Session SB63 (2025)

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Facilitative, Multilateral Consideration of Progress

A compilation of questions to - and answers by - Kazakhstan exported on 16-10-2025 by the UNFCCC secretariat

Question by United Kingdom of Great Britain and Northern Ireland
at Wednesday, 10 September 2025
Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Question to Kazakhstan on their data availability

Thank you, **Kazakhstan** , for the opportunity to comment on your 1 st Biennial Transparency Report. During your review, you noted that one of the main challenges you face when reporting on its policy and measures was due to limited data availability. What approaches are you taking to increase data availability? Have you seen some successes since submitting your first BTR?

Answer by Kazakhstan
The submission of Kazakhstan's first Biennial Transparency Report was a *learning-by-doing* process, particularly for NDC tracking and FTC needed and received. Through this process, we were able to identify critical data availability gaps and areas where further improvement is needed.

To address these challenges, Kazakhstan is taking a multi-pronged approach:

1. **Digitalization and institutional reforms:**

Kazakhstan is implementing a broad agenda for digitalization of government operations, monitoring and reporting processes. This is expected to make more data accessible and transparent. A dedicated Ministry of Artificial Intelligence and Digital Development has been established in September 2025, alongside the International Center for Artificial Intelligence and other initiatives that will help unlock, integrate, and operationalize additional sources of data.

2. **Stocktaking for NDC tracking:**

We are preparing a structured monitoring process to identify:

· Critical datasets required for effective NDC tracking.

· Data that already exists but requires proper pipelines and integration.

· New regulations and standards needed to ensure systematic data collection, monitoring and reporting as well as verification of data.

3. **Capacity building and coordination:**

We recognize that data availability is not only a technical but also an institutional challenge. Efforts are planned to strengthen capacity through projects of GEF-FAO-CBIT

and other donors in statistical agencies, ministries, and state-owned enterprises to collect and report climate-relevant data.

4. **Use of international support and methodologies:**

Kazakhstan is engaging with international partners and initiatives to adopt best practices for data collection, monitoring, and verification—ensuring alignment with ETF provisions and MPGs requirements. Work is also underway to harmonize national data collection with IPCC guidelines and sector-specific methodologies through GEF-FAO-CBIT project.

5. **New data sources and technologies:**

We are exploring the use of remote sensing, satellite data, and GIS tools to strengthen monitoring in areas such as land use, forestry, and waste. In addition, we are piloting digital MRV systems in the context of the national Emissions Trading System (ETS), which can also support broader BTR reporting in the future.

Since the submission of the first BTR, some progress has already been achieved:

· There are plans toward integrating data from the national ETS registry into BTR processes.

· Plans for pilot initiatives in digital MRV and satellite-based monitoring requiring linking with BTR process.

Kazakhstan sees this as an ongoing process of building institutional capacity, enhancing transparency, and improving consistency of data for future BTRs, though interagency coordination and ownership remain to be main challenges.

Question by European Union at Wednesday, 10 September 2025
Category: Progress towards the achievement of its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Renewable Energy Expansion

Kazakhstan has set a target of increasing the share of renewable energy in electricity generation to 15% by 2030 and 50% by 2050. In the BTR on page 82 it is noted that the share reached 5.92% in 2023, surpassing planned figures. What have been the most effective policy instruments in driving this progress, what challenges have been encountered, and what lessons can be drawn to support achievement of the 2050 target?

Answer by Kazakhstan

The development of renewable energy in Kazakhstan began with the Law on Support of Renewables in 2009. This was followed by the adoption of the Concept of Green Economy in 2013, which established clear renewable energy targets. In the same year, feed-in tariffs were introduced, enabling the launch of the first renewable energy projects.

In 2018, the system transitioned from feed-in tariffs to auctions, which became the main driver of renewable energy deployment. Auctions were supported by a package of enabling measures, including:

· Power Purchase Agreements (PPAs) with the government through the system operator's subsidiary, the *Financial Settlement Center* .

· Exemptions from electricity transmission service fees.

· Priority dispatch for renewable generation.

· Reservation of land plots and grid connection points for RE projects.

· Improved access to the network.

· Investment preferences, such as exemptions from customs duties, import VAT, corporate income tax, land tax, and property tax, as well as in-kind grants.

These measures created a viable business case for renewable energy, allowing projects to advance without relying on heavy subsidies. Among these policies, long-term PPAs (15–25 years) proved to be the most effective, providing investor confidence and lowering borrowing rates, thus making renewables financially attractive.

As a result, Kazakhstan is on track to surpass its 15% renewable energy target, with projects advancing both through auctions and through intergovernmental agreements.

Remaining Challenges

Despite notable progress, the country faces significant challenges in integrating higher shares of renewables into the grid:

1. Technical and system stability issues.

Aging power plants and transmission infrastructure, limited system flexibility, and reliance on expensive cross-border electricity trade for balancing all constrain further RE integration.

2. **Energy security concerns**

Transitioning from coal to natural gas for decreasing carbon intensity and for balancing renewables has been hindered by constant delays in constructing gas processing plants from major oil and producers.

3. **Human capital gap**

Power sector personnel are largely trained in the Soviet-style approach to grid management, which focuses on dispatchable load and strict operational standards. A higher share of variable renewables requires a shift toward adaptive, smart, and digitalized control systems.

4. **Rising integration costs**

As the renewable energy share grows, so do the costs of integration, which risk increasing tariffs for end consumers.

Future Outlook

Looking ahead to 2050 and 2060 decarbonization targets, Kazakhstan risks reaching the technical limits of its grid unless major reforms and investments are undertaken. Key issues include:

· **Limits of PPAs** . While PPAs were central to scaling up renewables, they may soon reach their effectiveness ceiling as system integration and balancing costs rise.

· **Corporate renewable initiatives** . Many companies wish to build renewable plants for self-supply and potentially feed into the grid. However, high financing costs and grid constraints limit these opportunities. Corporate PPAs are possible in principle but currently unattractive due to high interest rates, even with the added pressure of CBAM risks.

· **Distributed renewable energy** . Household-scale deployment remains minimal, primarily due to the lack of affordable financing and the need for local grid modernization.

· **Financing barriers.** Access to low-interest capital is critical. Kazakhstan and Central Asia are largely outside the scope of ODA and philanthropic low-cost financing mechanisms, leaving a major gap that could undermine progress toward 2050 and 2060 goals.

To sustain progress and avoid stagnation, Kazakhstan will need to:

· Secure affordable international financing for both utility-scale and distributed renewable energy deployment.

· Build sustainable national capacity for education and research in critical technologies and approaches in the power sector.

· Invest in system flexibility technologies (e.g., storage, demand response, and fast-ramping plants).

· Develop virtual power plants (VPPs) and market arrangements to enable corporate renewable generation to operate efficiently.

· Modernize the national grid with smart, digitalized solutions.

All of the abovementioned require substantial and targeted financial and knowledge support, otherwise, there is high risk of rolling backwards.

Question by European Union at Wednesday, 10 September 2025
Category: Progress towards the achievement of its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Afforestation initiative

In the BTR (p. 90), it is noted that the President of Kazakhstan announced an ambitious plan to plant two billion trees by 2025, representing a major and impressive afforestation initiative. Could you share how this initiative is advancing to date, and what key factors have supported its implementation, and what challenges have been encountered along the way?

Answer by Kazakhstan

Under this initiative, 1.15 billion trees were planted across the country from 2021 to 2024. According to the Ministry of Ecology and Natural Resources, 138 million trees were planted in 2021, 283 million in 2022, 340 million in 2023, and 1.6 million in 2024.

In 2025, 373 million trees are planned to be planted. In the spring of 2025, 225 million seedlings were planted, and 153 million shrubs of various species are planned to be planted in the fall.

Due to the failure to plant 2 billion trees by the end of 2025, the plan's implementation deadline was extended until the end of 2027.

The following reasons were cited for the failure to achieve the plan: insufficient funding; The drought of 2021-2023 negatively impacted seed quality, ultimately leading to a shortage of planting material.

A key factor in the implementation of this initiative is the creation of an interactive map displaying all plantings, ensuring transparency and public oversight, https://orman.gharysh.kz/ru/table

The interactive map provides a planting plan broken down by year and by region, https://orman.gharysh.kz/ru/plans

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Question by European Union at Wednesday, 10 September 2025
Category: Progress towards the achievement of its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Industrial Decarbonization via BAT and Circular Economy

Kazakhstan has introduced Best Available Techniques (BAT) for cement, lime, and chemical production, and banned the export of scrap metals to promote recycling. What have been the most promising outcomes of these measures in terms of emissions reduction and industrial modernization, and how is compliance being incentivized or enforced?

Answer by Kazakhstan
In Kazakhstan, the implementation of best available techniques (BAT) and a ban on scrap metal exports are aimed at modernizing industry, reducing resource consumption, and reducing emissions. The table provides rough estimates of the expected emission reductions, as these measures are in the early stages of implementation and require more time for verification. Compliance is stimulated by a combination of legislative measures, technical guidelines for new facilities, customs restrictions on scrap exports, and other measures. These measures can be justified in terms of emission reductions:

• The implementation of BATs promotes a gradual reduction in emissions and improved energy efficiency at industrial enterprises, but specific data on the extent of emission reductions have not yet been obtained.

• The requirement to implement BATs stimulates production modernization aimed at processing and creating products with higher added value. However, this process requires significant investment, time, and personnel retraining.

• The ban on scrap metal exports indirectly reduces the need for raw materials, thereby reducing emissions from pellet smelting.

Ensuring compliance with these requirements is also supported by incentive mechanisms:

• The Law on BAT in Kazakhstan provides investment incentives and requirements for the implementation of best available techniques for industrial enterprises.

• Experts are developing industry-specific BAT guidelines, which contain recommendations for the implementation of the most effective technologies and methods for reducing environmental impacts.

• The state can provide financial and administrative support and incentives for enterprises implementing BAT.

• The ban on scrap metal exports is intended to encourage domestic enterprises to collect and recycle it, thereby promoting the development of a circular economy.

• BATs are being introduced gradually, allowing time for the applicability of the technologies to be assessed.

Question by New Zealand at Tuesday, 09 September 2025
Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Emissions factors for manure management

New Zealand notes Kazakhstan uses default methane emission factors for manure management, based on Eastern Europe values. Could Kazakhstan elaborate on whether any country-specific emission factors are being developed or considered?

Answer by Kazakhstan
Methane emission factors for dairy cattle and non-dairy cattle calculated using the Tier 2 methodology in accordance with the IPCC Guidelines, 2006. Gross energy values were used to estimate emissions, taking into account national parameters such as animal weight, milk production and fat content, feeding situation, etc. CH4 emissions

from Cattle cover for over 60 % of total methane emissions from manure management, so the Tier 2 method was used for this category.

For other animal categories (sheep, goats, swine, horses, etc.), which contribute significantly less to emissions in this category, the Tier 1 method was used, with regional default emission factors typical of Eastern Europe.

At the same time, the country is considering switching to the Tier 2 method for some new animal categories, primarily swine and horses, as national data on animal characteristics and data on appropriate manure management systems accumulate.

Question by New Zealand at Tuesday, 09 September 2025
Category: Progress towards the achievement of its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Monitoring impact of mitigation policies and measures in the agriculture sector

Kazakhstan reports several policies and measures in the agriculture sector, including support for livestock breeding and rational land use. Could Kazakhstan provide more detail on how the mitigation impact of these measures is being monitored?

Answer by Kazakhstan
Statistics on the number of breeding livestock are published on the website of the Bureau of National Statistics. Data on breeding livestock are compared with the total number of livestock. Taking into account the higher productivity of breeding livestock, estimates of the mitigation effect are made.

Question by Canada at Wednesday, 03 September 2025
Category: All emissions and removals related to its quantified economy-wide emission reduction target
Type: Before 10 September
Title: New technologies in GHG Inventory development

How have you been able to leverage new technologies such as artificial intelligence to improve GHG inventory development?

Answer by Kazakhstan

At this stage, artificial intelligence technologies are not used in the preparation of the national greenhouse gas inventory. Calculations are carried out manually by expert teams using established methodologies based on IPCC guidelines.

Nevertheless, Kazakhstan is currently evaluating feasibility and potential applications of new technologies, particularly, remote sensing and artificial intelligence for monitoring land use, forestry, and infrastructure for climate change issues in general.

Question by Canada at Wednesday, 03 September 2025
Category: All emissions and removals related to its quantified economy-wide emission reduction target
Type: Before 10 September
Title: GHG Inventory methodologies and mitigation measures

What processes do you have in place to ensure inventory methodologies effectively reflect changes in activities/practices resulting from mitigation measures?

Answer by Kazakhstan

The greenhouse gas inventory methodology does not directly track the implementation of mitigation measures or policies. Instead, the inventory reflects **actual changes** in emissions based on activity data obtained from verified and authoritative sources, such as statistical agencies, sectoral ministries, or reporting entities.

Therefore, if mitigation measures lead to real changes in activity levels—such as reduced fuel consumption, shifts in production processes, or adoption of cleaner technologies—and these changes are captured in the underlying data, the inventory will reflect them accordingly.

Question by Canada at Wednesday, 03 September 2025
Category: All emissions and removals related to its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Archiving system of GHG Inventory

Could you please give a brief overview of key processes part of your national GHG inventory archiving system that support its efficient maintenance?

Answer by Kazakhstan
The national greenhouse gas emissions archiving system includes a set of procedures for the reliable storage, documentation, and organization of source data, calculation methodologies, and results used in the preparation of the National Inventory Document.

Key processes:

1. **Data registration and control** All activity data, emission factors, and calculation methodologies are recorded and tracked.

2. **Documentation of methodologies and calculations** Descriptions of data collection procedures, applied methodologies, assumptions, as well as digital and textual calculation materials are archived to ensure transparency and reproducibility.

3. **Quality control and archive access** Quality control of data and procedures is ensured, along with access to archived information for authorized bodies and experts during annual reviews and international assessments.

4. **Responding to inquiries and implementing recommendations** National experts respond to reviewers' queries and incorporate recommendations from reviews into updates of the National Inventory Document.

5. **Improvement of the archiving system** Work is underway to implement cloud technologies to enhance data storage and provide remote access to the archive for national experts and international reviewers.

This system ensures reliable inventory management, supports data quality, and promotes transparent international cooperation.

Question by Canada at Wednesday, 03 September 2025
Category: All emissions and removals related to its quantified economy-wide emission reduction target
Type: Before 10 September
Title: Quality management system of GHG Inventory

Could you please share some examples of good practices used to ensure that QA/QC checks are done thoroughly for all sectors as well as for cross-cutting areas of the GHG inventory?

Answer by Kazakhstan
The national GHG inventory system includes QA/QC procedures covering both sectoral and cross-sectoral components.

Examples of good practices include:

- Internal verification of calculations using control tables, logic checks, trend analysis;
- Use of standardized templates and reporting formats;
- Coordination of shared parameters (e.g., fuel use) across sectors;
- Independent external audit of key sectors as needed.

In addition, the system is guided by a **national QA/QC plan** , which outlines:

- Key milestones and timelines for inventory preparation and review;
- Designation of responsible experts for each sector;
- Roles and responsibilities for both **primary** and **cross-sectoral QA/QC** ;
- Procedures for quality control of the chapters and sections of the National Communication (NC) and other climate reports.

This plan supports the sustainability, consistency, and transparency of the inventory process over time.

Session SB63 (2025)

Session closed at 10-10-2025

UNFCCC - LAST PAGE OF EXPORT