rio Markers in Central Asian countries: monitoring financial flows

Turkmenistan represents a special case. Analysis reveals a relatively low volume of climate-related development finance. Funds were primarily channeled through the Global Environment Facility (GEF) and were linked to the energy and agriculture sectors. The low level of funding may also be explained by the generally much smaller extent of international development cooperation and the specific donor landscape.

Table 3

Conditions for determining climate finance parameters

Subject of analysis	Indicator / Variable	Question
Financial volume	Commitments and disbursements; per capita; share of ODA	How significant is climate-related financing in relative terms?
Climate goal	Mitigation / adaptation to changes	Which climate priorities dominate?
Sector	Energy, water supply, agriculture, infrastructure, public administration, etc.	Where are climate goals effectively enshrined?
Type of donor	Bilateral donors, multilateral development banks, private climate funds	To what extent does the country depend on specific sources of funding?
Instrument	Grants, concessional loans and other types of financing	What are the fiscal and debt implications?
Conditions for the recipient	Income level, vulnerabilities, and government effectiveness	Does the allocation of funds depend on needs, capabilities or both?

Source: own compilation according to OECD materials.

* * *

Rio markers constitute a particularly valuable dataset for Central Asian countries, as they facilitate project-level, comparative and sectoral analysis over extended periods. Their advantage lies in the precise determination of total climate finance volumes, as well as in the analysis of donor priorities and portfolio structures.

Several methodological issues must be considered when analyzing climate finance:

- Firstly, aid accounting methods differ across bilateral, private and multilateral reporting.
- Secondly, there can be significant discrepancies between commitments and actual expenditures.
- Thirdly, a high proportion of funding marked as “significant” can be interpreted positively as evidence of the broad integration of climate objectives.

At the same time, this may complicate the monetary interpretation, since the total volume of these projects cannot be equated to financing aimed directly at combating climate change.¹

For Central Asian states, the Rio Markers approach makes it possible to see how international donors integrate climate goals into development cooperation and where potential financing gaps exist. However, the marker system alone is insufficient to assess actual climate impacts, such as avoided emissions, enhanced resilience or social consequences. To achieve this, financial indicators

1 OECD (2026). DAC Statistical Reporting Directives, Annex on the Rio Markers. DCD/DAC(2026)14/ADD2/FINAL.

Monitoring of Russia's economic outlook

must be linked to project results in individual countries.^{1,2} This specific link represents the next important step in the study of climate finance in Central Asia. When planning climate-related financial flows, donors often take into account vulnerability, income, institutional capacity, policy frameworks, and the expected feasibility of projects.³ With regard to Central Asia, it is necessary to examine whether higher country vulnerability is indeed associated with higher funding volumes.

The analysis allows for several findings. For Kazakhstan, climate-related development finance is likely focused primarily on emission reductions, energy efficiency improvements and the transformation of carbon-intensive structures. For Kyrgyzstan and Tajikistan, the adaptation aspect – encompassing water resources, agriculture, resilience and climate-sensitive infrastructure – holds particular significance in the portfolio. For Uzbekistan, given the scale of economic and infrastructure transformations, a combination of climate change mitigation, adaptation and the broader integration of climate considerations into the national economic agenda is highly probable. For Turkmenistan, the scope of the data itself is a key analytical consideration: low or incomplete development finance figures should not be interpreted as a lack of relevance for climate policy. The aforementioned statements should be viewed as analytical hypotheses; their empirical validation requires further analysis. ▲

1 Arndt, C., Jones, S. & Tarp, F. (2015). Assessing Foreign Aid's Long-Run Contribution to Growth and Development. *World Development*, 69, 6–18.

2 Burnside, C. & Dollar, D. (2000). Aid, Policies, and Growth. *American Economic Review*, 90(4), 847–868.

3 Alesina, A. & Dollar, D. (2000). Who Gives Foreign Aid to Whom and Why? *Journal of Economic Growth*, 5(1), 33–63.