

# Country programme

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**Republic of Kazakhs**

*Draft for review*



GREEN  
CLIMATE  
FUND

2024 - 2027

# Country Programme of the Republic of Kazakhstan for the Green Climate Fund

for 2024–2027

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## 1 COUNTRY CONTEXT

### Climate and geophysical landscape

Kazakhstan, the world's largest landlocked country, features a diverse landscape encompassing vast plains, deserts, steppes, and mountains. This geographical diversity is accompanied by a sharply continental climate, with significant temperature variations between seasons and regions. Hot summers and cold winters, coupled with average annual precipitation of only 137 mm, contribute to arid and semi-arid conditions across much of the country. The average annual air temperature over the last decade (2012-2021) was +6.61°C, exceeding the climate norm by 1.19°C. The 8th National Communication (8NC) and the 5th Biennial Update Report (5BUR) of the Republic of Kazakhstan to the UN Framework Convention on Climate Change (UNFCCC) reported that further warming is projected, with the range of change between 2.3–2.6 °C under the SSP2-4.5 scenario and 3.0–3.5 °C under the SSP5-8.5 scenario by mid-century. By the end of the century, the scenarios indicate that expected warming will be between 3.3–3.9 °C and 6.2–7.3 °C.

### Emission profile

According to the Bureau of National Statistics of the Republic of Kazakhstan, cumulative greenhouse gas (GHG) emissions reached 340,838 million tCO<sub>2</sub>-eq., including land use, land use change and forestry, (LULUCF). Kazakhstan's economy is heavily reliant on fossil fuels, making the energy sector the dominant contributor to GHG emissions, accounting for 76.8%. The agricultural sector, industrial processes and product use, waste, and LULUCF contributed 12.6%, 7.9%, 1.84%, and 0.80%.

### Climate vulnerability areas

Kazakhstan faces significant climate vulnerabilities. The expected water deficit of approximately 20 billion m<sup>3</sup> by 2050 (70% of the demand for water) is a critical concern, with glacial melt, reduced river flows, and increased demand posing challenges for water management and allocation.<sup>i</sup> Rising temperatures have already led to a 16.8% decrease in the glaciation zone of the Western Tien Shan over 20 years, with projections indicating most Kazakh glaciers could disappear by 2100 if current melting rates continue.<sup>ii</sup> Forests in Kazakhstan were found to be vulnerable to wildfires and changes in moisture zones, impacting biodiversity and carbon sequestration potential.<sup>iii</sup> The risks of floods, droughts, mudflows and other extreme weather events are increasing, threatening infrastructure, livelihoods, and human health, especially in the large cities that are located on the banks of rivers.<sup>iv</sup> Kazakhstan's landscapes undergo changes due to new conditions and natural disasters. Melting glaciers and shifting temperature and humidity conditions are causing ecosystem shifts, including species migration and potential extinctions.

### Social, economic, and environmental impacts

The social, economic, and environmental impacts in Kazakhstan are intertwined. Rising temperatures are projected to exacerbate water scarcity, impacting agricultural yields and increasing the risk of desertification. These changes threaten food security, rural livelihoods, and social and economic stability, according to 8NC, 5BUR and other literature.<sup>v</sup>

The agricultural sector is susceptible to drought and land degradation with potential impacts on crop yields and livestock production. Maintaining current farming practices could slash spring wheat yields by 20-49% by 2050, resulting in annual economic losses up to 850 mUSD. The country is the 9<sup>th</sup> global largest wheat producer and the 7<sup>th</sup> global wheat exporter. Insufficient adaptation could pose a threat to national and regional food security. The industrial sector, being the 2<sup>nd</sup> largest water consumer after agriculture, faces decreased productivity due to water resources reduction, potentially slowing down economic and social development. The city water supply is the third top vulnerable sector, consuming 55% of domestic water needs and increasingly demanding wastewater disposal.

### Risks and opportunities for climate action

Kazakhstan has established a policy and regulatory framework aimed at addressing climate change. This includes the updated Nationally Determined Contribution (NDC) to the global response to climate change, the Long-Term Strategy (LTS, Strategy for Achieving Carbon Neutrality until 2060), and the Concept for the Transition to a Green Economy. These frameworks provide a foundation for climate action but face constraints in terms of implementation capacity, financial resources, and technology transfer. Policy incentives for climate-related investments include tax benefits, subsidies, and feed-in tariffs for renewable energy projects. However, constraints persist in the form of bureaucratic hurdles,

a lack of clear regulatory signals, and limited access to finance, particularly for small and medium-sized enterprises (SMEs) and adaptation projects.

The PESTEL (Political, Economic, Social, Technological, Environmental, and Legal) analysis of the private sector (111 Kazakh companies from different sectors) conducted during the preparation of this Country Programme revealed that many country's industries, including metallurgy, oil and gas, energy and construction, need to change their business model. They are especially vulnerable to shortage of water resources. Furthermore, Kazakh exporters to the EU countries must sharply reduce carbon intensity of products to remain competitive on the market after the adoption of the EU Cross-Border Adjustment Mechanism. The analysis hence attests the urgent need and therefore opportunities for design and implementation of water-related adaptation projects across various sectors and the acceleration of low-carbon technologies in the energy sector and the industry.

**Potential role of GCF financing in unlocking investments**

GCF financing can play a catalytic role in unlocking climate-related investments in Kazakhstan in the sectors, which are vulnerable to climate impacts, face not only physical, but also transition risks, and can develop climate-related opportunities. More specifically, GCF can incentivize the scaling up of renewable energy deployment, including large-scale solar and wind projects as well as distributed energy generation. GCF support can facilitate investments in energy efficiency measures in the industrial, building, and transport sectors. GCF funding can assist in implementing adaptation measures, such as water-saving technologies, drought-resistant agriculture, and early warning systems for natural disasters. Furthermore, the GCF can provide technical assistance and capacity building support to government agencies, financial institutions, and the project developers, enhancing their ability to effectively plan, implement, and monitor climate projects.

## 2 CLIMATE FINANCE STRATEGY AND PRIORITIES

**Climate finance policy landscape in Kazakhstan**

The updated NDC, submitted in 2023, sets ambitious targets for reducing GHG emissions by 15% unconditionally and 25% conditionally by 2030 compared to 1990 levels. The updated NDC also includes adaptation measures, such as diversification of crops, phasing out water-intensive crops, and sustainable water management.<sup>vi</sup>

The LTS adopted in 2024 outlines the strategic course for transforming the economy towards carbon neutrality by 2060.<sup>vii</sup> It involves decarbonizing fossil fuel industries, increasing natural sources of emission absorption, and implementing industrial solutions for carbon capture, utilization, and storage. It also emphasizes the development and implementation of sustainable practices and technologies for adaptation.

As of 20 January 2025, Kazakhstan has been working on the National Adaptation Plan (NAP). The process is guided by the Environmental Code adopted in 2021, prioritizing adaptation in sectors like agriculture, water resources, forestry, and disaster risk reduction. The plan aims to reduce climate risks, minimize adverse impacts, and strengthen the resilience of natural ecosystems, economic activities, and infrastructure.<sup>viii</sup>

The "Concept for the Transition of the Republic of Kazakhstan to a 'Green Economy' until 2050", approved in 2013, defines the country's commitment to transitioning from an energy- and carbon-intensive economy to a more environmentally friendly path. The Concept includes specific targets, particularly for renewable energy sources and energy efficiency.<sup>ix</sup>

The "Investment Policy Concept of the Republic of Kazakhstan until 2029", adopted in 2024, outlines the strategic directions for attracting domestic and foreign investment for sustainable development and provides for the improvement of mechanisms for state support of such activities.<sup>x</sup> It focuses on creating a favorable investment climate, diversifying the economy, developing priority sectors (such as manufacturing, the agro-industrial complex, transport and energy infrastructure), and stimulating innovation and digitalization.

**Climate finance needs**

According to the CPI modeling, the country requires annual investments of 1.1 bUSD or 10.85 bUSD over the period from 2021 to 2030 to meet its NDC targets (out of the total amount, 40% for unconditional targets and 60% for conditional targets).<sup>xi</sup> To achieve net-zero emissions, the LTS projects a total need for 610 bUSD by 2060. This represents 17.4

bUSD annually or 7.7% of Kazakhstan's 2022 GDP, posing a considerable financial burden and a challenge for resource mobilization. National public sources are expected to contribute 3.8% of the total; over half of the required amount (386 bUSD) is expected to come from shifting investments from commodity-based sectors towards greener industries; calling for new sources for the remaining 224 bUSD.<sup>xii</sup>

**Availability of climate finance**

Kazakhstan's government allocates funds for climate projects through various programs and initiatives, such as the Action Plan for the Implementation of the Electoral Program of the President of the Republic of Kazakhstan "Fair Kazakhstan - for one and all, now and forever"<sup>xiii</sup> and the Action Plan for the Implementation of the Concept for the Transition to a Green Economy.<sup>xiv</sup> Yet, the survey conducted as part of the GCF Country Programme preparation revealed that businesses face regulatory hurdles, suggesting they may not be sufficient or they are difficult to access.

Kazakhstan relies on external aid to finance climate-related projects, mainly technical assistance and increasingly, as an upper middle-income country, commercial loans. It is also eligible for grants and subsidized loans from donors, such as the countries-members of the OECD Development Assistance Committee (DAC), but with reduced concessionality, as compared to the past.<sup>xv</sup> Climate finance comes from several development banks such as the European Bank for Reconstruction and Development (EBRD) and the Asian Development Bank (ADB). For instance, the EBRD's Green Economy Financing Facility pilot programme, launched in 2019 and totaling to USD 30 mUSD, has successfully financed green projects for SMEs and individuals in areas such as renewable energy, energy efficiency, and resource conservation. Yet, the survey conducted as part of the GCF Country Programme preparation revealed that companies perceive credit risks related to the availability and cost of capital as highly influential. Besides the GCF, the country can access resources from other environmental funds, such as the Adaptation Fund and the Global Environment Facility (GEF). Coordination with the GCF environmental and social safeguards helps avoid duplication of efforts and ensure effective utilization of resources.

The private sector is playing an increasingly large role in climate finance, particularly in renewable energy projects, evidenced by green bond issuances from KEGOC JSC and the Development Bank of Kazakhstan JSC (DBK). The survey conducted as part of the GCF Country Programme preparation revealed however that companies worry about carbon taxes in export markets, demonstrating the need for projects that reduce carbon intensity of their products to maintain competitiveness in international markets. The government uses a range of fiscal incentives, such as tax breaks and subsidies, to encourage private sector investment in renewable energy and other green projects. However, the 2022 Energy Sector Review published the International Energy Agency suggests that Kazakhstan's fiscal incentives for renewable energy are not as attractive as those offered by other countries in the region.

**Role of the financial system**

The development of green bonds, green loans, and other sustainable finance instruments is mobilizing additional resources for climate action. The Roadmap for the Implementation of ESG Principles in the Regulation of the Financial Market of Kazakhstan, approved in 2023, aims to stimulate the transition of the financial sector to ESG standards and create an enabling environment for green finance.<sup>xvi</sup> However, the current cost per unit of carbon quota in Kazakhstan is less than USD 1, which may not provide a strong enough price signal to incentivize long-term investments in emission reduction.<sup>xvii</sup> Capacity building for financial institutions is essential to assess climate risks and develop green finance products, such as green bonds and sustainable linked loans, which can further catalyze private sector investment in climate projects.

**Fiscal space for climate finance**

Kazakhstan's fiscal space for climate finance is influenced by various factors, including government revenue, expenditure, and debt levels. The World Bank notes that Kazakhstan's fiscal space is constrained by its dependence on oil revenues and the need to address social and economic challenges. This suggests that while the government is committed to climate action, it may face challenges in allocating significant public funds for climate finance.<sup>xviii</sup> The government has started implementing a pilot project on budget tagging, with the support of UNDP, to obtain an accurate picture of climate-related expenditures and facilitate better planning and coordination of climate action.<sup>xix</sup>

**Gaps and opportunities**

Despite government efforts, domestic public funding for climate action remains limited, suggesting a funding gap to support businesses adopting to climate change and meeting the challenges posed by tightening climate regulations. The provision of domestic public funding for renewable energy project was found to be insufficiently effective opening the opportunity for its redesigning. Critically insufficient funding for adaptation calls for an urgent need to address this niche and more capacity building required in this area. Further developing the green finance market can attract additional private sector investment in climate projects and promote sustainable economic growth. This opportunity involves strengthening the regulatory framework, building capacity in financial institutions, and developing innovative green finance instruments.

**Paradigm shift and transformational impact of GCF investments**

The Country Programme identified areas where GCF financing is critical for catalyzing climate project investments. This involved analyzing gaps and opportunities and developing a portfolio of projects for which GCF financing provides additionality—acting as a catalyst to mobilize and multiply investments and create a paradigm shift, where funding from other sources is not feasible. Estimates suggest a total potential for GCF financing of 1.5 billion USD for mitigation projects and 750 million USD for adaptation projects between 2024 and 2027. This financing will be targeted towards specific areas described further.

GCF investments in renewable energy and energy efficiency could accelerate the transition from fossil fuels to clean energy sources. This will reduce GHG emissions, improve air quality, and enhance energy security. The integration of renewable energy into the grid will also require investments in smart grid technologies and energy storage systems, promoting innovation and modernization in the energy sector. The International Energy Agency estimates that achieving Kazakhstan's renewable energy targets could create thousands of jobs and significantly reduce the country's reliance on coal.<sup>xx</sup>

GCF investments in energy efficiency and cleaner production processes could promote industrial decarbonization. This will reduce GHG emissions, improve resource efficiency, and enhance the competitiveness of Kazakh industries in the global market. The adoption of best available techniques and the development of green industrial policies will further support this transformation. The UNIDO suggests that industrial decarbonization in Kazakhstan could lead to significant cost savings and improve the environmental performance of industries.<sup>xxi</sup>

GCF investments in sustainable agriculture and water management would enhance climate resilience and food security. This will involve promoting climate-smart agricultural practices, improving irrigation efficiency, and strengthening drought preparedness. The integration of climate considerations into agricultural policies and the development of innovative water management technologies will be crucial for this transformation. The UN FAO emphasizes that climate-smart agriculture can increase agricultural productivity, improve livelihoods, and enhance the resilience of farming communities to climate change.<sup>xxii</sup>

GCF investments in sustainable urban development will promote the development of climate-resilient cities. This will involve investments in green infrastructure, energy-efficient buildings, and sustainable transport systems. The integration of climate considerations into urban planning and the promotion of green building codes will further support this transformation. The World Bank estimates that investing in green infrastructure in Kazakh cities could generate economic benefits and improve the quality of life for urban residents.<sup>xxiii</sup>

GCF investments in disaster risk reduction will strengthen early warning systems and enhance the capacity to respond to climate-related disasters. This will involve investments in climate monitoring, risk assessment, and community-based adaptation measures. The integration of climate risk information into national and local development plans will be crucial for building resilience to climate change impacts. The United Nations Office for Disaster Risk Reduction highlights that investing in disaster risk reduction can significantly reduce the economic and social costs of disasters.

### 3 IMPLEMENTATION OF GCF PORTFOLIO AND LESSONS

#### Previous and current GCF support

Overall, Kazakhstan's engagement with the GCF is still evolving. The GCF's contribution to achieving NDC, LTS, and forthcoming NAP objectives is still nascent but promising.

Kazakhstan already has four approved GCF investment projects. Initially, GCF projects in Kazakhstan focused heavily on mitigation, particularly in the renewable energy sector (FP047, FP140). Recently, there's a shift towards a more balanced portfolio, with projects addressing both mitigation and adaptation (FP225, FP253). All approved projects are implemented through international entities, primarily the European Bank for Reconstruction and Development (EBRD) followed by the Asian Development Bank (ADB).

Overall, the GCF portfolio in Kazakhstan demonstrates a positive trend towards a more balanced approach, covering a wider range of sectors and increasingly integrating adaptation considerations. Future programming should build on these achievements, prioritize direct access accreditation, and further enhance private sector engagement and capacity building efforts.

#### Reflection on effectiveness of delivery

Kazakhstan's experience with GCF project implementation highlights the importance of strong national ownership, effective stakeholder engagement, and adaptive management strategies. The absence of national accredited entities has posed challenges in aligning GCF projects with national priorities and ensuring effective implementation. Insufficient involvement of national stakeholders calls for more effective stakeholder engagement, including local communities, government agencies, and the private sector in project design and implementation. Adaptive management strategies backed up by accountability mechanisms are crucial for ensuring project effectiveness.

#### Lessons learned

The lessons learned from the previous and current GCF support suggest that Kazakhstan can enhance the effectiveness of GCF project implementation. This Country Programme therefore aims to support the following developments:

- Direct access accreditation to empower local institutions to lead climate action;
- Increased involvement of the private sector for scaling up climate finance and achieving ambitious climate goals;
- Continuous capacity building for local stakeholders for effective project implementation and long-term sustainability;
- Prioritization of adaptation projects, particularly in water resource management, agriculture, and disaster risk reduction;
- Mainstreaming gender and social inclusion considerations in all projects to ensure equitable benefits and maximize impact.

#### Accreditation of national entities

Four GCF projects, which have been approved and/or are being under implementation in Kazakhstan are delivered by international accredited entities (IAEs). This reliance on international entities has influenced the GCF project portfolio, with a focus on renewable energy projects. There were no national Accredited Entities in the Republic of Kazakhstan. Recognizing the need to diversify the GCF portfolio and enhance national ownership, the government has been actively promoting the accreditation of national entities.

#### Accreditation pipeline

Four national organisations have been in the process of accreditation:

**Table 1. Accreditation pipeline of Kazakhstan**

Entity name	Type	Size (project cost)	ESS Category	Fiduciary standards	Accreditation status
Development Bank of Kazakhstan JSC (DBK)	Direct national	Medium (up to 250 mUSD)	B	On-lending/blending: equity, guarantee, loan	Application submitted.
Entrepreneurship Development Fund JSC (DAMU)	Direct national	Small (up to 50 mUSD)	C	On-lending/blending: equity, guarantee, loan	Application submitted.

International Center for Green Technologies and Investment Projects NJSC (IGTIC)	Direct national	Micro (up to 10 mUSD)	D	Project management	Application submitted.
Bank Freedom Finance Kazakhstan JSC	Direct national	Medium (up to 250 mUSD)	B	On-lending/blending	Application submitted.

## 4 EVIDENCE FROM ANALYTICAL WORK: PRIORITIZATION OF PROJECTS FOR CLIMATE IMPACT

**Methodology** The proposed National Result Areas (NRAs) in this Country Programme offer prime investment opportunities for transformational change in Kazakhstan. They are grounded in a robust analytical framework considering observed and projected climate impacts, mitigation and adaptation potential, associated risks, and expected climate benefits. While risks exist, such as economic transition costs and potential job losses in fossil fuel sectors, climate action also presents opportunities for economic diversification, renewable energy development, and green job creation. The NRAs were identified through analysis of national strategies and GCF guidelines (*Annex 1 and Annex 2*) and refined through three rounds of stakeholder consultations with over 200 organizations, including government bodies, international organizations, and representatives from various sectors like finance, industry, transport, agriculture, and construction (*Annex 4*).

### Climate story **NRA 1: Decarbonizing the Electricity Sector**

This NRA aligns with Kazakhstan's national goal of carbon neutrality by 2060 and its NDC targets. It seeks to catalyze a paradigm shift from fossil fuel dependency to a sustainable, low-carbon electricity system. The NRA aligns with the GCF sectoral guide on energy access and power generation.

- Sub-area 1.1: Deploy large-scale renewable energy projects utilizing advanced energy storage systems, with a focus on high-quality integration through flexible generation capacity and other measures to ensure grid stability. The sub-area supports a paradigm shift pathway towards low emission power generation.
- Sub-area 1.2: Promote distributed renewable energy solutions (small-scale off-grid generation and mini-grids) to enhance energy access and resilience, particularly in remote communities. The sub-area supports a paradigm shift pathway towards access to modern renewable energy.
- Sub-area 1.3: Modernize electricity grids through digitalization and smart grid technologies to optimize energy distribution and integrate renewable energy sources. The sub-area supports a paradigm shift pathway towards efficient and reliable energy transmission, distribution, and storage.

### **NRA 2: Enhancing Energy Efficiency**

This NRA aligns with Kazakhstan's Carbon Neutrality Strategy, Energy Efficiency Concept, and NDC, aiming to improve energy efficiency in industry, buildings, and heat supply. The NRA will catalyze a paradigm shift towards a more energy-efficient economy, reducing energy consumption and GHG emissions.

- Sub-area 2.1: Promote energy efficiency, renewable energy, and decarbonization of industrial processes, particularly of energy-intensive industries. The sub-area aligns with the GCF sectoral guide on energy efficiency and supports a paradigm shift pathway towards scaling up efficiency in energy-intensive industries.
- Sub-area 2.2: Improve energy efficiency and integrate renewable energy in the communal and housing services and the heat supply sector. The sub-area aligns with the GCF sectoral guide on energy efficiency and the GCF sectoral guide on cities, buildings, and urban systems. It supports paradigm shift pathways towards energy efficient building design, "space" energy efficiency, and the most efficient appliance and equipment.

### **NRA 3: Transitioning to Low-Carbon Transport**

This NRA aligns with Kazakhstan's decarbonization goals, aiming to reduce the transport sector's reliance on fossil fuels. The NRA will catalyze a paradigm shift towards sustainable mobility, reducing emissions and improving air quality. It aligns with the GCF sectoral guide on low emission transport.

- Sub-area 3.1: Accelerate the electrification of transport systems. The sub-area supports a paradigm shift pathway towards rapidly electrifying transport systems.
- Sub-area 3.2: Develop alternative fuels to decarbonize the transport sector and/or alternative modes of transport communication. The sub-area supports a paradigm shift pathway towards scaling up a new generation zero emission fuels and a paradigm shift towards low emission public transport, including the integration of non-motorised transport and micro-mobility solutions.

#### **NRA 4: Climate-Smart Agriculture**

This NRA aligns with Kazakhstan's strategies for carbon neutrality and combating desertification, aiming to enhance the resilience and sustainability of the agricultural sector. The NRA will catalyze a paradigm shift towards climate-resilient and low-emission agriculture, focusing on a paradigm shift pathway towards promoting resilient agroecology. It aligns with the GCF sectoral guide on agriculture and food security.

- Sub-area 4.1: Address land degradation and promote sustainable land management practices to enhance soil health, productivity, and carbon sequestration.
- Sub-area 4.2: Promote climate-resilient practices in crop production, livestock farming, fisheries, and aquaculture, ensuring diversification of crops and varieties, increased soil carbon, expansion of organic and resource-conservation agriculture, and reduction of methane emissions.
- Sub-area 4.3: Improve water use efficiency in agriculture and ensure sustainable water resource management to address water scarcity.
- Sub-area 4.4: Promote innovative farming methods and technologies to enhance productivity, resource efficiency, food security, and climate resilience.

#### **NRA 5: Sustainable Forest Management**

This NRA aligns with Kazakhstan's goal of making the forestry sector a net carbon sink by 2060. The NRA will catalyze a paradigm shift towards reducing emissions from forest loss and degradation and it aligns with the GCF sectoral guide on forests and land use.

- Sub-area 5.1: Restore degraded forest landscapes and enhance forest cover to increase carbon sequestration and improve ecosystem services. The sub-area supports a paradigm shift pathway towards restoring degraded forests.
- Sub-area 5.2: Promote sustainable forestry practices to ensure the long-term health and productivity of forest ecosystems. The sub-area supports a paradigm shift pathway towards sustainable management of productive forest landscapes.

#### **NRA 6: Integrated Waste Management**

This NRA aligns with Kazakhstan's goal of transitioning to a circular economy. The NRA will catalyze a paradigm shift towards a circular economy approach in waste management, minimizing waste and maximizing resource recovery. The NRA aligns with the GCF sectoral guide on cities, buildings, and urban systems.

- Sub-area 6.1: Promote a circular economy approach to urban waste management, including waste reduction, recycling, and composting.
- Sub-area 6.2: Address the environmental and economic impacts of food loss and waste by promoting reduction initiatives throughout the supply chain.
- Sub-area 6.3: Improve wastewater treatment and management to protect water resources and reduce pollution.
- Sub-area 6.4: Promote the capture and utilization of landfill gas to reduce emissions and generate renewable energy.

#### **NRA 7: Climate Change Adaptation and Resilience**

This NRA focuses on building resilience and adapting to the impacts of climate change in Kazakhstan. The NRA will catalyze a paradigm shift towards securing water resilience and water services under conditions of increased climate change impacts, strengthening early warning systems, and conserving ecosystems.

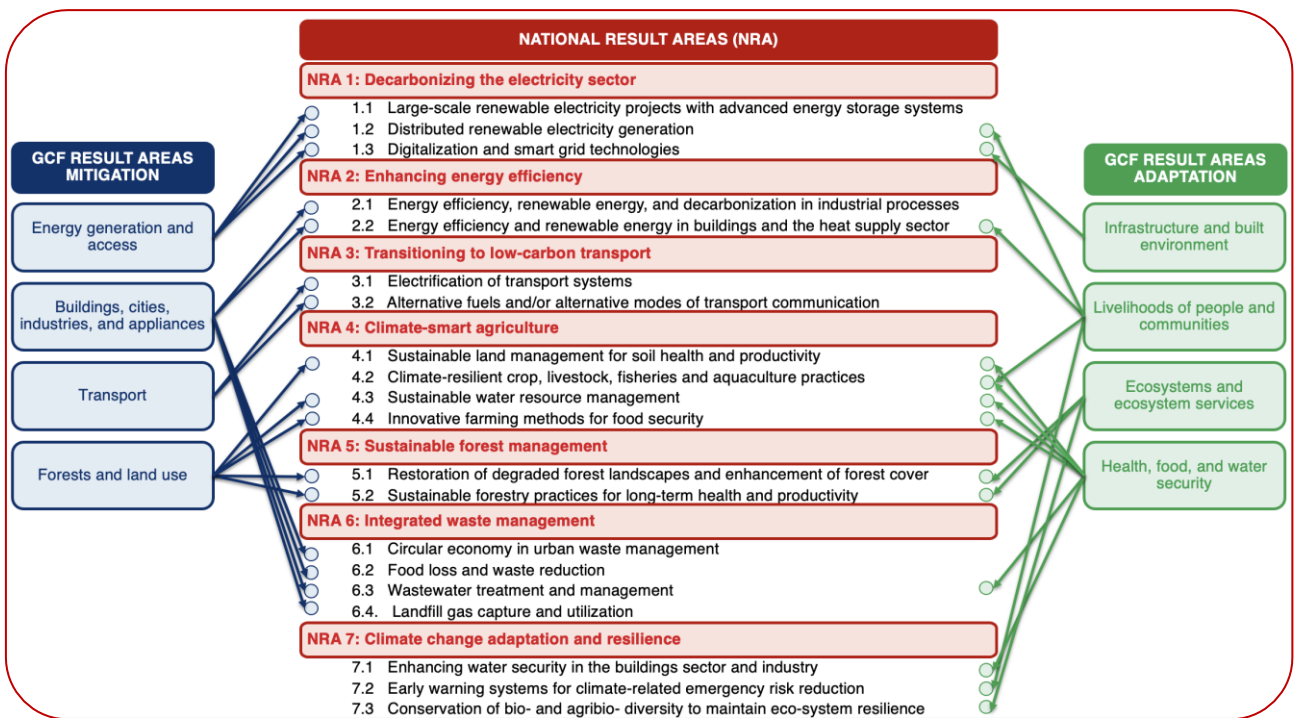
- Sub-area 7.1: Enhance water security in buildings and industry by promoting water-saving technologies, water recycling, and rainwater harvesting. This sub-area aligns with the GCF sectoral guide on water security and supports a paradigm shift pathway towards water conservation, water efficiency and water re-use.
- Sub-area 7.2: Strengthen early warning systems to prevent climate-related disasters and mitigate the impacts of climate-related hazards. This sub-area aligns with the GCF sectoral guide on climate information and early warning systems.
- Sub-area 7.3: Conserve bio- and agrobiodiversity to maintain ecosystem resilience that aligns with the GCF sectoral guide on ecosystems and ecosystem services.

## 5 CLIMATE RESULT AREAS AND FINANCIAL INSTRUMENTS

### 5.1 CLIMATE INVESTMENT PROJECTS

**GCF result area alignment** The Country Programme aligns the NRAs to the GCF’s result areas as follows:

**Figure 1. Alignment of national result areas (NRAs) and GCF result areas**



**Investment project pipeline**

The following project and programme portfolio describes submitted, approved and potential investment projects to be funded and co-financed by the GCF. It is expected that international accredited entities as well as national entities undergoing accreditation will further develop Concept Notes and eventually, the corresponding Funding Proposals.

**Table 2. Investment project pipeline of Kazakhstan (as of 20 January 2025)**

Name / status	Accredited Entity	Region/ country	NRAs	Theme
<i>International Accredited Entities</i>				
GCF-EBRD Kazakhstan Renewables Framework (FP047)	EBRD	Kazakhstan	1	Mitigation
	Total project budget: 557 mUSD	GCF funding: USD 110 mUSD	GCF instruments: Equity, grants, senior loans.	
	The project aims to scale-up investment in renewables, crowding-in low-carbon investors through a programme of investment and creating a viable alternative to cheap coal-based power. More specifically, it supports the construction of 8-11 renewable energy			

Name / status	Accredited Entity	Region/ country	NRAs	Theme
Status: approved in 2017; under implementation from 2018 until 2025.	projects, with a total capacity of 330 MW. The programme also provides technical assistance, building institutional capacity for energy integration, policies and planning.			
High Impact Programme for the Corporate Sector (FP140)  Status: approved in 2020; under implementation from 2021 until 2029.	EBRD	7 countries, including Kazakhstan	2	Mitigation
	Total project budget: 1.0 bUSD	GCF funding (for 7 countries): USD 258 mUSD	GCF instruments: Grants, senior loans, subordinated loans	
	This programme is GCF's first at-scale investment to promote the uptake of low-carbon technologies in the industrial sector. It facilitates a transformational shift within energy-intensive industries, agribusinesses, and the mining sector in Armenia, Jordan, Kazakhstan, Morocco, Serbia, Tunisia, and Uzbekistan. It seeks to forge a low-carbon pathway by promoting the uptake of high climate impact technologies and stimulating behavioural change at the corporate governance and management level. This includes integrating climate considerations into strategic, financial, and technological decision making.			
Electro-mobility development program (FP225)  Status: approved in 2024; under implementation from 2024 until 2029.	ADB	7 countries, including Kazakhstan	3, 7	Mitigation/ Adaptation
	Total project budget: 454 mUSD	GCF funding (for 7 countries): USD 170 mUSD	GCF instruments: Grants, senior loans.	
	The project aims to increase the resilience of urban transport infrastructure by improving public and non-motorized transport systems, creating e-bus fleets and charging infrastructure, and providing technical assistance for electro-mobility implementation, including roadmaps, business models, project structuring, and feasibility studies.			
Greening the financial system: Delivering climate finance for all (FP253)  Status: approved in 2024.	EBRD	13 countries, including Kazakhstan	2, 3, 4	Mitigation/ Adaptation
	Total project budget: 669 mUSD	GCF funding (for 13 countries): 200 mUSD	GCF instruments: Grants, senior loans.	
	The project aims to promote mitigation and adaptation by greening Kazakhstan's financial system and increasing access to climate finance for vulnerable groups, including households and micro, small, and medium enterprises. This is expected to reduce emissions by 12 million tCO <sub>2</sub> e and directly benefit over 247,000 people.			
Sustainable water systems  Status: project design.	EBRD	Multi-country programme, focus on Central Asia	4, 7	Adaptation
	Total project budget: under discussion.	GCF funding: Under discussion	GCF instruments: Loan, grant.	
	The project aims to promote adaptation to climate change of water systems and inter-connected infrastructures and systems.			
Increasing the climate resilience of agriculture in vulnerable populations of the Aral region  Status: project design.	UNDP	Kazakhstan, Uzbekistan	4, 5	Adaptation
	Total project budget: under discussion.	GCF funding: Under discussion	GCF instruments: Loan, grant.	
	The project strengthens livelihoods in the Aral Sea region by promoting sustainable agriculture and forestry, financed through innovative schemes. This will reduce pressure on ecosystems and boost climate resilience. Outcomes include a regional monitoring system, integration of farmers into sustainable value chains, ecosystem restoration, and attracting private investment. The project is planned for 2025-2029.			
<b>Direct access (All national entities are undergoing accreditation)</b>				
	DBK	Kazakhstan	1, 2	Mitigation

Name / status	Accredited Entity	Region/ country	NRAs	Theme
Financing large infrastructure projects for the modernization of renewable energy Status: design, planned submission in 2025.	Total project budget: Ca 355.5 mUSD	GCF funding: Up to 250 mUSD	Instruments: Loan, guarantees	
	The programme aims to reduce GHG emissions from the energy sector by implementing sustainable practices, enhancing energy efficiency, and promoting the use of low-carbon and renewable energy.			
Construction of a group water pipeline to provide drinking water to populated areas with a cascade of hydroelectric power stations Status: design, planned submission in 2025.	DBK	Kazakhstan	4, 7	Adaptation
	Total project budget: Ca 384 mUSD	GCF funding: Up to 250 mUSD	Instruments: Loan	
	The project aims to enhance the resilience of centralized water supply systems for rural settlements, livestock farms, and production facilities in the face of increasing climate risks, while also increasing the availability and quality of drinking and household water. The partners are the country's second-tier banks and international financial intermediaries.			
The programme of conditional placement of funds aimed at supporting private sector projects in the green financing  Status: design, planned submission in 2026-2027	DBK (implemented by DAMU)	Kazakhstan	1, 2	Mitigation/ Adaptation
	Total project budget: Ca 100 mUSD	GCF funding: Up to 50 mUSD	Instruments: Loan	
	The Programme targets high climate impacts sectors which are aligned to Kazakhstan's mitigation and adaptations needs as identified in Kazakhstan NDC and Country's climate strategies for GCF. Addressing market failures in the financial sector by offering long-term and concessional financing to local financial institutions and project developers to de-risk high climate impact potential projects. The Programme will be designed with a specific mandate to enable and crowd in the local financial sector by incentivizing local banks to change their credit risk appetite and grow their lending to green projects in Kazakhstan, thereby creating a systemic shift towards climate financing.			
Central Asia Global Clean-tech Innovation Programme  Status: project design, planned submission in 2026-2027	IGTIC	Kazakhstan	1, 2, 6	Mitigation
	Total project budget: Ca 29.9 mUSD	GCF funding: Up to 10 mUSD	Instruments: Grant.	
	The GCIP Central Asia programme, a logical continuation of the currently implemented Global Cleantech Innovation Programme (GCIP), will provide free acceleration support to cleantech startups and further integrate the cleantech ecosystem across Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan. The programme focuses on launching green projects, strengthening the cleantech ecosystem, and monitoring program implementation. The key partners are UNIDO and the Ministry of ecology and natural resources of the Republic of Kazakhstan.			
Kazakhstan's Green Project Financing Program for Regions, Cities, Rural, and Remote Areas	Bank Freedom Finance Kazakhstan	Kazakhstan	1, 3, 5, 6, 7	Mitigation/ Adaptation
	Total project budget: Ca 50 mUSD	GCF funding: Under discussion	Instruments: Loan	
	The bank's Green Financing Program aims to catalyze a transition towards a sustainable economy and reduce negative environmental impacts by financing projects that contribute to GHG emission reductions, climate change adaptation, natural resource conservation, and environmental improvement. The program encompasses projects not only at the national and regional levels, but also for cities, rural, and remote areas, such as: 1) Financing e-vehicles through concessional loans and partnerships with global brands; 2) Rehabilitation of degraded lands, reforestation, and water-saving technology.			

Name / status	Accredited Entity	Region/ country	NRAs	Theme
Status: design, planned submission in 2027	gies; 3) Implementation of waste recycling and provision of sustainable water and energy supply to rural areas using renewable energy sources; 4) Creation of sustainable energy infrastructure in remote areas, including providing educational institutions with electricity from renewable sources.			

## 5.2 READINESS FOR CLIMATE INVESTMENT PROJECTS

### Priorities of the readiness programme

The Country Programme of Kazakhstan recognizes the importance of addressing cross-cutting issues and building institutional capacity to effectively implement climate action. Therefore, the following key horizontal and cross-sectoral approaches have been identified as foundational elements for the Country Programme and require dedicated funding to enhance Kazakhstan's readiness for climate finance:

Intersectoral and interdepartmental coordination	Strengthening coordination mechanisms among government agencies includes establishing clear mandates, communication channels, and collaborative frameworks to streamline climate action across sectors and ensure the coherent implementation of these measures.
Stakeholder engagement	Promoting inclusive and participatory processes that actively engage stakeholders in the design, implementation, and monitoring of climate projects implies meaningful engagement with civil society organizations, indigenous peoples, local communities, and the private sector to ensure that they is responsive to diverse needs and perspectives.
Just transition and gender equality	Ensuring a just transition that leaves no one behind and promotes gender equality in climate action includes integrating gender considerations into all aspects of climate change planning and implementation, promoting equal opportunities for women and vulnerable groups, and ensuring that the benefits of climate action are equitably distributed.
Private sector engagement	Mobilizing private sector investment includes creating enabling environments for private sector participation, promoting the development of corporate carbon neutrality strategies, and supporting the assessment and management of climate risks by businesses.
Financial system transformation	Supporting the transformation of the financial system to align with climate objectives includes developing markets for green financial instruments, promoting sustainable investment, and strengthening the capacity of financial institutions to manage climate-related risks and opportunities.
Project support mechanisms	Establishing mechanisms to support the development of high-quality project proposals, including pre-feasibility and feasibility studies, particularly for adaptation projects, will enhance the capacity of entities to access climate finance from the GCF and other sources.
Education and awareness	Developing and implementing educational programs and awareness-raising campaigns aims to enhance understanding of climate change, promote climate-smart practices, and build capacity for climate risk management among the general public and businesses.
Increasing the country's readiness for adaptation planning	The new Environmental Code of the Republic of Kazakhstan, adopted in January 2021, provides a legal framework for the country's adaptation planning process. However, implementation of the code remains limited due to critical gaps in institutional arrangements, insufficient support for climate science and data, and low levels of awareness among government officials. Targeted readiness support is needed to strengthen institutional capacity for adaptation planning, enhance access to climate information and data, and build awareness among decision-makers on the importance of climate change adaptation.

**Readiness support pipeline** Kazakhstan already has had three approved readiness support projects. The following project and programme portfolio describes submitted, approved and potential new readiness support projects to be funded by the GCF.

**Table 3. Readiness support pipeline of Kazakhstan (as of 20 January 2025)**

Delivery partner	Country	Objectives supported	Status
United Nations Development Programme (UNDP)	48 countries, including Kazakhstan	Capacity building Strategic frameworks National adaptation planning Pipeline development	Completed by the end of 2019.
International Center for Green Technologies and Investment Projects NJSC (IGTIC)	Kazakhstan	Capacity building Strategic frameworks	2022-2025
International Center for Green Technologies and Investment Projects NJSC (IGTIC) Global Green Growth Institute (GGGI)	Kazakhstan	Capacity building Strategic frameworks	Under development

## 6 PROJECT IMPLEMENTATION, QUALITY, ASSURANCE, MONITORING AND REPORTING

**Implementation arrangements** The Republic of Kazakhstan has established structures and processes for effective engagement with the GCF and implementation of this Country Programme led by the National Designated Authority (NDA) of the Republic of Kazakhstan to the GCF. The NDA oversees the Country Programme, with Annex 3 detailing the no-objection procedure for selecting project proposals aligned with national priorities. The NDA established a multi-stakeholder consultation platform that facilitates implementation.

**Quality assurance** The Quality Assurance Mechanism is one of NDA's core functions, ensuring the effectiveness and efficiency of the GCF Country Programme. It continuously monitors and evaluates ongoing and potential GCF projects and programmes, assessing progress against the project pipeline. This allows the NDA to identify and address potential problems.

To meet new GCF requirements for quality assurance and performance reviews, the NDA would like to request support from in-country GCF experts (an "in-country network" model). These experts, based within the NDA, will assist with implementing the quality assurance mechanism.

**Multi-stakeholder platform** Kazakhstan has a comprehensive multi-stakeholder consultation platform, ensuring active stakeholder engagement at the NDA's request. When project proposals are submitted, the NDA systematically distributes them to relevant national bodies (e.g. those responsible for areas, such as energy efficiency, water resources, and others) for review and feedback. Focused working meetings facilitate discussion and refinement, ensuring alignment with national priorities. Further, proposals are forwarded to the Association of Ecological Organizations and the NGO "Civil Society" for review. These two-stage approach ensures technical soundness, feasibility, and social and gender inclusivity.

**Performance reviews and reporting to GCF** The Country Programme will undergo annual portfolio performance reviews and a mid-term review in 2026. These reviews will assess overall performance of the country programme, including the achievement of objectives, outcomes, and impacts of the project pipeline, and identify the associated challenges and risks. Recommendations for adjustments or improvements to the Country Programme will be provided. The NDA requests support from the aforementioned in-country GCF experts for performance reviews and reporting to the GCF.

## 7 RISKS TO COUNTRY PROGRAMME IMPLEMENTATION AND MITIGATION MEASURES

**Overview** While Kazakhstan has demonstrated strong commitment and has a solid foundation for achieving its climate goals, the implementation of the Country Programme faces potential risks, which will be mitigated as follows:

	<i>Risks</i>	<i>Mitigation measures</i>
<b>Financial and economic risks</b>	Challenges in securing co-financing from public or private sources could hinder the implementation of larger-scale projects.	Explore a range of funding options, including blended finance models and partnerships with international financial institutions.
	Macroeconomic conditions or volatility in currency exchange rates could impact the availability and value of funds.	Implement strong financial planning and risk management strategies to mitigate the impact of economic fluctuations.
<b>Policy risks</b>	Amendments to environmental regulations or bureaucratic delays in project approvals could impact project implementation.	Incorporate adaptive management that allow for adjustments based on potential policy or regulatory changes.
<b>Capacity risks</b>	Shifts in the political agenda or changes in the government could lead to new priorities that those of the Country Programme.	Consult regularly with the government officials to align with national priorities and update of the Country Programme, if needed.
	Insufficient capacity within government agencies or implementing partners could challenge project implementation.	Prioritize training and skills development for key personnel involved in project planning, implementation, and monitoring.
	A shortage of skilled personnel or technical expertise could hinder the implementation of projects involving complex technologies.	Collaborate with international partners and experts to provide technical support and guidance.
<b>Environmental risks</b>	Climate change impacts could disrupt project implementation or affect the long-term sustainability of project outcomes.	Integrate climate risk considerations and social safeguards into project design and implementation.
<b>Social risks</b>	Potential negative impacts on local communities or vulnerable groups could create social risks and hinder project success.	Establish clear procedures for addressing community concerns and ensuring that potential negative impacts are mitigated.
<b>Communication risks</b>	Ineffective communication or coordination among government agencies, implementing partners, and local communities could lead to delays or conflicts.	Create a formal coordination mechanism for ongoing dialogue and collaboration among all stakeholders throughout the Country Programme cycle.
	Insufficient involvement of local communities or other stakeholders in project design and implementation could result in projects that do not sufficiently address local needs.	Involve local communities and other stakeholders in project design, implementation, and monitoring to ensure that their perspectives are considered.

## ANNEXES

### ANNEX 1. STRATEGIC AND REGULATORY DOCUMENTS

The table identifies strategic and regulatory documents of the Republic of Kazakhstan and the GCF that define priority areas of action in the field of climate change

Documents of the Republic of Kazakhstan	GCF's documents
<ul style="list-style-type: none"> <li>▪ Strategy for Achieving Carbon Neutrality of the Republic of Kazakhstan by 2060, Resolution of the Government of the Republic of Kazakhstan No. 121 dated February 2, 2023</li> <li>▪ Concept for the Development of the Fuel and Energy Complex of the Republic of Kazakhstan for 2023-2029, as amended by Resolution of the Government of the Republic of Kazakhstan No. 260 dated March 28, 2023 (Fuel and Energy Complex Concept)</li> <li>▪ Updated Nationally Determined Contribution of the Republic of Kazakhstan to the Global Response to Climate Change, Resolution of the Government of the Republic of Kazakhstan No. 313 dated April 19, 2023 (Nationally Determined Contribution - NDC)</li> <li>▪ Eighth National Communication and Fifth Biennial Report of the Republic of Kazakhstan to the United Nations Framework Convention on Climate Change (8NC), 2022</li> <li>▪ State Program for the Development of the Manufacturing Industry of the Republic of Kazakhstan for 2023-2029, Resolution of the Government of the Republic of Kazakhstan No. 259 dated March 28, 2023</li> <li>▪ Action Plan for the Implementation of the Concept for the Transition of the Republic of Kazakhstan to a "Green Economy" for 2021-2030, Resolution of the Government of the Republic of Kazakhstan No. 479 dated July 29, 2020</li> <li>▪ Concept for the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021-2030, Resolution of the Government of the Republic of Kazakhstan No. 960 dated December 30, 2021</li> <li>▪ Concept for the Development of the Energy Saving and Energy Efficiency Sector of the Republic of Kazakhstan for 2023-2029, Resolution of the Government of the Republic of Kazakhstan No. 264 dated March 28, 2023</li> <li>▪ Environmental Code of the Republic of Kazakhstan No. 400-VI ZRK dated January 2, 2021.</li> <li>▪ Water Code of the Republic of Kazakhstan No. 481 dated July 9, 2003.</li> <li>▪ Concept for the Development of the Water Resources Management System of the Republic of Kazakhstan for 2024-2030, as amended by Government Resolution No. 695 dated August 28, 2024</li> <li>▪ Program for the Development of the Fisheries Sector of the Republic of Kazakhstan for 2021-2030, Resolution of the Republic of Kazakhstan No. 208 dated April 5, 2021, as amended by Government Resolution No. 784 dated September 13, 2023</li> <li>▪ Forecast Scheme of Territorial and Spatial Development of the Country until 2030, Decree of the President of the Republic of Kazakhstan No. 185 dated October 9, 2019</li> </ul>	<ul style="list-style-type: none"> <li>▪ GCF strategic plan 2024 – 2027</li> <li>▪ GCF sectoral guide on energy access and power generation</li> <li>▪ GCF sectoral guide on energy efficiency</li> <li>▪ GCF sectoral guide on low carbon transport</li> <li>▪ GCF sectoral guide on water security</li> <li>▪ GCF sectoral guide on forests and land use</li> <li>▪ GCF sectoral guidance on agriculture and food security</li> <li>▪ GCF sectoral guide on cities, buildings, and urban systems</li> <li>▪ GCF sectoral guide on ecosystems and ecosystem services</li> <li>▪ GCF sectoral guide on water security</li> <li>▪ GCF sectoral guidance on ecosystems and ecosystem services</li> <li>▪ GCF sectoral guide on climate information and early warning systems</li> </ul>

Documents of the Republic of Kazakhstan	GCF's documents
<ul style="list-style-type: none"> <li>▪ Law of the Republic of Kazakhstan "On Pastures" No. 47-VI ZRK dated February 20, 2017.</li> <li>▪ Law of the Republic of Kazakhstan "On Production and Circulation of Organic Products" No. 89-VIII ZRK, dated June 10, 2024.</li> <li>▪ Law of the Republic of Kazakhstan "On Flora" No. 183-VII ZRK dated January 2, 2023.</li> <li>▪ Law of the Republic of Kazakhstan "On the Protection, Reproduction and Use of Wildlife" No. 593 dated July 9, 2004.</li> <li>▪ Law of the Republic of Kazakhstan "On Civil Protection" No. 188-V 3PK dated April 11, 2014.</li> <li>▪ Plan for the Implementation of the Obligations of the Republic of Kazakhstan under the Stockholm Convention on Persistent Organic Pollutants for 2017-2028, Order of the Minister of Energy of the Republic of Kazakhstan No. 312 dated September 14, 2017.</li> <li>▪ Concept for the Development of Civil Society in the Republic of Kazakhstan, Decree of the President of the Republic of Kazakhstan No. 390 dated August 27, 2020.</li> </ul> <p>Other documents:</p> <ul style="list-style-type: none"> <li>▪ Strategic Measures to Combat Desertification in the Republic of Kazakhstan until 2025, Astana, 2015</li> <li>▪ Concept of High Conservation Value Forests (HCVF) of Kazakhstan, UNDP Document, 2019</li> <li>▪ UNDP Project "Global Biodiversity Framework – Early Action Support"</li> </ul>	

## ANNEX 2. MATRIX OF NATIONAL RESULT AREAS

National Result Area		Justification of National Significance (RK)	Rationale for a Paradigm Shift (GCF)
<b>NRA 1: Decarbonizing the Electricity Sector</b>			
<b>Sub-area 1.1</b> Deploy large-scale renewable energy projects utilizing advanced energy storage systems, with a focus on high-quality integration through flexible generation capacity and other measures to ensure grid stability	Mitigation	<ul style="list-style-type: none"> <li>▪ Strategy for achieving carbon neutrality in the Republic of Kazakhstan until 2060. National goals:               <ul style="list-style-type: none"> <li>○ gradual replacement of coal with alternative and renewable energy sources;</li> <li>○ displacing the combustion of fossil fuels in final energy consumption to the lowest possible level through the electrification in all sectors of the economy;</li> <li>○ transition to the use of hydrogen, biofuels and synthetic low-carbon fuels in processes difficult or impossible to electrify;</li> <li>○ application of carbon capture and storage technologies.</li> </ul> </li> <li>▪ Concept for the development of the fuel and energy complex of the Republic of Kazakhstan for 2023 – 2029. National goal:               <ul style="list-style-type: none"> <li>○ Increase the share of renewable energy generation in total electricity production to 12.5% in 2029.</li> </ul> </li> <li>▪ Nationally determined contribution</li> </ul>	GCF sectoral guide on energy access and power generation: <ul style="list-style-type: none"> <li>▪ Low emission power generation</li> <li>▪ Investing in network flexibility, digitalization and storage</li> <li>▪ Access to modern renewable energy sources for the population</li> </ul>
<b>Sub-area 1.2</b> Promote distributed renewable energy solutions (small-scale off-grid generation and mini-grids) to enhance energy access and resilience, particularly in remote communities	Mitigation/adaptation		
<b>Sub-area 1.3</b> Modernize electricity grids through digitalization and smart grid technologies to optimize energy distribution and integrate renewable energy sources	Mitigation/adaptation		
<b>NRA 2: Enhancing energy efficiency</b>			
<b>Sub-area 2.1</b> Promote energy efficiency, renewable energy, and decarbonization of industrial processes, particularly of energy-intensive industries	Mitigation	<ul style="list-style-type: none"> <li>▪ National goals:               <ul style="list-style-type: none"> <li>○ reducing the energy intensity of industry by 10% by 2029 from the 2021 level;</li> <li>○ reducing energy consumption per unit area of premises by 10% by 2029 from the 2021 level;</li> <li>○ attracting investments in the amount of USD 20 million for energy saving;</li> </ul> </li> <li>▪ Concept for the development of energy saving and increasing energy efficiency of the Republic of Kazakhstan for 2023 – 2029</li> <li>▪ Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060</li> <li>▪ Nationally determined contribution</li> </ul>	GCF sectoral guide on energy efficiency: <ul style="list-style-type: none"> <li>▪ Improving energy efficiency in industry</li> <li>▪ Improving efficiency in buildings</li> <li>▪ Market transition to highly efficient devices/equipment</li> </ul>
<b>Sub-area 2.2</b> Improve energy efficiency and integrate renewable energy in the communal and housing services and the heat supply sector.	Mitigation/adaptation		
<b>NRA 3: Transitioning to low-carbon transport</b>			
<b>Sub-area 3.1</b> Accelerate the electrification of transport systems	Mitigation	<ul style="list-style-type: none"> <li>▪ Strategy for achieving carbon neutrality in the Republic of Kazakhstan until 2060. National goals:               <ul style="list-style-type: none"> <li>○ eliminating or reducing the need for travel</li> </ul> </li> </ul>	GCF sectoral guide on low carbon transport: <ul style="list-style-type: none"> <li>▪ Electrification of</li> </ul>

National Result Area		Justification of National Significance (RK)	Rationale for a Paradigm Shift (GCF)
<b>Sub-area 3.2</b> Develop alternative fuels to decarbonize the transport sector and/or alternative modes of transport communication	Mitigation	<ul style="list-style-type: none"> <li>○ transition to more environmentally friendly modes of transport</li> <li>○ increasing energy efficiency and reducing vehicle emissions</li> </ul> <ul style="list-style-type: none"> <li>▪ Nationally determined contribution</li> <li>▪ Concept for the development of energy saving and increasing energy efficiency of the Republic of Kazakhstan for 2023 – 2029</li> </ul>	transport systems <ul style="list-style-type: none"> <li>▪ Use of new generation zero-emission fuels</li> </ul>
<b>NRA 4: Climate-smart agriculture</b>			
<b>Sub-area 4.1</b> Address land degradation and promote sustainable land management practices to enhance soil health, productivity, and carbon sequestration	Mitigation / adaptation	<ul style="list-style-type: none"> <li>▪ Strategy for achieving carbon neutrality in the Republic of Kazakhstan until 2060. National goals:               <ul style="list-style-type: none"> <li>○ sustainable agriculture and livestock management, improved irrigation;</li> <li>○ sustainable forest management and reforestation.</li> </ul> </li> <li>▪ Nationally determined contribution</li> </ul>	GCF sectoral guide on agriculture and food security: <ul style="list-style-type: none"> <li>▪ Promoting agricultural sustainability and improving management of natural resources: land, water, ecosystems, including improved management of soil, irrigation, drainage, water flow and storage</li> </ul>
<b>Sub-area 4.2</b> Promote climate-resilient practices in crop production, livestock farming, fisheries, and aquaculture, ensuring diversification of crops and varieties, increased soil carbon, expansion of organic and resource-conservation agriculture, and reduction of methane emissions	Adaptation	<ul style="list-style-type: none"> <li>▪ Action plan for the implementation of the Concept for the transition of the Republic of Kazakhstan to a “green” economy for 2021–2030</li> <li>▪ Concept for the development of the agro-industrial complex of the Republic of Kazakhstan for 2021 – 2030</li> <li>▪ Law of the Republic of Kazakhstan “On Pastures”</li> <li>▪ Law of the Republic of Kazakhstan “On the production and circulation of organic products”</li> <li>▪ Strategic measures to combat desertification in the Republic of Kazakhstan to 2025</li> <li>▪ National Action Program to Combat Desertification in the Republic of Kazakhstan</li> <li>▪ Law of the Republic of Kazakhstan “On Flora”</li> <li>▪ Concept for the development of the water resources management system of the Republic of Kazakhstan for 2024-2030</li> </ul>	
<b>Sub-area 4.3</b> Improve water use efficiency in agriculture and ensure sustainable water resource management to address water scarcity	Mitigation / adaptation	National goals: <ul style="list-style-type: none"> <li>▪ Irrigation water savings through the implementation of water saving technologies in irrigated agriculture (in million m<sup>3</sup> per year): 2024 – 326, 2025 – 728, 2026 – 1100, 2027 – 1428, 2028 – 1975, 2029 – 2192, 2030 – 2192.</li> <li>▪ Volume of additionally accumulated water (increase by km<sup>3</sup>): in 2024 – 0.01 km<sup>3</sup>, in 2025 – 0.01 km<sup>3</sup>, in 2026 – 0.2 km<sup>3</sup>, in 2027 – 1.2 km<sup>3</sup>, in 2028 – 2.6 km<sup>3</sup>, in 2029 – 2.6 km<sup>3</sup>, in 2030 – 2.6 km<sup>3</sup>.</li> <li>▪ Water losses in agriculture during transportation (decrease from 50% to 25%): 2024 - 50%, 2025 - 47%, 2026 -43%, 2027 - 39%, 2028 - 35%, 2029 – 30%, 2030 – 25%.</li> <li>▪ The level of supply of domestic seeds in 2030 is up to 80%;</li> <li>▪ The area of land using water-saving technologies (drip irrigation, sprinkling) in 2030 – 750,000 ha.</li> </ul>	
<b>Sub-area 4.4</b> Promote innovative farming methods and technologies to enhance productivity, resource efficiency, food security, and climate resilience	Mitigation / Adaptation		
<b>NRA 5: Sustainable forest management</b>			
<b>Sub-area 5.1</b> Restore degraded forest landscapes and enhance forest cover to increase carbon	Mitigation / Adaptation	Strategy for achieving carbon neutrality in the Republic of Kazakhstan until 2060. National Goal: <ul style="list-style-type: none"> <li>○ the sector can become a net CO<sub>2</sub> sink, which will cover GHG emissions from</li> </ul>	GCF sectoral guide on forests and land use: <ul style="list-style-type: none"> <li>▪ Restoring degraded</li> </ul>

National Result Area		Justification of National Significance (RK)	Rationale for a Paradigm Shift (GCF)
sequestration and improve ecosystem services		agricultural production and partially in other sectors by 2060. <ul style="list-style-type: none"> <li>▪ Law of the Republic of Kazakhstan "On Flora"</li> <li>▪ Law of the Republic of Kazakhstan "On the Protection, Re-production and Use of Wildlife"</li> <li>▪ Concept of High Conservation Value Forests (HCVF) of Kazakhstan</li> <li>▪ UNDP Project "Global Biodiversity Framework – Early Action Support"</li> </ul>	<ul style="list-style-type: none"> <li>▪ forests</li> <li>▪ Reforestation</li> </ul>
<b>Sub-area 5.2</b> Promote sustainable forestry practices to ensure the long-term health and productivity of forest ecosystems	Mitigation / Adaptation		
<b>NRA 6: Integrated waste management</b>			
<b>Sub-area 6.1</b> Promote a circular economy approach to urban waste management, including waste reduction, recycling, and composting	Mitigation	<ul style="list-style-type: none"> <li>▪ Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060</li> <li>▪ Nationally determined contribution</li> <li>▪ Action plan for the implementation of the Concept for the transition of the Republic of Kazakhstan to a "green" economy for 2021–2030</li> <li>▪ Plan for fulfilling the obligations of the Republic of Kazakhstan under the Stockholm Convention on Persistent Organic Pollutants for 2017-2028, national goals:               <ul style="list-style-type: none"> <li>○ reducing waste generation;</li> <li>○ accelerated implementation of solid waste collection and sorting;</li> <li>○ increasing the share of recycled and compostable waste.</li> </ul> </li> </ul>	GCF sectoral guide on cities, buildings, and urban systems: <ul style="list-style-type: none"> <li>▪ Circular urban economy</li> </ul>
<b>Sub-area 6.2:</b> Address the environmental and economic impacts of food loss and waste by promoting reduction initiatives throughout the supply chain	Mitigation		
<b>Sub-area 6.3</b> Improve wastewater treatment and management to protect water resources and reduce pollution	Mitigation / Adaptation		
<b>Sub-area 6.4</b> Promote the capture and utilization of landfill gas to reduce emissions and generate renewable energy	Mitigation		
<b>NRA 7: Climate change adaptation and resilience</b>			
<b>Sub-area 7.1</b> Enhance water security in buildings and industry by promoting water-saving technologies, water recycling, and rainwater harvesting	Adaptation	<ul style="list-style-type: none"> <li>▪ Concept for the development of the water resources management system of the Republic of Kazakhstan for 2024-2030</li> <li>▪ National goals:               <ul style="list-style-type: none"> <li>▪ Volume of inflow into Lake Balkhash (at least 12 km<sup>3</sup>/yr.): in 2024 – 12 km<sup>3</sup>/yr., in 2025 – 12 km<sup>3</sup>/yr., in 2026 – 12 km<sup>3</sup>/yr., in 2027 – 12 km<sup>3</sup>/yr., in 2028 – 12 km<sup>3</sup>/yr., in 2029 – 12 km<sup>3</sup>/yr., in 2030 – 12 km<sup>3</sup>/yr.</li> <li>▪ Volume of the Northern Aral Sea (from 20 to 27 km<sup>3</sup>): 2024 – 20 km<sup>3</sup>, 2025 – 20.6 km<sup>3</sup>, 2026 – 21.2 km<sup>3</sup>, 2027 – 22 km<sup>3</sup>, 2028 – 23 km<sup>3</sup>, 2029 – 25 km<sup>3</sup>, 2029 – 27 km<sup>3</sup>.</li> <li>▪ Increase in water reuse across economic sectors (increase from 17% to 28%): 2026 – 17%, 2027 – 22%, 2028 – 24%, 2029 – 26%, 2030 – 28%.</li> <li>▪ Coverage of the water management system with digital technologies (increase to 40% by 2030): 2025 – 5%, 2026 – 10%, 2027 – 16%, 2028 – 24%, 2029 – 32%,</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ GCF sectoral guide on water security</li> <li>▪ GCF sectoral guide on ecosystems and ecosystem services</li> <li>▪ GCF sectoral guide on climate information and early warning systems</li> </ul>

National Result Area		Justification of National Significance (RK)	Rationale for a Paradigm Shift (GCF)
		2030 – 40%. <ul style="list-style-type: none"> <li>▪ Level of pressure on water resources:               <ul style="list-style-type: none"> <li>○ in the Aral-Syr Darya river water basin (from 57.2% to 52.8%), water quality class: 2024 - 57.2%, 2025 - 56.7%, 2026 – 56.2%, 2027 – 56.2%, 2028 – 55.2%, 2029 – 54.2%; 2029 – 52.8%;</li> <li>○ in the Shu-Talas river water basin (from 56.8% to 52.8%): 2024 - 56.8%, 2025 - 56.8, 2026 - 56.8% , 2027 – 56.3%, 2028 – 54.8%, 2029 – 53.8%, 2030 – 52.8%.</li> <li>○ In the Nura-Sarysu river basin management area (reduction from 87.5% to 83.5%): 2024 – 87.5%, 2025 – 87.5%, 2026 – 87.1%, 2027 – 86.6%, 2028 – 85.6%, 2029 – 84.5%, 2030 – 83.5%.</li> </ul> </li> </ul>	
<b>Sub-area 7.2</b> Strengthen early warning systems to prevent climate-related disasters and mitigate the impacts of climate-related hazards.	Adaptation	<ul style="list-style-type: none"> <li>▪ Law of the Republic of Kazakhstan “On Civil Protection”</li> </ul>	
<b>Sub-area 7.3</b> Conserve bio- and agrobiodiversity to maintain ecosystem resilience	Adaptation	<ul style="list-style-type: none"> <li>▪ Concept for the development of civil society in the Republic of Kazakhstan;</li> <li>▪ Law of the Republic of Kazakhstan “On Flora”;</li> <li>▪ Law "On the Protection, Re-production and Use of Wildlife".</li> </ul>	

### ANNEX 3. DESCRIPTION OF THE “NO OBJECTION” PROCEDURE

The NDA is responsible for carrying out the no-objection procedure. When formalizing this procedure, stages and time frames for each of them are determined, including:

- The procedure for requesting a no-objection letter, including a list of required documents and deadlines for their consideration;
- Technical examination of submitted documents;
- Agreement process;
- Issuance of a letter of no objection to the accredited organization.

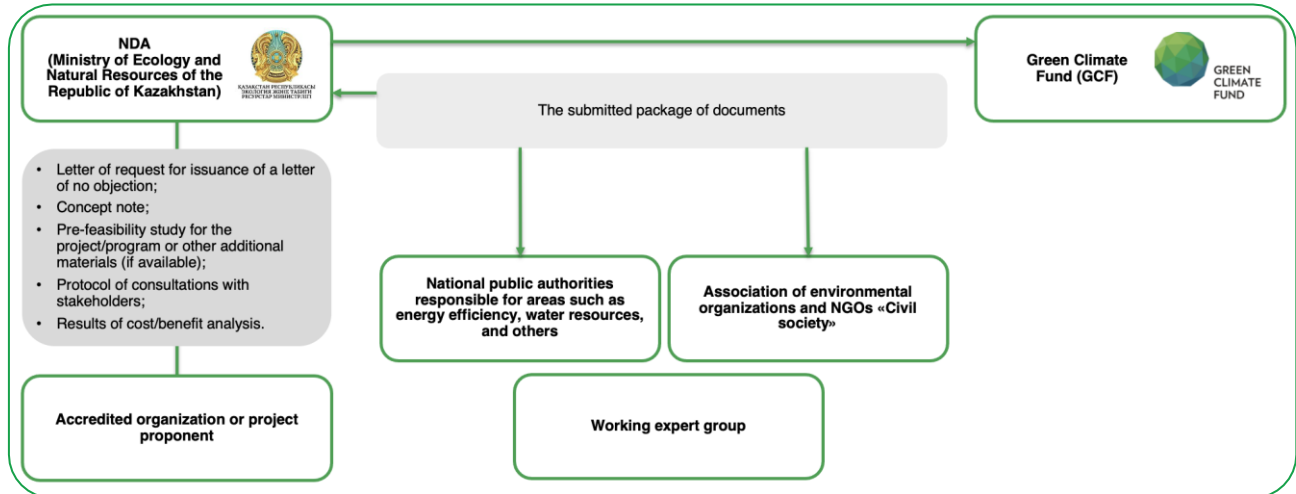
An accredited organization or project proponent wishing to receive funding from the GCF must develop a concept note using the latest template available on the GCF website.

To receive a letter of no objection from the NDA, the accredited organization or project proponent must submit the following documents to the NDA secretariat:

- Letter of request for issuance of a letter of no objection;
- Concept note;
- Pre-feasibility study for the project/program or other additional materials (if available);
- Protocol of consultations with stakeholders;
- Results of cost/benefit analysis.

The accredited organization sends a package of documents via mail to the NDA - the Ministry of Ecology and Natural Resources. If the concept note has been sent to the GCF Secretariat for informal assessment, then the advice received from the Secretariat should be attached to the package.

**Figure 2. The no objection procedure**



## **ANNEX 4. STAKEHOLDER ENGAGEMENT IN THE COUNTRY PROGRAMME**

A comprehensive multi-stakeholder consultation process was undertaken to develop the Country Programme, under the leadership of the National Designated Authority (NDA), the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan. The multi-stakeholder engagement platform included:

- The NDA provided national ownership and strategic guidance, with active participation from relevant ministries (the Ministry of Energy of the Republic of Kazakhstan, the Ministry of National Economy of the Republic of Kazakhstan, the Ministry of Agriculture of the Republic of Kazakhstan, the Ministry of Water Resources and Irrigation of the Republic of Kazakhstan, the Ministry of Transport of the Republic of Kazakhstan, the Ministry of Healthcare of the Republic of Kazakhstan, the Ministry of Industry and Construction of the Republic of Kazakhstan (Division of energy conservation and energy efficiency), the Ministry of Emergency Situations of the Republic of Kazakhstan, the Ministry of Foreign Affairs of the Republic of Kazakhstan, and the Ministry of Finance of the Republic of Kazakhstan), as well as the private sector, the financial sector, civil society, think tanks, and academia (a total of approximately 200 organizations).
- The GCF Secretariat provided guidance, technical support, and ensured compliance with GCF policies and procedures.
- International Accredited Entities operating in the Republic of Kazakhstan, national entities undergoing accreditation, and potential programme partners, who contributed their experience and knowledge on project development and implementation.

Key issues raised during these consultations included:

- Physical and transition risks and opportunities for stakeholders, differentiated by sector (survey, presentation of results, and discussion);
- The country's climate priorities, gaps, and needs, including those identified through risk and opportunity analysis (two rounds of review and discussion);
- Potential interest in accreditation from local financial institutions;
- Potential project ideas aligned with national priority areas.

These consultations highlighted the importance of engaging the private sector and local communities to address their climate risks and needs. They also underscored the importance of involving the financial sector in climate action, which will ensure co-financing and leverage additional resources.

The NDA, playing a central role, will continue to engage with stakeholders throughout the Country Programme cycle (development, prioritization, identification of potential projects, implementation, monitoring, review, updating), ensuring that the programme remains responsive to evolving needs and priorities and effectively contributes to achieving Kazakhstan's climate change goals. The NDA will actively facilitate this ongoing engagement through regular consultations, workshops, and information-sharing platforms.

## ANNEX 5. REFERENCES

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