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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED GRANT

IN THE AMOUNT OF
US$ 5 MILLION

TO THE

REPUBLIC OF KAZAKHSTAN

FOR A

PARTNERSHIP FOR MARKET IMPLEMENTATION PROJECT

August 17, 2022

Environment, Natural Resources & The Blue Economy Global Practice
Europe And Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective as of June 6, 2022)

Currency Unit	=	Kazakhstan Tenge (KZT)
KZT 431.95	=	US$1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Anna Bjerde
Country Director:	Tatiana A. Proskuryakova
Regional Director:	Sameh Naguib Wahba
Practice Manager:	Kseniya Lvovsky
Task Team Leader(s):	Qing Wang, Kirtan Chandra Sahoo, Sandeep Kohli

ABBREVIATIONS AND ACRONYMS

AM	Accountability Mechanism
CO_2	Carbon Dioxide
CHP	Combined Heat and Power
CBAM	Carbon Border Adjustment Mechanism
CRF	Common Reporting Format
DA	Designated Account
EC	Environmental Code
ETS	Emission Trading Scheme (or System)
EU	European Union
ESIA	Environmental and Social Impact Assessments
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Review Summary
ESSA	Environmental and Social Systems Assessment
FM	Financial Management
FY	Fiscal Year
GRS	Grievance Redress Service
GoK	Government of Kazakhstan
IGTIPC	International Green Technology and Investment Projects Center
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
JSC	Joint Stock Company
KZT	Kazakhstan Tenge
LULUCF	Land-Use, Land-use change and Forestry
MEGNR	Ministry of Ecology, Geology and Natural Resources
MNE	Ministry of National Economy
MOF	Ministry of Finance
MOE	Ministry of Energy
MIID	Ministry of Industry and Infrastructure Development
MRV	Monitoring, Reporting and Verification
MCI	Monthly Calculation Index
MtCO2	Metric tons of carbon dioxide equivalent
M&E	Monitoring and Evaluation
NEI	Negative Environmental Impact
NOx	Nitrogen Oxides
NAP	National Allocation Plan
NDC	Nationally Determined Contribution
NDP	National Development Plan
OECD	Organization for Economic Co-operation and Development
PMR	Partnership for Market Readiness
PMI	Partnership for Market Implementation

PDO	Project Development Objective
PIU	Project Implementation Unit
R&D	Research and Development
SEA	Sexual Exploitation, and Abuse
SH	Sexual Harassment (workplace)
SO_2	Sulfur Dioxide
TA	Technical Assistance
USD	United States Dollars
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
ZD	Zhasyl Damu JSC

BASIC INFORMATION

Is this a regionally tagged project? No		Country (ies)
Financing Instrument Investment Project Financing		Classification Small Grants
Approval Date 29-Jul-2022	Closing Date 31-Dec-2026	Environmental and Social Risk Classification Moderate
Approval Authority CDA	Bank/IFC Collaboration No	
Please Explain		

Proposed Development Objective(s)

To strengthen the effectiveness of Emission Trading Scheme and support carbon pricing expansion to contribute to Kazakhstan's updated 2030 Nationally Determined Contribution targets and 2060 carbon neutrality goals.

Components

Component Name	Cost (USD Million)
ETS Improvement	3,200,000.00
Carbon Pricing Expansion	950,000.00
Stakeholder Engagement and Just Transition	350,000.00
Project Management and M&E	500,000.00

Organizations

Borrower : Ministry of Ecology, Geology and Natural Resources

Implementing Agency : Zhasyl Damu JSC under Ministry of Ecology, Geology and Natural Resources

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	5.00
Total Financing	5.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	5.00
Partnership for Market Implementation Facility	5.00

Expected Disbursements (in USD Million)

Fiscal Year	2023	2024	2025	2026	2027
Annual	1.00	1.00	1.50	1.00	0.50
Cumulative	1.00	2.00	3.50	4.50	5.00

INSTITUTIONAL DATA

Financing & Implementation Modalities

Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Fragile State(s) [ ] Fragile within a non-fragile Country [ ] Small State(s) [ ] Conflict [ ] Responding to Natural or Man-made Disaster

Other Situations

[ ] Financial Intermediaries (FI)
[ ] Performance-Based Conditions (PBCs)
[ ] Series of Projects (SOP)
[ ] Contingent Emergency Response Component (CERC)

[ ] Alternative Procurement Arrangements (APA)

[ ] Hands-on Expanded Implementation Support (HEIS)

Practice Area (Lead)

Environment, Natural Resources & the Blue Economy

Contributing Practice Areas

Climate Change
Energy & Extractives
Macroeconomics, Trade and Investment
Poverty and Equity

OVERALL RISK RATING

Risk Category	Rating
Overall	Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Not Currently Relevant
Community Health and Safety	Not Currently Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Not Currently Relevant
Financial Intermediaries	Not Currently Relevant

Legal Covenants

Conditions

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Qing Wang	Team Leader(ADM Responsible)	Environment	SEAE1
Kirtan Chandra Sahoo	Team Leader	Environment and CC	SCAEN
Sandeep Kohli	Team Leader	Energy	IECE1

Jamal Abdulla Abdulaziz	Procurement Specialist(ADM Responsible)		EECRU
Kuat Sultan	Procurement Specialist	Procurement	EECRU
Aliya Kim	Financial Management Specialist(ADM Responsible)		EECG1
Jiyoun Christina Chang	Environmental Specialist(ADM Responsible)	Environment	SCAEN
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Grace O. Aguilar	Team Member	Program Assistant	SCAEN
Metin Nebiler	Team Member	just transition	EECPV
Olga Bessedina	Team Member	Program Assistant	ECCKZ
Timila Dhakhwa	Team Member	Climate change	SCCMI
Yelena Yakovleva	Team Member	Operations	ECCKZ

Extended Team

Name	Title	Organization	Location

KAZAKHSTAN
PARTNERSHIP FOR MARKET IMPLEMENTATION PROJECT

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I. STRATEGIC CONTEXT

A. Country Context

1. **Kazakhstan has been the economic success story of Central Asia, transitioning from lower-middle-income to upper-middle-income status in less than two decades.** Since 2002, Gross Domestic Product (GDP) per capita has risen six-fold and Kazakhstan currently accounts for nearly two-thirds of the regional GDP, powered by an abundance of oil, gas, and other minerals. A prominent feature among the government's strategic objectives is for Kazakhstan to join the Organization for Economic Co-operation and Development (OECD) ranks and be amongst the top thirty economies of the world by 2050. However, solid economic growth during 2017-2019 turned into an economic contraction in 2020 due to the COVID-19 pandemic, delivering a double whammy through demand contraction as well as a crash in oil prices. This exposed the limitations and vulnerabilities of the fossil and extractives' exports-based, state-led economic growth model. Even though oil prices and demand have since reached new heights due to the Russia's invasion of Ukraine, the accompanying global inflationary trends have put a sharp focus on the need for economic diversification, especially as it has strengthened global and, particularly, European will to move away from fossil fuels dependency.

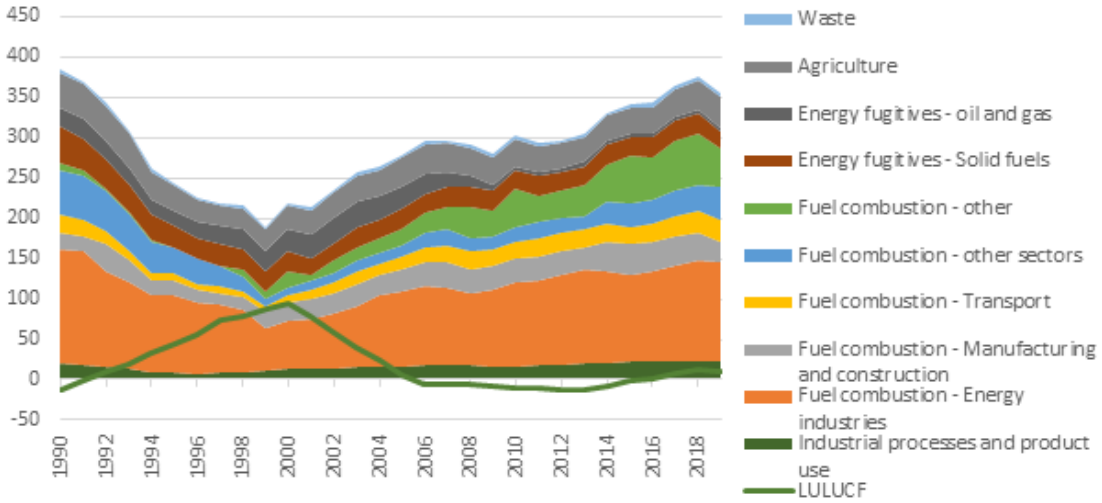
2. **Kazakhstan is a mineral and fossil rich middle-income country of 18.5 million people, strategically located Central Asian country with Russia to the north and China to its south-east.** Kazakhstan's huge production of fossil fuels and significant heavy industrial sector drives its rising greenhouse gas emissions. It is the largest per-capita greenhouse gas emitter (GHG) in Europe and Central Asia, and the 21st largest emitter globally. Although the emissions intensity of GDP has declined in recent year as the services sector has grown in importance, in absolute terms emissions have been growing with the economy. In some years, emissions are partially offset by Land-Use, Land-use change and Forestry (LULUCF). Net GHG emissions (including LULUCF) amounted to 386.3 million tons of CO2eq in 1990 and 401.9 million tons of CO2eq in 2018, representing a 4.05 percent increase. GHG emissions increased significantly over 2009-2018, rising by 41.8 percent from 283.5 million tons of CO2eq in 2009. A bulk of the increase in emissions is attributable to energy industries, transport, and residential energy use. The transport sector, for example, showed an average annual growth rate of 4-5 percent from 2011 to 2018.

3. **Kazakhstan has signed on to ambitious Nationally Determined Contribution (NDC) targets under the Paris Agreement - to reduce GHG emissions from the benchmark 1990 level by 15 percent (unconditionally) and by 25 percent (conditional upon international support) by 2030.** The NDC was updated in 2021 through the World Bank's Partnership for Market Readiness (PMR) (P150680) support and the updated NDC is now under broad consultation in the country. It is expected that the updated NDC will be submitted to COP27[1] in 2022. In addition, Kazakhstan's President has also set a national target of becoming carbon-neutral by 2060, and of ranking among the top 30 developed countries by 2050. The country's cold climate, energy inefficient building stock, its legacy of predominantly coal-fired heating, power generation, and heavy industry base, as well as its abundant fossil reserves, particularly coal, pose significant challenges to its meeting not just its NDC targets and the target of carbon neutrality, but also to its goal of remaining a competitive economy in an increasingly decarbonization driven global policy environment.

[1] The 27th session of the Conference of the Parties (COP 27) to the United Nations Framework Convention on Climate Change (UNFCCC) will take place in Sharm El-Sheikh, Egypt from November 7-18, 2022

4. **Energy production and consumption are responsible for 84 percent of Kazakhstan's GHG emissions (Figure 1). Thus, achieving a low carbon path to development will require strong and sustained actions, starting with reducing reliance on coal for power and heating.** In power generation, renewables will need to expand significantly from their current share of 3.7 percent up to around 15 percent by 2030. As this occurs, power grid flexibility is a near and medium-term concern. Addressing this will require the use of gas-based generation as a transition fuel for grid stability, not only to facilitate the absorption of more renewables, but also to assure resilience of the rapidly ageing power system. Over time, as new generation is added, the country's ageing coal generation fleet will ramp down, and then be phased out. To ensure this phase-out, appropriate clean and green alternatives would have to be phased in, alongside energy storage. Using competitive and transparent auctions can result in scaling-up development of the country's world class wind resources and its significant solar potential to provide abundant and affordable energy not just for the country, but even for export. In the long run, beyond 2030, nuclear generation could also play a role in the power generation mix, especially as Kazakhstan is the source for 40 percent of the world's Uranium exports. Heating, currently predominantly fueled by coal, will also transition to natural gas, and finally adopt a combination of cleaner technologies that include blue and then green hydrogen as an energy storage medium, geothermal resource use, and greater electrification of the building and industrial sectors. Furthermore, enhanced energy efficiency across key sectors, adoption of new technologies for lowering the carbon footprint of industries, and diversification of the economic and industrial base towards green manufacturing and services will also be a key component of any successful roadmap for lowering the carbon footprint of the economy and decoupling growth from emissions.

Figure 1. Historical emissions by source



Source: Kazakhstan 2021 CRF tables

5. **Kazakhstan has indicated its desire to continue to strengthen its capacity to pursue lower carbon growth and effective adaptation.** While the government's thinking on meeting interim and final emission targets is still evolving, it's Low Emissions Development Strategy for power generation is being developed in collaboration with USAID and is aimed at charting a short-, medium-, and long-term path to decarbonizing the power sector – in line with its 2060 target of carbon neutrality. The government is already implementing plans to transition urban center coal-fired district heating by adding gas-fired combined heat and power (CHP) facilities in Nur-Sultan and Almaty. Since 2016, it has also significantly changed its power generation fuel mix by switching approximately 11 percent of its power generation from coal to natural gas.

6. **Kazakhstan already regulates its GHG emissions through the national Emission Trading Scheme (ETS) which is enshrined in its Environment Code.** The ETS is the country's main instrument to regulate domestic CO_2 emissions and to drive the development of low-carbon technologies. The ETS was established in 2013 and has been evolving with the country's continued efforts and support from the World Bank through the PMR. The Department of Climate Policy and Green Technologies of the Ministry of Ecology, Geology and Natural Resources (MEGNR) is in charge of regulating the ETS, while the Joint Stock Company (JSC) Zhasyl Damu under MEGNR has been operating the ETS. Presently the principal regulatory structure for the ETS is established in Chapter 20 of the 2021 new Environmental Code "State regulation in the field of emissions and removals of greenhouse gases" and associated bylaws including 10 new ones recently adopted. The ETS covers oil and gas industry, power sector, mining, metallurgical industry, chemical industry, and manufacturing related to construction materials production, such as cement, lime and bricks. Transport, agriculture, and service industries are not regulated under the ETS. The amount of 20,000 tons of CO2 per year is used as a threshold value. Companies emitting more than the threshold are included in the National Allocation Plans (NAP) with allocated allowances. Currently there are 199 installations in 128 companies with about 40 percent of national GHG emissions regulated under ETS. Installations within the threshold value (i.e., less than 20,000 tons of CO2/year and more than 10,000 tons/year) are obliged to report GHG emissions, but have no emission reduction obligations. The ETS covers only carbon dioxide emissions so far while other GHGs, especially methane, are yet to be included. Currently, under the ETS, offsets can be implemented and there are no quantitative limits in place. There are fines for non-complying with the ETS requirements, which is US$30/ton.

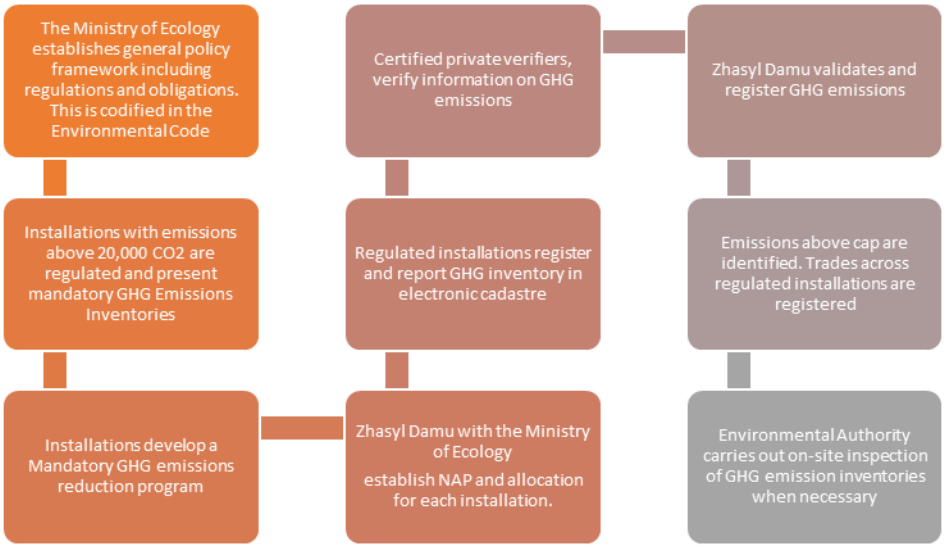
7. **The carbon budget for the ETS is set in the National Allocation Plan, which is approved by the Government of the Republic of Kazakhstan.** The 4th NAP for 2021 was approved in January 2021 at 169.2 MtCO2 (plus a reserve of 11.5 MtCO2). It does not reduce emissions compared to the previous NAP period (2018-20) that had an average annual cap of 162 MtCO2 (plus a reserve of 11.8 MtCO2)[2]. However, for the first time the 4th NAP fully applies a benchmarking approach (grandfather approach or hybrid were used in previous NAPs) to allocate allowances for all ETS installations, following international best practice. The 5th NAP covering 2022-2025 is currently under consultation and is expected to be approved soon in 2022. Annual quotas are currently distributed free of charge. It is expected that a carbon quota auction will be introduced at a level of 3 percent of total allowances for 2023-2025 and 10 percent for 2026-2030, and methane will be covered under the ETS starting from 2026. There is no carbon tax in Kazakhstan yet, but the government is considering introducing the carbon tax in the near future for those emitters that are not covered under the ETS in order to meet its NDC targets.

8. **Kazakhstan has established a Monitoring, Reporting and Verification (MRV) strucure for GHG emissions.** An estimate-based approach involving verification by a third party is being used for MRV. The new 2021 Environmental Code and/or bylaws lay down the framework of MRV mechanisms and enforce all installations regulated under the ETS to conduct annual monitoring, inventory, and verification of their emissions . National methods for calculating GHG emissions (based on the IPCC methodologies) have also been developed and approved. Reports on the GHG inventory from ETS-regulated installations are subject to verification by a third independent party (an accredited body for validation and verification). The National Center for Accreditation is the authorized body for accrediting agencies for verification and validation of GHG reporting from ETS-regulated entities in Kazakhstan. They conduct accreditation according to ISO standards. Verified GHG inventory reports

[2] NAP 1 (2013): 147 MtCO (plus new entrants' reserve of 20.6 MtCO). NAP 2 (2014-2015): 2014: 154.9 MtCO (plus a reserve of 18 MtCO) and 2015: 152.8 MtCO (plus a reserve of 20.5 MtCO). 2016-2017: ETS suspended

are provided annually by April 1. Carbon units are paid off (surrender) according to the verified volume of carbon dioxide emissions. There is a liability of the subject of quotas in case of failure to cover its obligations for greenhouse gas emissions - 5 MCI (Monthly calculation index)[3] for each ton of CO2 not compensated by carbon units. It also considers the responsibility of validation and verification bodies in case they provide false information. Inspections at enterprises are carried out by competent territorial/regional departments of ecology (inspectors)[4]. Figure 2 below presents a general flow diagram of the operation of the ETS and the institutions that intervene.

Figure 2. The ETS operation flow diagram



Source: GoK resources

9. **From January 1, 2023, the "Carbon Border Adjustment Mechanism" (CBAM) in the European Union will make it more difficult for carbon-intensive manufactured goods and products to find export markets.** Over time, as the sensitivity to use of carbon intensive products increases, it is anticipated that more items, including even fossil exports, could be impacted. It is reasonable to assume that CBAM type legislation could also come up in other geographies, including China, which is a major trading partner for Kazakhstan. Moreover, since Kazakhstan has made serious climate change mitigation commitments, such as its commitment to achieve a 15 percent GHG emission reduction by 2030 and carbon neutrality by 2060. it is appropriate for the government to consider measures that not only help in decreasing carbon intensity in local manufacturing and consumption, but also ensuring that there is a level playing field when it comes to monitoring and accounting for the carbon intensity of imports and exports.

10. **Following a low carbon path to development, as highlighted by the country's NDC commitments, is also the right pathway to enhance the country's competitiveness in light of greater global compact to combat**

[3] For administrative and transparency purposes the Kazak government uses Monthly calculation index (MCI) as a reference price baseline to determine tax rates, penalties, and other fees. The MCI is established annually by the Law on National Budget (https://egov.kz/cms/ru/articles/article_mci_2012.). The MCI for 2021 is KZT 3,063 (approximately US$7).

[4] However, inspections by the regional inspectors are principally focused on the compliance of environmental permits. Given the ETS administrative structure and the current GHG emission quotas, it is unusual for regulated installations under the ETS not to comply with their emission commitment.

climate change. It also aligns well with the national goal of becoming an OECD member country in the future. The implementation of the draft NDC Roadmap lays the foundation for deep decarbonization of the national economy in a phased manner. The draft Roadmap proposes sectoral goals and decarbonization measures, and there is increasing recognition that the low emission development pathway has tremendous opportunities for building a more robust, diversified, and inclusive growth model. However, there are challenges in transitioning and re-focusing the country's human capital, building upon skills that the country has, as well as training for new skills. These are the principles of a "just transition" that needs to be a part of any viable transition roadmap. The Government needs to find a compromise and balanced solutions that support green projects in various sectors of the economy and allow the existing "brown" industries to adapt to the anticipated changes by 2030 and beyond – in line with committed national goals and timelines.

11. **The Republic of Kazakhstan is actively involved in the international process of combating climate change.** This Partnership for Market Implementation (PMI) project support is fully aligned with the Strategy Kazakhstan 2050, the National Development Plan 2025, and the government's Concept to Transition to Green Economy by 2050 to advance environmental sustainability and address climate change. A low-carbon development concept/strategy for the country is being prepared, which GoK plans to adopt in 2022. The new Environmental Code of Kazakhstan became effective on July 1, 2021. It addresses the state regulation of GHG emissions. Rules for monitoring and control of GHG inventory, carbon quota allocation, quota trading, and implementing emission reduction projects, etc. have been put in place either through a government decree or by an order of the Minister of MEGNR.

B. Sectoral and Institutional Context

12. **Carbon pricing can play a key role in supporting Kazakhstan to meet its NDC targets by 2030 and carbon neutrality goal by 2060.** Carbon pricing[5] can be a cost-effective policy tool for governments and companies to use as part of their broader climate strategy. If well-designed and sufficiently ambitious, and successfully incorporated into fiscal policy and decision making, carbon pricing can send a strong price signal to incentivize commercial entities and citizens to reduce emissions and the private sector to co-invest in the key systems transitions, reducing the extent of additional public investment needed. Through the PMR support, Kazakhstan conducted an extensive modeling exercise to inform the updated NDC accompanied with an implementation roadmap. Study results show that the unconditional NDC target is very ambitious, and Kazakhstan will need to reduce GHG emissions levels by 20 percent over 2021-2030. Implementing stricter regulation of GHG emissions through the existing ETS alone will not enable the country to meet its NDC targets. Meeting this goal will require expanding carbon pricing and strong political will for deep infrastructure transformation, mobilization, and targeted use of significant investment resources, as well as building human capital and developing and implementing a plan for a just transition of the affected sectors.

13. **The PMR studies highlighted the importance of expanding carbon pricing for sectors and GHGs not covered by the ETS to support Kazakhstan to meet its climate targets.** About 60 percent of national GHG emissions are not regulated and this share of GHGs continues to grow. The draft NDC Implementation Roadmap proposes that GHG emissions from unregulated sectors can be limited by implementing carbon tax in alignment with other complementary policies. Modeling was used to calculate an indicative, effective carbon price and

[5] Carbon pricing policy options include explicit policies, such as carbon taxes, fossil fuel subsidy reform, emissions trading systems (also known as cap-and-trade systems), and crediting mechanisms, and implicit policies, such as revenue-neutral fee-and-rebate systems and internal and shadow carbon pricing

carbon tax levels but the exercise also indicated that the introduction of a carbon tax would also lead to higher energy prices. While implementation of the proposed policies and decarbonization measures are targeted towards increasing modernization and competitiveness of industry, GDP growth, and investments in green technologies, higher energy prices would also adversely impact poor and vulnerable households. Therefore, appropriate just transition measures must be designed to minimize such externalities. There would likely also be job losses, and related loss of income. A strong focus on skill diversification, retraining, and growth of new and greener industries should be a part of the overall package of climate measures that the government needs to consider in order to meet its target. Table 1 below highlights the PMR outcomes and the continued support through the proposed PMI project on carbon pricing in Kazakhstan.

Table 1: PMR and PMI in Kazakhstan

	PMR (completed)	PMI (follow up)
Cost	US$ 1.5 Million	US$ 5 Million
Implementation duration	2014-2021	2022-2026
Objectives	to support its national ETS improvement and operation and NDC update with an implementation roadmap.	to strengthen the effectiveness of ETS and support carbon pricing expansion to contribute to Kazakhstan's updated 2030 Nationally Determined Contribution targets and 2060 carbon neutrality goals.
Outcomes	i) the ETS's design issues solved, and the ETS resumed operation in 2018 after suspension in 2016 and 2017, ii) national capacity in modeling and benchmarking of GHG emissions built to enable its continued NDC update every five years following the Paris Agreement requirement, iii) the GHG e-reporting platform established to ensure data accuracy, transparency and better inform decision-making, iv) policies ensuring effective ETS and carbon registry operation in place through the Environmental Code and government degrees and will be further enhanced following the provided recommendations, v) the 4th National Allocation Plan for 2021 (and beyond up to 2030) developed and approved (but with a higher cap than expected for 2021), and vi) the updated NDC and its implementation roadmap developed and expected to be approved prior to COP27 in 2022 in line with the Long-term Doctrine for decarbonization expected to be approved by GoK soon.	i). reduction in GHG emission allowance cap in the ETS, ii). procedures for validation and verification of GHG emissions digitalized and complies with international requirements and experience, iii). carbon pricing expanded – the ETS is expanded to cover one more sector or more emitters or methane, or a carbon tax is introduced, iv). allowance auction is introduced in ETS, v). accounts opened to register carbon offset projects in the carbon registry, and vi). benchmark values updated to reflect technological progress in different sectors in line with international environmental standards.

14. **Kazakhstan subsidizes the production and use of fossil fuels that are consumed directly by end users or used for the generation of electricity.** Electricity is also subsidized, even though direct subsidies of electricity and heat consumption have been eliminated. Nevertheless, the Government indirectly supports electricity and heat

consumption by keeping rates below the market cost for supplying the services. According to the International Energy Agency (IEA)[6], the value of fossil fuel and electricity subsidies in Kazakhstan equaled 3.9 percent of GDP in 2019. On average, 45 percent of the costs associated with fossil fuels and electricity were subsidized in 2019.

15. **Several factors can influence the path that households can be impacted by expansion of carbon pricing, and discussions focus on two main channels, energy prices and employment.** It is important to understand the winners and losers of these policies to guarantee a just transition for the country. With the expansion of carbon pricing, fossil fuel prices will keep rising to meet the 2030 and net-zero emission targets. Low-income households' budget will be threatened since energy expenditure constitutes a higher share in their budget. In 2018, lowest income households spent around 27 percent of their budget on energy while the richest ten percent households spent around 19 percent of their budget on energy. Moreover, energy consumption was more inelastic for low-income families, with a price elasticity of electricity demand at -0.62 compared to -0.78 for the high-income households. Therefore, carbon tax alone is likely to be regressive unless collected revenues are used to support vulnerable households.

16. **Expansion of carbon pricing is intended to drive a shift away from high-emissions products to low emissions products and processes.** Some firms that compete against these low-emissions substitutes may experience a loss of market share and reduced profits. A significant share of workers is employed in high emitting sectors, referred to as brown sectors and defined as the top four sectors with the highest GHG emissions in Kazakhstan. Greenhouse emission intensity displays a great heterogeneity across sectors. The highest GHG emission intensity, measured as tons of CO2 per million USD production, was in electricity, gas, steam and air conditioning supply. Similarly, GHG emission intensity was relatively high in water supply, mining and quarrying and manufacturing sectors. These sectors employ around 12.5 percent of the total employment. As carbon pricing policies are implemented by the government, these sectors will require significant structural transformation. Moreover, as the costs of firms in these sectors can rise due to carbon pricing, employment can be adversely impacted in these sectors during the transition to low carbon or green energy sources. Addressing skills mismatch and facilitating labor mobility can help workers from brown sectors to find employment in less-carbon intensive sectors. Economic models show that green transition will have limited impact on overall employment, but the impact can be higher in carbon intensive sectors. The most important challenge is how governments can reallocate those workers from brown sectors into other sectors during the low-carbon transition. Vocational training programs and on the job training are potential options however, both options have fiscal implications (i.e. financial support needs) and require capacity to deliver training programs.

Challenges Facing ETS Effectiveness

17. **All carbon quotas in Kazakhstan to date are distributed free of charge, auctioning is not carried out, but under the new 2021 Environmental Code is now legally permitted from 2022.** Presently installations can cover their emissions with the distributed individual quota, and since there is no auctioning, there is no explicit carbon price on the primary emission allowance market when the installations acquire their initial quota. However, since trading is permitted there is a small secondary market for carbon emission allowances. Since Phase II (2014-2015) the ETS has permitted allowance trading, however, there have been few trades with low market prices, suggesting that the allowance cap has been set too high. The most recent data for 2021, suggest the volume of trading of approximately 2.8 percent and an average carbon trading price of KZT 504 (US$1.16). Although trading has increased marginally from previous years, it is unclear what the impact has been on emission reduction and

[6] IEA. Energy Subsidies. https://www.iea.org/topics/energy-subsidies

investment in regulated installations. Furthermore, at present there are no forward contracts or other derivatives, the allowance market is only a spot market (see Table 2 below). The Caspian Commodity Exchange has carried out most of the secondary trading of carbon units (between enterprises).

Table 2. Overview of Kazakhstan ETS Trading, 2013–2020

	Unit	NAP 2013	NAP 2014–15	NAP 2018-20
Number of trades	Number	34	40	48
Volume of trades	Thousand t of CO2	1,252.9	1,983.9	7,353.6
Value of trades	KZT, millions	175.5	754.6	3,611.2
Average price for a ton of CO2	KZT	259,7	607,5	499,9

Source: ETS Operator/ZD

18. **Despite the existence of an ETS in Kazakhstan since 2013, national GHG emissions have steadily increased over the same period of time, posing a significant challenge to Kazakhstan in meeting its NDC commitment.** Contributing factors include: the process for allocating emission allowances under previous NAPs, that set caps on emissions close to, or even above, the historical emission levels of some of the regulated emitters; and the scope of the ETS instrument that does not regulate emissions from smaller installations in the energy and industry, transport, and agriculture sectors which account for about 60 percent of total GHG emissions. Unless the ETS caps are properly aligned with the reductions in carbon budget established under new 2021 Environmental Code, there is little impetus for emission reductions through the ETS.

19. **Carbon pricing and pollution levies are considered to be the best practices internationally and Kazakhstan is well-advanced compared to other countries, however, these policies are not completely coherent, with contradictory incentives and different institutional and regulatory systems in the country.** For example, even if carbon pricing is increased by reducing the GHG emission allowance cap in the ETS, installations need to have technological alternatives, or the capacity for fuel-switching to reduce GHG emissions. These require a clear policy for investment in Research and Development (R&D) and additional infrastructure to access alternative fuel sources. Also, in the case specifically of power generation, complementary policies are necessary in the regulation of electricity and heating tariffs. Moreover, a range of environmental co-benefits are possible with climate mitigation policies which have not been clearly explored.

20. **The design and implementation of ETS has been an important contribution to environmental and climate policy in Kazakhstan, however, it should be strengthened and supported with additional policies and instruments.** ETS is a powerful policy instrument that has developed a sophisticated institutional infrastructure and can serve multiple related policy objectives beyond climate mitigation. Clearly there is recognition that if climate objectives are to be achieved, a lower allowance cap is necessary. More financialization and banking will be necessary to provide market flexibility, so that companies/installations can adjust to increasing emission reductions obligations. Given that the Kazakh electricity system is highly regulated and that the coal fuel sources are predominant, and that the opportunity for switching to cleaner fuels is still limited, the Government must not only provide a credible long term price signal, but also implement additional complementary incentives that can support decarbonization efforts through technological innovation, and by ensuring access to cleaner fuels, and broadening the number of sectors and facilities affected by carbon pricing.

C. Higher Level Objectives to which the Project Contributes

21. **The proposed project is aligned with and directly contributes to the objectives of the Country Partnership Framework FY20-25 (CPF), which was discussed by the Board of Executive Directors on December 12, 2019**[7]. Namely, the project objectives are a part of the Focus Area 3 (Securing Sustainable, Resilient, and Low Carbon Growth), and Objective 7 of Preserving and Restoring Natural Capital. Explicit carbon pricing instruments, such as an ETS and carbon taxes provide an incentive for sectors to move towards decarbonization by adopting low-carbon technologies. While an ETS provides an emission certainty to industry, taxes provide a price certainty necessary for enterprises to shift practices. These price signals can therefore support Kazakhstan's energy sector transformation and green transition. The project is also consistent with the World Bank Group Climate Change Action Plan 2021-2025: Supporting Green, Resilient, and Inclusive Development (GRID)[8]. The Action Plan calls for provision of support to clients to design and implement carbon pricing.

22. **The proposed project is also aligned with the draft updated NDC and a Low-emissions Development Doctrine that Kazakhstan aims to adopt in 2022.** The draft updated NDC retains the 2030 emissions target and reinforces the role of the ETS, energy efficiency measures, and increased renewable energy in meeting Kazakhstan's 2030 and 2060 targets. It also proposes additional mitigation measures—such as a new energy tax to cover transport fuels and small-scale coal use—and includes a component on adaptation to climate change. The Low-emissions Development Doctrine was drafted in 2021. It lays out a vision (a technology pathway based on a least cost approach) to achieve carbon neutrality by 2060, providing insight into the type, scale, and pace of the necessary transition.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

23. The project development objectives (PDO) are to strengthen the effectiveness of Emission Trading Scheme and support carbon pricing expansion to contribute to Kazakhstan's updated 2030 Nationally Determined Contribution targets and 2060 carbon neutrality goals.

B. Project Beneficiaries

24. The project beneficiaries will be MEGNR, Ministry of Finance (MOF), Ministry of National Economy (MNE), Ministry of Energy (MOE), and Ministry of Industry and Infrastructure Development (MIID), whose capacity is expected to be strengthened to reduce GHG emissions in the country through carbon pricing instruments.

C. PDO-Level Results Indicators

25. The PDO-level indicators are:

[7] World Bank. 2019. Country Partnership Framework for the Republic of Kazakhstan for the Period of FY20-25. Report Number 143372-KZ

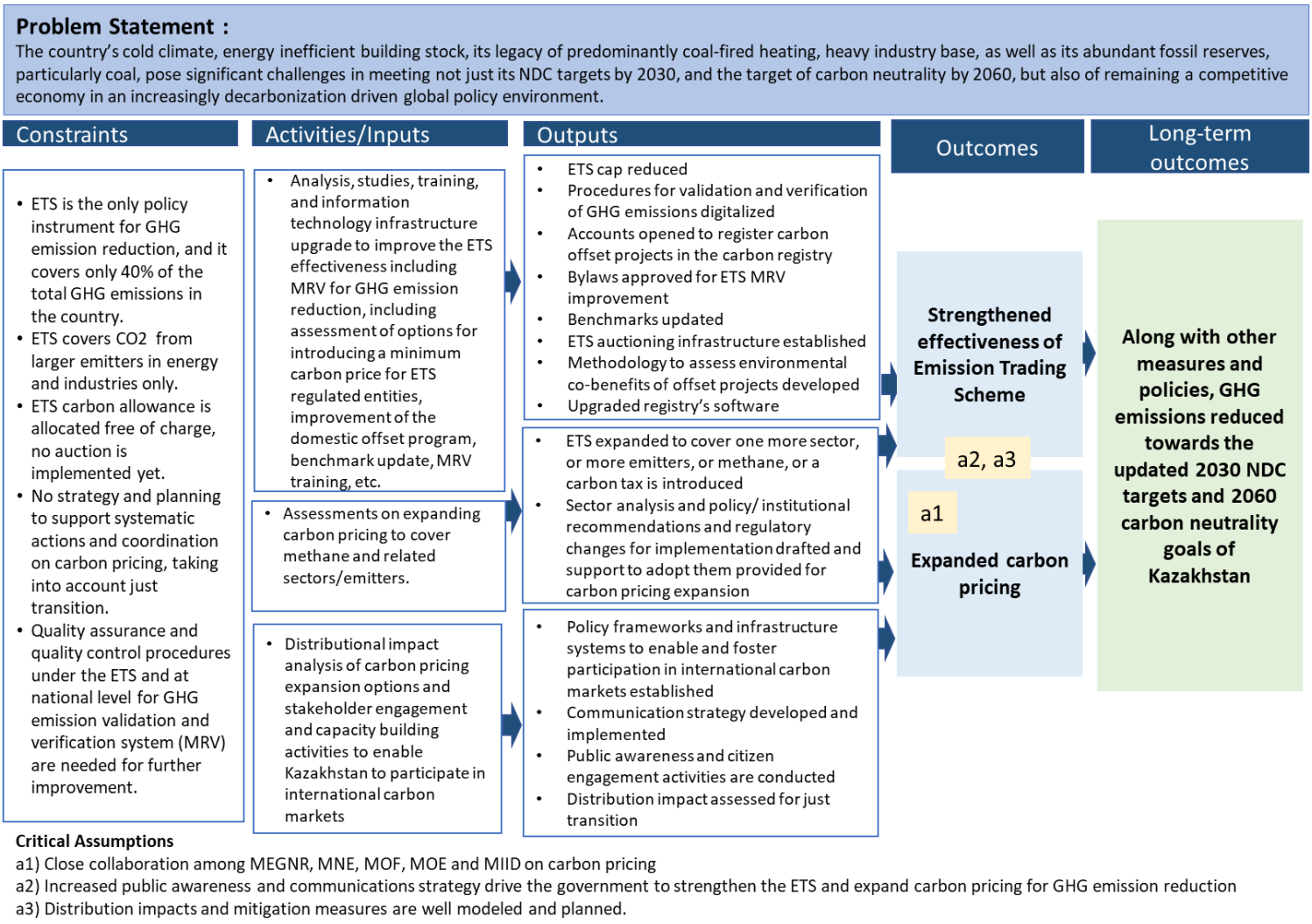
[8] World Bank Group. 2021. World Bank Group Climate Change Action Plan 2021–2025: Supporting Green, Resilient, and Inclusive Development. World Bank, Washington, DC. *https://openknowledge.worldbank.org/handle/10986/35799*

(a) Reduction in GHG emission allowance cap in the ETS (percentage, 7 percent[9] reduction by 2026 compared to 2021 National Allocation Plan[10]),
(b) Procedures for validation and verification of GHG emissions digitalized and complies with international requirements and experience (i.e., Transparency Framework of the Paris Agreement) (Yes/No), and
(c) Carbon pricing expanded – the ETS is expanded to cover one more sector or more emitters or methane, or a carbon tax is introduced (Text)

26. A Theory of Change for the proposed PMI project is illustrated below:

[9] 7 percent is estimated based on the 2021 Environmental Code (EC), Article 286 on Carbon Budget and the draft NAP 5 (2022-2025) under consultation which uses 2021 NAP cap as the baseline (*https://legalacts.egov.kz/npa/view?id=14014177)*. According to the 2021 EC, the carbon budget is developed taking into account the need to comply with Nationally Determined Contributions under international treaties ratified by the Republic of Kazakhstan in the following way:
1) for the carbon budgeting period from 2021 to 2025: the carbon budget for 2021 shall be at least 1.5 percent below the 1990 carbon budget, in subsequent years–it shall be reduced by at least 1.5 percent annually from the level of the carbon budget of the previous year;
2) for the carbon budgeting period from 2026 to 2030: the carbon budget for each calendar year shall be reduced by at least 1.5 percent of the level of the previous year's carbon budget;
3) for subsequent carbon budgeting periods: the carbon budget for each calendar year shall be at least 15 percent below the 1990 carbon budget.

[10] The 2021 NAP is 181 million tons including reserved allowance.



III. PROJECT DESCRIPTION

A. Project Components

27. The PMI project is a follow-up to the completed PMR Technical Assistance Activity (P150680), a Bank-executed Trust Fund. In order to address the challenges facing ETS effectiveness as mentioned earlier and expand carbon pricing to significantly contribute to Kazakhstan's NDC targets and carbon neutrality goals, the project will continue to support ETS improvement and expansion of carbon pricing in Kazakhstan, along with comprehensive stakeholder engagement and support for just transition. Notwithstanding the intent to the authorities to reduce the cap and emission allowances or introduce auctioning, there needs to be more urgency in emission control, a more committed private sector, and more innovation in emission reduction efforts. Clearly there are political economy problems associated with both reducing the cap and implementing auctioning due to ETS regulated entities' high dependence on fossils and lack of alternatives, such as renewables or efficient gas use in power and heat generation. As a complementary approach, the project proposed to assess options for

introducing a minimum carbon price to generate incentives for ETS cap reduction by modeling impacts of feasible options for the introduction of a minimum carbon price floor[11] for entities regulated under the ETS.

28. For achieving the PDO, the proposed PMI project will have four components: i) ETS improvement – to support analysis, studies, training, and information technology infrastructure upgrade to improve overall effectiveness of the ETS including MRV for GHG emission reduction, ii) carbon pricing expansion – to support assessments on expanding carbon pricing to cover methane and related sectors and emitters, iii) stakeholder engagement and just transition - to support distributional impact analysis of carbon pricing options studied under Component 1 and 2 and stakeholder engagement and capacity building activities, and iv) project management and monitoring & evaluation – to support daily implementation of the PMI project including hiring PIU consultants/staff, project management training, annual financial audits, and operating costs including project launch and completion workshops and regular project Steering Committee meetings. The project components, activities and key outputs are provided in Table 3 below, which follows the format in the PMI proposal submitted to the PMI Management Unit in the Bank for approval.

Table 3: Project Components, Activities and Key Outputs

Components and Activities	Key Outputs
Component 1. ETS Improvement	
To support reduction of ETS allowance cap: • Assess options for introducing a minimum carbon price by modeling impacts for entities regulated under the ETS: ✓ Option 1: implement a carbon price floor (or surrender charge) for acquired allowances to ETS entities emitting above the threshold, ✓ Option 2: a small carbon levy for CO2 emissions from both ETS-regulated threshold and sub-threshold companies/installations. ✓ Other options as desired/acceptable • Assess the institutional and MRV requirements for the above options	A modeling and assessment report produced. The report will include full cadaster of threshold and subthreshold installations and current emissions and geographic location.
To support effective implementation of carbon pricing by carrying out the following sector analysis: • A complementary analysis of Kazakhstan's ETS experience and shortcomings building on the gap analysis done during project preparation. • Assess barriers to development and adoption of low carbon technologies and clean fuels by ETS companies and development of a roadmap for addressing these barriers. • Identify possible reforms needed to support effective carbon pricing in energy sector including assessment of the ability of the carbon price to flow through to key decisions in the energy sector, such as dispatch, investment,	A report on sector analysis including policy/institutional recommendations produced. Necessary changes in the legislation/bylaws to implement recommendations drafted and support to adopt them provided.

[11] Since the carbon price in the ETS is determined indirectly through the total emission allowances, price volatility has generated uncertainty and confused the pricing incentive. Therefore, countries have adopted additional policy such a price band, reserves, or minimum prices to complement their ETS. Minimum carbon prices or carbon price floors (CPF) are increasingly being adopted in individual jurisdictions as part of the package of climate policies. These not only reduce price volatility but are key design elements to provide certainty for investors in low-emission technologies and therefore incentivize decarbonization. For example, Great Britain introduced a CPF in electricity generation in 2013. It is designed to 'top up' the EUETS, with a Carbon Price Support for 2018–2019 of £18 per tCO2(roughly €20 per tCO2). In October 2017, the new Dutch government announced a similar plan to introduce a national CPF. President Macron of France has recently advocated an EU-wide CPF (Newberry et al. 2019).

Components and Activities	Key Outputs
and consumption and examination on how the carbon price will interact with existing policies, such as renewables auctions. • Review and assess existing R&D policy and the institutional framework of the IGTIPC and how it can support/engage investments in clean technologies.	
To deepen offset market: • Improve legal and institutional framework for the implementation of carbon offsets through the development of draft regulations governing the eligibility, environmental integrity and process of implementing offsets from beginning to end, including the development of methodologies for calculating the reduction of emissions / increase in removals of greenhouse gases, as well as providing advisory support to potential investors of carbon offsets on their design and registration in the country. • Support the digital end-to-end IT infrastructure necessary for the operation of the domestic offset program, including the technical upgrades to the registry's software and improvements in the current regulatory documentation. • Assess how to maintain the environmental integrity of the domestic carbon offset system and develop related guidelines • Support training and capacity building of relevant stakeholders in developing and processing offset projects	Accounts opened to register carbon offset projects in the carbon registry, Bylaws, regulatory documentation, methodologies approved by the Minister's orders Methodology to assess environmental co-benefits (i.e., waste and pollution reduction) of offset projects developed Technically upgraded registry's software Report on maintaining environmental integrity produced.
To support implementation of auctions of allowance allocation: • Assess and select mechanisms for auctioning, including detailed process design, building on the modeling work under the PMR. • Develop technical and functional requirements for the IT infrastructure needed to run the auctions • Establish the IT infrastructure • Conduct auction training for participants and provide support for implementation	A report on auctioning implementation plan, outlining technical and functional requirements for auction infrastructure and required changes in the legislation Training materials and training recording
To strengthen MRV of the ETS: • Evaluate existing national MRV practices for compliance with the international requirements and experience (i.e., UNFCCC, Transparency Framework of the Paris Agreement and EU ETS) to identify gaps and provide specific recommendations for continued improvement. • Develop and approve new methodologies for calculating GHG emissions and removals. • Update benchmark values to reflect technological progress in different sectors in appliance with international environmental standards. • Further improve electronic systems of the GHG Cadastre and Carbon Unit Registry (including the installation of new software that meets international requirements (i.e., system requirements under the EU ETS, the Paris Agreement) and digitalize the MRV using new technologies. • Improve GHG emission validation and verification system, including quality assurance and control procedures at the national level, in order to improve transparency, accuracy, consistency, completeness, comparability and the overall confidence in the emission estimates.	A report on gap analysis and recommendations Approved new bylaws on methodologies for GHG accounting, benchmarks, etc. Updated benchmarks, Improved GHG Cadastre and Carbon Units Registry Improved procedures for validation and verification of GHG emissions

Components and Activities	Key Outputs
• Assessment of feasibility, including technical, economic and environmental impact of introducing automated emissions monitoring system in the ETS-regulated entities. This work will fully coordinate relevant efforts among different international partners and donors in Kazakhstan to jointly improve the MRV system.	
To support implementation of improved MRV: • Training on new MRV requirements (developed above) for operators of installations, verifiers, and regulatory authorities.	Training materials and training provided
Component 2. Carbon Pricing Expansion	
To expand climate relevant fiscal policy through the following activities: • Assess the economic, environmental, and social impacts of expanding GHG coverage to methane and other sectors such as transport and process emissions. In doing so evaluate the options of covering other sectors though expansion of the ETS or through a tax using the excise system and evaluate any new institutional and MRV requirements. If there are overlaps adjustments should be made to ensure that there is no double taxation, by crediting emitters with one of the taxes.	A report on the assessment of expanding carbon pricing and associated MRV
Component 3. Stakeholder Engagement and Just Transition	
Distributional Impact Analysis: • Analyze, through modelling, the impacts of tightening the ETS emission cap, an increased carbon price, an expanded coverage of ETS, and/or introduction of carbon tax on different stakeholder groups, including the lower-income groups and assess the options for mitigating such impacts (e.g. compensating the households for any adverse financial impacts). • Identify the economic impacts of carbon pricing on household budget by using an economic model (microsimulation or Carbon Pricing Assessment Tool (CPAT) or other appropriate models could be used). • Analyze the sectoral economic and employment impacts of carbon pricing by using CPAT and Multi-Regional Input-Output (MRIO) models, or other models as appropriate. • Run simulations of potential transfer programs to understand the most effective way of minimizing the adverse impacts of carbon pricing on low-income households. • Analyze impact on competitiveness (including the potential benefits of neutralizing CBAM[12] taxes for exports in key client countries) and with estimates of volume of stranded assets when caps are tightened, if any • Build the capacity of local institutions - develop local expertise in analyzing the distributional effect of tightening the ETS emission cap.	A report that maps the key distributional impacts of carbon pricing and options for compensation.

[12] The main objective of this environmental measure "Carbon Border Adjustment Mechanism" is to avoid carbon leakage. It will also encourage partner countries to establish carbon pricing policies to fight climate change. CBAM targets imports of carbon-intensive products, in full compliance with international trade rules, to prevent offsetting the EU's greenhouse gas emissions reduction efforts through imports of products manufactured in non-EU countries, where climate change policies are less ambitious than in the European Union. It will also help prevent the relocation of the production or the import of carbon-intensive products.

Components and Activities	Key Outputs
Stakeholder Engagement: • Develop a communication plan for carbon pricing. Stakeholder engagement and consultation activities target towards covered industrial entities under the ETS and communities working in the sectors, as well as households impacted by carbon pricing. • Establish coordination mechanism among international development partners in Kazakhstan supporting carbon pricing and other low carbon actions. • Organize a series of roundtable meetings with independent experts, trade unions, and civil societies on the findings of the reports and plans, and to get their views on specific issues on ETS effectiveness as part of the communication plan.	A communication plan for regulated entities and the public at large Report on implementation of the Communication Strategy
Article 6 of the Paris Agreement[13]: • Conduct capacity building activities to enable Kazakhstan to participate in international carbon markets, meet Article 6 requirements and strengthen experience on carbon offsets • Develop a Guidance Note on cooperation framework under Article 6 and the considerations for applying it domestically, including in the ETS. • Assess the readiness and policy and legislative changes needed for participation in transactions under Article 6. • Explore interest of partner countries The PIU through ZD and MEGNR will ensure effective coordination among international development partners through regular meetings (e.g., semi-annually)	Guidance Note on Article 6
Component 4. Project Management and Monitoring and Evaluation (M&E)	
The PIU will be in full consultation with MNE and MOF which will play a key role on design and implementation of carbon pricing. It will manage and monitor and evaluate the implementation of project work plans; ensure collaboration among stakeholders at the national and local levels; report on progress and financial management performance to the World Bank; ensure timely external auditing of project accounts and the appropriateness of procurement and financial management tasks; and ensure adherence to and implementation of environmental and social measures as appropriate. The PIU will also be responsible for production of communication materials for any project-level meetings and knowledge exchange visits and mobilization of the Kazakhstan representatives' participation in such events.	Semi-annual project progress reports, Semi-annual Interim Unaudited Financial Reports (IFRs), Key meeting/event minutes, etc.

B. Project Cost and Financing

[13] Article 6 of the Paris Agreement aims at promoting integrated, holistic and balanced approaches that will assist governments in implementing their NDCs through voluntary international cooperation. This cooperation mechanism, if properly designed, should make it easier to achieve reduction targets and raise ambition. In particular, Article 6 could also establish a policy foundation for an emissions trading system, which could help lead to a global price on carbon.

Project Components	Project cost	Trust Funds	Counterpart Funding
1. ETS Improvement	3,200,000	3,200,000	1,649,000[14]
2. Carbon Pricing Expansion	950,000	950,000	
3. Stakeholder Engagement and Just Transition	350,000	350,000	
4. Project Management	500,000	500,000	
Total Costs	5,000,000	5,000,000	1,649,000
Total Project Costs	5,000,000		
Total Financing Required	5,000,000		

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

29. **The PMI project will be implemented by JSC Zhasyl Damu (ZD) under MEGNR**. JSC Zhasyl Damu (ZD) has been operating the ETS in Kazakhstan[15]. A Project Implementation Unit (PIU) for the PMI project will be set up in ZD within 90 days after project effectiveness. The PIU Director, i.e., the head or deputy head of ZD, will sign all documents including contracts and disbursement documents and supervise implementation and coordination of the project by the PIU. For daily implementation of the project, a dedicated project team consisting of five (5) people will be hired for the PIU, including a Project Team Leader with the deep knowledge on carbon pricing and project management experience for leading daily implementation of the PMI project, a Technical Specialist who is well versed in climate and environmental issues including experience on Environmental and Social management, a Procurement Specialist, a Financial Management Specialist, and a Project Assistant/Translator. The staff of ZD, namely the unit managers responsible for the ETS, GHG inventory, carbon cadastre, carbon registry, sale and purchase of carbon units, modeling, analytics, should provide support to the PIU for the successful implementation of the project,. MEGNR and the PIU Director as well as the Project Team Leader will lead coordination and collaboration among Ministries and international development partners in the country with support from the PIU team. Regular meetings will be organized by the PIU with international development partners to share their knowledge and initiatives on carbon pricing in Kazakhstan, therefore, avoiding duplicated efforts.

[14] Budget program 038 "Reduction of greenhouse gas emissions" – 178 million tenge (around US$349,000) per year and Budget program 044 "Promoting Kazakhstan's accelerated transition to a "green economy" through the promotion of technologies and best practices, business development and investment" – 679 million tenge (around US$1.3 million) per year.

[15] The ETS operation function may be transferred to the International Green Technology and Investment Projects Center (IGTIPC) in future, which is also under MEGNR.

30. **Given the impact of carbon pricing on different sectors of the economy, MNE, MOE, MIID, and MOF will be the key stakeholders in implementation of the PMI project**. The PIU through ZD and MEGNR as needed will coordinate with these key stakeholders. MNE, MOE and MOF will play a role for project Component 2 and 3. A Steering Committee (SC), jointly led by the Vice Ministers of MEGNR and MNE with participation of all key stakeholders, will be established to provide oversight and guidance for the implementation of the PMI project, and ensure effective coordination and collaboration among the key stakeholders and other agencies. Regular meetings of the SC will be organized. To ensure that there are ample opportunities for consensus building on carbon pricing issues, the PIU will conduct outreach and dialogue with national associations and trade groups, international development partners, and other stakeholders, with active participation of the SC members. Regular updates and formal reports on agreements reached through dialogue will be provided by the PIU to MEGNR and SC.

31. In order to effectively manage the PMI grant, procurement and financial management (FM) as well as environmental and social impact mitigation measures for all grant activities will be processed and managed by the PIU under supervision of ZD and MEGNR. The project implementation will follow the Bank's procurement and financial management procedures and requirements and the environmental and social framework policy and standards. The PMI through ZD or MEGNR should consult and confirm with MNE, MOF and other key ministries and stakeholders on the TORs for project activities especially under Component 2 and 3.

B. Results Monitoring and Evaluation

32. A PMI grant progress report in English will be submitted semi-annually by the PIU to the Bank team by February 15 and August 15 each year. The Bank team will carry out one or two missions annually to provide implementation support to the PIU, especially providing technical advice and supporting in addressing issues if any during project implementation, and trainings on procurement, financial management and environmental and social management as needed. The Bank team and the PIU will also jointly organize meetings as needed with other key stakeholders/ministries, the SC and international development partners to report and share project progress and seek support to address issues if any. All final study reports produced under the project are required to be in both English and Russian.

C. Sustainability

33. **Experience from the earlier World Bank involvement through the PMR implementation strongly supports the expectation of sustainable outcomes**. The PMI will lay the foundation for future strengthening of government's capacity to pursue lower carbon growth and effective adaptation. The project will support strengthening and improvement of the ETS (including the emissions cap), related regulation, allowance allocation, trade, MRV of GHG emissions under the ETS; as well as expanding climate-related fiscal policies and instruments (e.g., carbon taxes in the non-ETS sectors), and implementation tools, thus building government capacity to utilize these tools and instruments in the longer term. Institutional sustainability will be addressed by training and increased hands-on experience to strengthen and maintain long-term management skills in project management, communication, policy analysis, as well as better technical and institutional capacities of the key implementing agency and key stakeholders.

34. **Dialogues and cooperation between various stakeholder groups will contribute to the carbon policy development process and implementation support in the country.** The PMI will strengthen facilitation of

awareness raising and building support among key stakeholders (both public and private) and the general public for the targeted carbon pricing policy/policy mix in the country. Studying of international experiences, sharing of lessons and insights in the carbon pricing field, particularly, through study tours to countries with effective ETSs (e.g., US (Californian) ETS, Korean ETS, Chinese ETS, etc.) would serve as a good opportunity to develop skills, establish robust communication channels with international experts, and present practical experience for government agencies overseeing climate-related policy development and ETS in Kazakhstan, as well as key ministries involved in fiscal policy development and implementation.

35. The PMI project builds on the following key lessons learnt from the PMR project:

(a) Policy signals matter: As EU announced its European Green Deal in December 2019 with the possibility of implementing a Carbon Border Adjustment Mechanism (CBAM) and as Kazakhstan announced its goal to achieve carbon neutrality by 2060 during the UN Climate Ambition Summit in December 2020, these signals created an opening for a policy dialogue on more robust climate policies in Kazakhstan.
(b) Updated NDC: The modeling exercise demonstrated that without a stricter implementation of the ETS and complementary policies in non-regulated sectors, Kazakhstan may not be able to meet its NDC target.
(c) GHG Reporting: The e-reporting platform shifted GHG reporting from a manual format to an online platform. Moving forward investments in software upgrades are key to enhance ease and transparency for GHG emission reporting.
(d) MRV System: As Kazakhstan considers expanding the ETS to include methane, a strong MRV system is key in building trust in a market-based mechanism.
(e) Carbon Offset Registries: The diagnostic demonstrated a need for a critical technical upgrade for the registry software architecture and remove regulatory barriers to implement carbon transactions.
(f) National Allocation Plan (NAP): While there is no auctioning for the 4th allocation period (2021-2022) auctioning is key for the following two phases: 3% for 2023-25 and 10% for 2026-30.
(g) Stakeholder Engagement: Given that the NDC update exercise and the NAP exercise were conducted with Zhasyl Damu, there was strong engagement and buy-in of the government on the PMR outputs. This also helped build capacity of Zhasyl Damu. Active engagement with agencies responsible for the ETS in addition to engagement with industry associations, private sector, academia and the civil society will be necessary for an effective ETS.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

36. The overall residual risk is rated as *Moderate*. The key risks to achieving the PDO are related to Fiduciary (mainly procurement management) and Institutional Capacity for Implementation and Sustainability risk (lack of consultation and engagement among government ministries and other agencies). Taking into account the proposed mitigation measures, the procurement risk is rated Substantial. The risks for Institutional Capacity and Financial Management (FM) are rated Moderate after mitigation measures.

37. The PMI project builds on successful outcomes and close relationship that has been achieved and built through the Kazakhstan PMR project implemented during September 2014 and February 2021. The project only supports TA type activities based on the country's level of commitment to tackling climate change through carbon pricing instruments. The key risk on project management is lack of active consultation and engagement among

government ministries and other agencies on design and implementation of the instruments. This risk will be mitigated through close coordination and collaboration among key ministries as described under Institutional and Implementation Arrangement and strengthening linkages with the Development Policy Operations[16] and Energy Efficiency (EE) Operation[17] in Kazakhstan. Thus, a series of DPOs in Kazakhstan have a strong focus to support a more sustainable economic transition. The DPOs will put in place important building blocks, including, *inter alia*, reforms to strengthen the legal and policy foundations for ETS operation. Potential EE operation is also aimed towards support of achieving the national goals of lowering the energy intensity and improving industrial competitiveness (including ETS entities). As a result, the PMI is underpinned by a strong partnership with the Government and policy engagement through existing operations and analytical work. Reforms, however, require substantial time to develop, reflecting the country's political economy and the challenges of the post-COVID-19 global economy. High level of engagement with government and further policy dialogue to support implementation and deepening the reforms are expected to be fostered during project implementation. There is also a risk that the timeline of engagement could be jeopardized if there is a resurgence of COVID-19 cases. It is noted that the ETS function may be transferred from Zhasyl Damu to IGTIC, which will not involve key staff change. Therefore, the impact to project implementation is expected low.

38. The overall FM risk rating is assessed as *Substantial* before the mitigation measures are implemented given the inadequate capacity and lack of experience in implementing a World Bank-financed project by ZD. To mitigate the FM risk, the experienced qualified FM Specialist will be contracted as part of the PIU to manage all fiduciary aspects of the Project. All Project specific FM procedures will also be documented in the Fiduciary Manual that will be agreed with the Bank. With these mitigation measures implemented, the residual risk for FM is assessed as Moderate.

39. The overall procurement risk rating is assessed as High before the mitigation measures are implemented given (i) inadequate level of competition; (ii) procurement and implementation delays due to limited procurement capacity and lack of knowledge and experience of ZD under the MEGNR with Bank's Procurement Regulations. The proposed mitigation measures are: (i) development of the Fiduciary Manual, including the project specific procurement arrangements; (ii) hiring qualified technical experts to assist ZD under the MEGNR in preparation of the technical specifications; (iii) conducting a streamlined market analysis before launching tender processes; (iv) continuous capacity building and on job training by the WB procurement team; (v) monitoring of contracts implementation (quality, time, and cost) with agreed upon actions to expedite the payment process. With these mitigation measures implemented, the residual risk for Procurement is assessed as Substantial.

VI. APPRAISAL SUMMARY

40. **Rationale for public sector provisioning/financing**. The project supports the provision of public good, important for communities and on the regional/national levels. Given the underlying environmental problems and international commitments, Kazakhstan has committed to environmental policy goals that require the adoption or review of environmental policy instruments. With the current environmental policy approach and the development of the national ETS and other market-based policy instruments, adjusting and integrating these

[16] Private-Sector-Led And More Sustainable Economic Recovery Development Policy Financing (P174367); new - Kazakhstan Support for Vibrant and Sustainable Economic Transition DPF (P178303)
[17] Kazakhstan Energy Efficiency Project (P130013)

instruments will be a way forward to support environmental policy reform. The interventions aim at considering an integrated policy approach and introducing a strong price signal on carbon emissions, contributing to the Paris Agreement goal and the NDC target.

41. **The development impact.** Carbon pricing is a valuable instrument in the policy toolkit to promote decarbonization transitions. By internalizing the societal cost of GHG emissions, carbon pricing instruments facilitate investments in low-carbon technological innovations, foster multilateral co-operation, and create synergies between energy and climate policies. Thus, the ETS generates incentives to reduce emissions where these are most cost-effective and contributes to achieving climate change mitigation goals. Kazakhstan plans to use carbon pricing as an important component of its mitigation policy, with its expansion to play a central role in achieving the 2030 emissions reduction target. The project considers local context and regulations, as well as interlinkages with other policy priorities in the country. In the longer term, gradually increasing the stringency of a trading system's cap would contribute more to emissions reductions. As the ETS coverage increases, mitigation costs are also likely to fall, particularly if methane emissions are regulated. The project additionally includes institutional strengthening activities that will be instrumental for the Government of Kazakhstan while developing the right set of carbon pricing instruments and enhancing the ETS.

42. The tentative costs of the PMI TA project are those associated with developing approaches, policy measures, and instruments for improved ETS to drive GHG emission reduction and expand carbon pricing in the country. The PMI project is designed to bring a range of environmental co-benefits through support to national climate mitigation policies, including not only the co-benefit associated with reducing GHG emissions, but also the possibility of using offsetting mechanisms associated with GHG emission regulation in the ETS that could support air pollutant emission control and/or biodiversity protection through nature-based solutions, as well as could raise revenue from carbon pricing to help smooth the transition to a less carbon intensive economy, making it fairer and more inclusive.

43. **World Bank's comparative advantage and value added.** The World Bank has considerable experience working with and supporting emerging economies to design and deploy carbon pricing and market instruments to facilitate the reduction of emissions. In Kazakhstan, the Bank has a history of supporting the national ETS strengthening and improvement through the PMR program since 2014. Globally, collaborations with countries through the PMR over the last decade allowed to build on lessons learned and synergies and will enable effective and efficient implementation of the PMI and bring a long-term vision for the viability of carbon markets to its support for policies in the country. The World Bank adds value by assisting the Government of Kazakhstan in accessing the sources of global best practice approaches, facilitating international cooperation on carbon markets, as well as promoting development of a comprehensive knowledge base on carbon pricing instruments and market mechanism. The Bank involvement is, therefore, critical to support the country in strengthening of the national ETS and expansion of carbon pricing instruments to meet the NDC target and a long-term carbon neutrality goal by 2060.

A. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

B. Environmental and Social

44. The environmental risk from the project activities is expected to be Low. The project has no physical dimensions and does not include actions with any material manifestations. It does not have any physical footprint from construction activities that could have the potential to cause potential adverse impacts and or risks on the biophysical environment, human health and safety, and / or valued environmental components. Instead, the outputs of the project are likely to have indirect positive environmental impacts by providing technical assistance to strengthen carbon pricing that incentives reduction of GHG emission. The only activity that might involve physical activity would be related to the upgrade of infrastructure (electronic devices) necessary i) for the operation of the domestic offset program including the technical upgrades to the registry's software and improvements in the current regulatory documentation and ii) running the auctions of allowance allocation. However, actual hardware updates (i.e., electronic device purchase or replacement) would be none or expected to be at a very limited scale.

45. The social risk from the project activities is expected to be Moderate. Considering the project activities are not expected to involve physical works that may lead land acquisition or resettlement, labor influx risks, community health and safety risks or negative impacts on cultural heritage, as the project is aimed at decarbonization policies within the country and more importantly increasing modernization and competitiveness of industry, GDP growth, and foster investments in green technologies. The downstream impacts of these future policies of the government could result in higher energy prices which will have impacts on poor and vulnerable households or current carbon-intensive facilities. To understand downstream social impacts of the project activities, a distribution impact assessment for carbon pricing options assessed will be conducted as part of the project Component 3 during the project implementation. The planned distribution impact assessment will also outline strategies to address these impacts and risks. The Terms of Reference (ToR) for the mentioned assessment will be developed during project implementation for the Bank's team approval. To ensure the changes in policies are properly communicated to all stakeholders, particularly the public, the project will ensure timely information disclosure through the project stakeholder engagement plan (SEP), which will be complemented by a dedicated and robust Grievance Redress System (GRM).

46. The project is not expected to engage labor or security guards. However, a number of technical consultants will be hired to support the project implementation and carry out project activities. Additional precautionary measures will be put in place to prevent the risk of SEA/WSH (sexual exploitation and abuse/workplace sexual harassment) by enforcing the mandatory training and orientation of SEA/WSH aspects including a comprehensive code of conduct. Therefore, the risk of SEA?SH is considered to be low.

C. Financial Management and Procurement

47. **Financial management assessment**. The overall responsibility for financial management will be with ZD under MEGNR. It will be supported by the PIU, including dedicated experienced financial management/accounting/disbursement specialist (FMS). The FMS will handle daily financial management responsibilities, including planning and budgeting, disbursements, accounting, and financial reporting on project resources. Internal control procedures to be followed for managing project resources will be documented in the *Fiduciary Manual* (FidM), to be developed during the project preparation. Consistent with the World Bank-financed projects in Kazakhstan, the project will follow transaction-based disbursements and produce semi-annual Interim Unaudited Financial Reports (IFRs) for monitoring purposes. The procedures and formats for disbursements and IFRs will be agreed

during appraisal and documented in the FidM. External auditing of the project will be carried out by an independent private auditor in accordance with the terms of reference acceptable to the World Bank.

48. Financial management assessment was conducted in accordance with the Financial Management Manual for World Bank Investment Project Financing Operations that became effective on March 1, 2010 and was revised on February 10, 2017. The assessment established that the FM arrangements at ZD under MEGNR are not adequate to implement the project. In order to bring the Implementing Agency's arrangements in line with minimum requirements of the World Bank Policy and Directive: Investment Project Financing, the following actions should be implemented: (i) development of the Fiduciary Manual, including the project specific FM arrangements; (ii) recruitment of the qualified FMS acceptable to the Bank as part of the PIU, and (iii) upgrading of the accounting software acceptable to the Bank that meets the Bank's financial reporting and accounting requirements.

49. The overall responsibility for the project financial management arrangements will be with the Finance Service (FS) of ZD, that is responsible for budgeting and planning, as well as for accounting and financial reporting. However, since the staff of the FS has no knowledge and experience in the FM and disbursement procedures of the Bank, they will need to be supported by the FM Specialist to be recruited as part of the PIU. The project accounts will be prepared in line with Cash Basis of the International Public Sector Accounting Standards. Currently the FS utilizes 1C accounting software, which is adequate and is used for all Kazakhstan projects' accounting and financial reporting. This software will need to be upgraded for the proposed Project to meet the Bank's accounting and financial reporting requirements within 60 days after the Project effectiveness.

50. The project will use traditional disbursements method, which is the Statement of Expenditures (SOE) based. The project's Designated Account (DA), in US dollars, will be opened in a financial institution acceptable to the Bank. Other methods of disbursement the project could include direct payments and special commitments. Further details of the disbursement arrangements, including the DA authorized allocation, will be specified in the Disbursement and Financial Information Letter (DFIL). Semi-annual Interim Unaudited Financial Reports (IFRs) will be used for the Project monitoring and supervision. These reports will be prepared by the PIU and submitted to the Bank within 45 days of the end of each calendar semester.

51. There are no overdue audits under the ongoing projects neither in Kazakhstan, nor in the Environment and Energy Sectors. The audit of the project financial statements will be conducted by (i) independent private auditors acceptable to the Bank, on Terms of Reference acceptable to the Bank, and (ii) according to the International Standards on Auditing issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants. Annual audited project financial statements will be submitted to the Bank within six months after the end of each fiscal year, also at the project closing.

52. The Recipient has agreed to disclose the audit reports for the project, within one month of their receipt from the auditors, by posting the reports on the website of the MEGNR or any other website agreed with the Bank. Following the Bank's formal receipt of these reports from the Recipient, the Bank will make them publicly available according to the World Bank Policy on Access to Information.

53. **Procurement assessment**. Procurement under the proposed project will be governed by the World Bank's Procurement Regulations for IPF (November 2020 or any updated version after that) and will be also subject to the World Bank's Anti-Corruption Guidelines (dated July 2016). The procurement approach, procurement risks, arrangements and procurement plan for the project duration recommended by the Recipient will be presented in the Project Procurement

Strategy for Development (PPSD). The PPSD is being prepared by the Recipient with the support of the Bank's team and will be finalized before or by project effectiveness. The PPSD and the Procurement Plan will be updated during the project implementation to reflect any substantial changes in procurement approaches and methods to meet the actual project needs.

54. Procurement activities and packages envisaged under the project are mainly of low value and typical for the sector. They mainly include technical support and sector analysis for ETS improvement; assessments of carbon pricing; distributional impact analysis; and capacity building activities.

55. Procurement staff at ZD under the MEGNR lacks implementation experience of the World-Bank projects. A Procurement Specialist shall be hired as part of the PIU (see other risk mitigation measures in Section V. A. Key Risks). The overall responsibility for the project procurement arrangements will be with the Procurement unit of ZD under the MEGNR. The scope of the proposed project and its implementation following Procurement Regulations will require strengthening of the implementation capacity of ZD under the MEGNR and devoting additional resources to support ZD under the MEGNR in project oversight and procurement.

VII. World Bank Grievance Redress

Grievance Redress. Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY : Kazakhstan
Partnership for Market Implementation

Project Development Objectives

To strengthen the effectiveness of Emission Trading Scheme and support carbon pricing expansion to contribute to Kazakhstan's updated 2030 Nationally Determined Contribution targets and 2060 carbon neutrality goals.

Project Development Objective Indicators

Indicator Name	Corporate	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Name: Carbon pricing expanded		Text	No carbon tax and ETS covers its existing sectors, larger emitters and GHG (CO2).	ETS expanded to cover one more sector, or more emitters, or methane, or a carbon tax is introduced.	Annually	PIU, ZD, MEGNR and other key stakeholders (MNE, MOF, MOE and MIID)	PIU

Indicator Name	Corporate	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Description: This indicator measures the second part of the PDO on carbon pricing expansion.							
Name: Reduction in GHG emission allowance cap in the ETS (reduction compared to the 2021 National Allocation Plan) (percentage)		Percentage	0.00	7.00	Annually	PIU, MEGNR	MEGNR
Description: This indicator measures the first part of the PDO.							
Name: Procedures for validation and verification of GHG emissions digitalized and complies with international requirements and experience (i.e., Transparency Framework of the Paris Agreement)		Yes/No	N	Y	Annually	PIU, MEGNR	PIU
Description: This indicator also measures the first part of the PDO focusing on ETS MRV improvement.							

Intermediate Results Indicators

Indicator Name	Corporate	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Name: Allowance auction is introduced in ETS		Yes/No	N	Y	Annually	PIU, MEGNR	PIU
Description: This indicator also measures ETS improvement.							
Name: Accounts opened to register carbon offset projects in the carbon registry		Number	0.00	15.00	Annually	PIU, MEGNR	PIU
Description: This indicator also measures ETS improvement.							
Name: Benchmark values updated to reflect technological progress in different sectors in line with international environmental standards		Text	Existing benchmarks	Benchmarks updated	Annually	PIU, MEGNR, MIID	PIU
Description: This indicator also measures ETS improvement.							

Target Values

Project Development Objective Indicators

Indicator Name	Baseline	End Target
Carbon pricing expanded	No carbon tax and ETS covers its existing sectors, larger emitters and GHG (CO2).	ETS expanded to cover one more sector, or more emitters, or methane, or a carbon tax is introduced.
Reduction in GHG emission allowance cap in the ETS (reduction compared to the 2021 National Allocation Plan) (percentage)	0.00	7.00
Procedures for validation and verification of GHG emissions digitalized and complies with international requirements and experience (i.e., Transparency Framework of the Paris Agreement)	N	Yes

Intermediate Results Indicators

Indicator Name	Baseline	End Target
Allowance auction is introduced in ETS	N	Yes
Accounts opened to register carbon offset projects in the carbon registry	0.00	15.00
Benchmark values updated to reflect technological progress in different sectors in line with international environmental standards	Existing benchmarks	Benchmarks updated