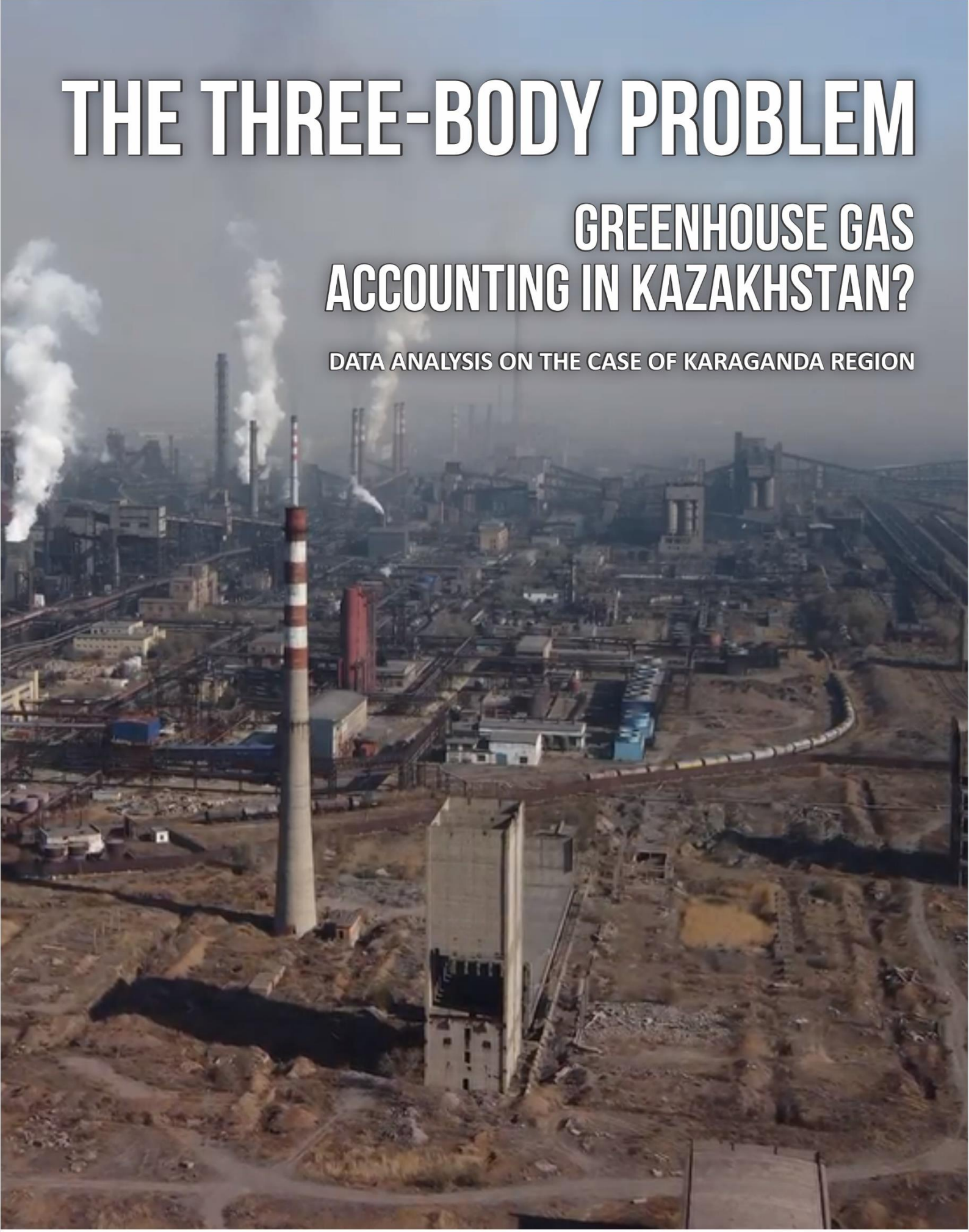
THE THREE-BODY PROBLEM

GREENHOUSE GAS ACCOUNTING IN KAZAKHSTAN?

DATA ANALYSIS ON THE CASE OF KARAGANDA REGION



Финансирование Европейского Союза

TRANSITION
Ministry of Foreign Affairs of the Czech Republic

CZECH AID

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Supported by:
Federal Ministry for Economic Affairs and Climate Action
on the basic of a decision by the German Bundestag

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Karaganda - Prague - 2023

Kalmykov D.E. et al. **The three-body problem. Greenhouse gas accounting in Kazakhstan? Data analysis on the case of Karaganda region.** Karaganda - Prague: EcoMuseum, Arnika, 2023. 44 pages.

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This study is published in English, Russian and Kazakh languages
English translation: Makar Tereshin
Kazakh translation: Asel Malikova

This publication was prepared with the financial support of the European Union and the Transition Promotion Program of the Ministry of Foreign Affairs of the Czech Republic, as well as with the assistance of the Small Grants Program of the International Climate Initiative (IKI), financed by the German Federal Ministry of Economic Affairs and Climate Protection (BMWK) and the German Federal Foreign Office (AA) and implemented through the German Society for International Cooperation (GIZ) GmbH.

The contents of this publication are the responsibility of the Karaganda Regional Ecological Museum and Arnika and do not represent the views of donors.

Annotation

The initiative **"OUR RESPONSE TO CLIMATE CHANGE"** united two projects of the EcoMuseum:

● **"Civil Society Participation in Climate Change Mitigation in Karaganda Oblast"** - is implemented in partnership with the Czech NGO "Arnika - Citizen Support Centre" with financial support from the European Union (EU) nder the “Civil Society Organizations and Local Authorities” program, with additional support from the Transition Promotion Program of the Ministry of Foreign Affairs of the Czech Republic.

● **"Implementation of measures on adaptation to climate change in Karaganda Oblast"** - is carried out within the framework of the International Climate Initiative (IKI), implemented by the German Society for International Cooperation (GIZ) on behalf of the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV).

One of the objectives of the initiative is to develop a greenhouse gas (GHG) emission reduction action plan for the Karaganda Region. Emission reduction measures (mitigation measures) should be implemented for enterprises that have the most detrimental impact on the climate. They should also be cost-effective in terms of GHG emission reduction.

In order to select priority sectors of the economy and specific polluting enterprises, where mitigation measures will be implemented, the "Our Response to Climate Change" initiative has carried out the search and assessment of the availability of data on the current level of GHG emissions in the Karaganda region. Such data is a starting point for planning of emission reduction measures.

The work on the search of data on actual greenhouse gas emissions by enterprises of Karaganda region for the period 2016-2021 revealed the imperfection and inefficiency of the system of monitoring and accounting of greenhouse gasses, violations and shortcomings in ensuring its availability to the public and government agencies.

The study found that at least three GHG accounting and reporting systems exist in parallel in the RK:

- State GHG inventory, which is used to generate national reports to the UNFCCC;
- Reports of enterprises submitted to the state carbon inventory;
- Reports of enterprises submitted to the Pollutant Release and Transfer Register.

In this study, the above GHG accounting systems are studied to assess the availability of GHG emission data in them, their completeness, reliability, quality, accessibility and comparability of the information available in them.

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List of abbreviations and acronyms

CHPP	Combined Heat and Power Plant
CRF	Common Reporting Format
CRF	Common Reporting Format
EC	Ecological Code
EDS	Electronic digital signature
EIS OOS	Unified Information System for Environmental Protection (Единая Информационная Система Охраны Окружающей Среды in Russian)
FEB	Fuel and energy balance
GFEI	State Fund Environmental Information (ГФЭИ, государственный фонд экологической информации in Russian)
GHG	Greenhouse gas
GWP	Global warming potential
IPCC	Intergovernmental Panel on Climate Change
IPCCC	International Panel Climate Change Convention
IPPU	Industrial Processes and Product Use
IPUP	Industrial processes and product utilization
ISO	International Organization for Standardization
JSC	Joint-stock company
LULUCF	Land Use, Land Use Change and Forestry (ЛХДВЗ, лесное хозяйство и другие виды землепользования in Russian)
MENR	The Ministry of Ecology and Natural Resources
MSW	Municipal solid waste
NDCs	Nationally determined contributions
NIR	National inventory reports
NIR	National Inventory Report
PRTR	Pollution Release and Transfer Register
RK	Republic of Kazakhstan
TEB	The National Statistic fuel energy consumption reporting table (Toplivno-Energeticheskyi Balance, ТЭБ in Russian)
TPP	Thermal Power Plant
UN	United Nations
UN FCCC	United Nations Framework Convention on Climate Change
UNECE	United Nations Economic Commission for Europe

1. Legal requirements on access to information on greenhouse gas emissions and removals

Sources of information on emissions and removals of greenhouse gasses of Kazakhstan are:

1) National reports of the RK on the inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gasses not regulated by the Montreal Protocol on Substances that deplete the Ozone Layer;
2) National Carbon Quota Plan;
3) State Registry of Carbon Units;
4) State Carbon Inventory;
5) Register of emissions and transfer of pollutants of the Republic of Kazakhstan.

According to the Ecological Code of the Republic of Kazakhstan (Article 17 of the EC RK, paragraph 1, subparagraphs 2, 4 and 8, Article 18 of the EC RK) data on emissions and removals of greenhouse gasses refer to environmental information and cannot be recognised as commercial or other secret protected by law. Such data should be collected in GEFI - the State Environmental Information Fund (Article 20 of the EC RK, paragraph 5-7), which, in its turn, is obliged to provide this information at the first request without explaining the reasons for the request.

One can submit a request to the State Environmental Information Fund through an online service for obtaining information on the website of the e-government of the RK (www.egov.kz and https://oos.ecogeo.gov.kz, see Figures 1.1-1.3). An electronic digital signature (EDS) is required to submit a request. Without EDS it is impossible to request information, which unreasonably discriminates against the population of Kazakhstan in the right of access to environmental information, as possession of EDS is not mandatory, and many people do not have a digital signature due to lack of need or inability to obtain one. This system deprives whole layers and groups of population - several million people - of the possibility of access to environmental information, including, for example, pensioners and students, as the majority of elderly people do not have EDS, schoolchildren and students cannot obtain EDS until they reach the age of 17.

The interface of this page also does not allow making freely formulated requests (Figure 1.4). To submit a request, you can select only the information that is included in the drop-down list. For example, this list does not allow requesting information on issued GHG emission quotas and carbon inventory data, on fulfillment of Kazakhstan's commitments under the UNFCCC and other international conventions or on issued environmental permits. Arbitrarily limited by the the Ministry of Ecology and Natural Resources of the RK the list of the requested information makes it impossible for the public to access important environmental information, including data on Kazakhstan's impact on the climate.

The following is a brief characterization of each of the above information sources with an analysis of the availability of data of interest on greenhouse gas emissions and removals in Karaganda Oblast as part of Kazakhstan's overall indicators (Ch. 3-4).

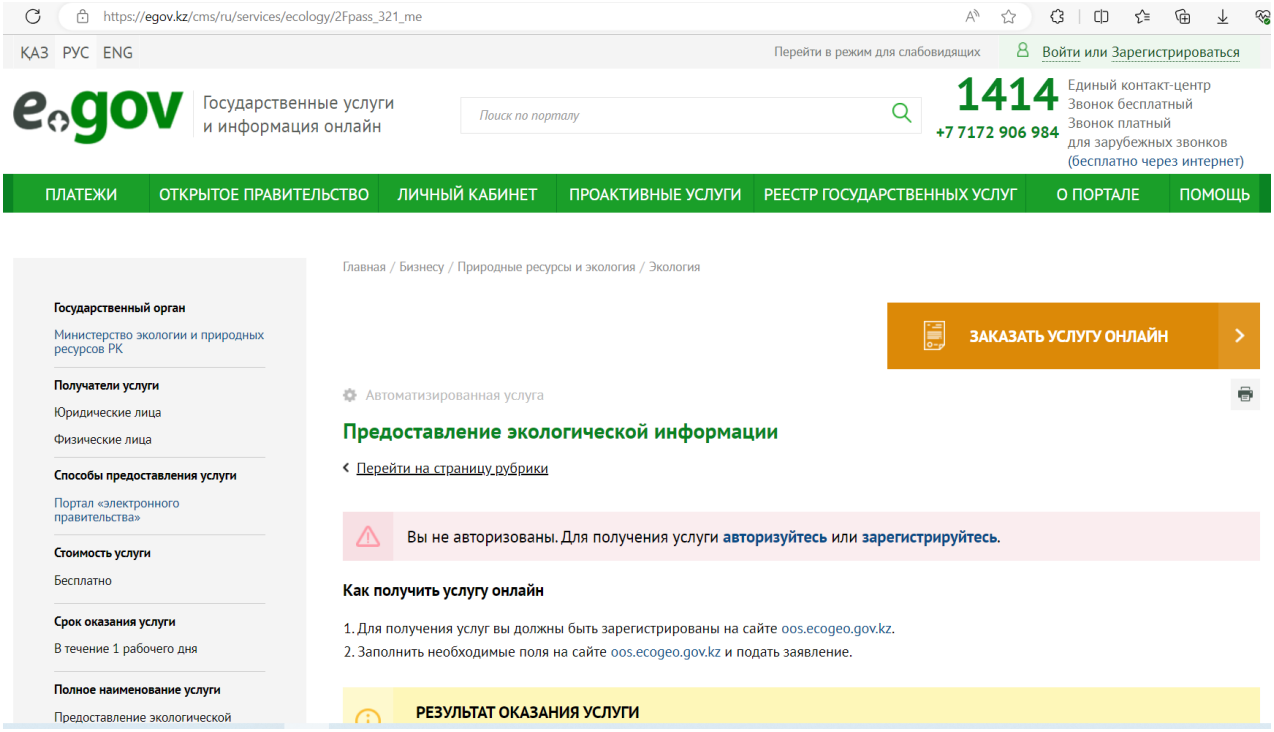

Figure 1-1 – Page of the service "Provision of environmental information" on the website of the e-government of Kazakhstan www.egov.kz

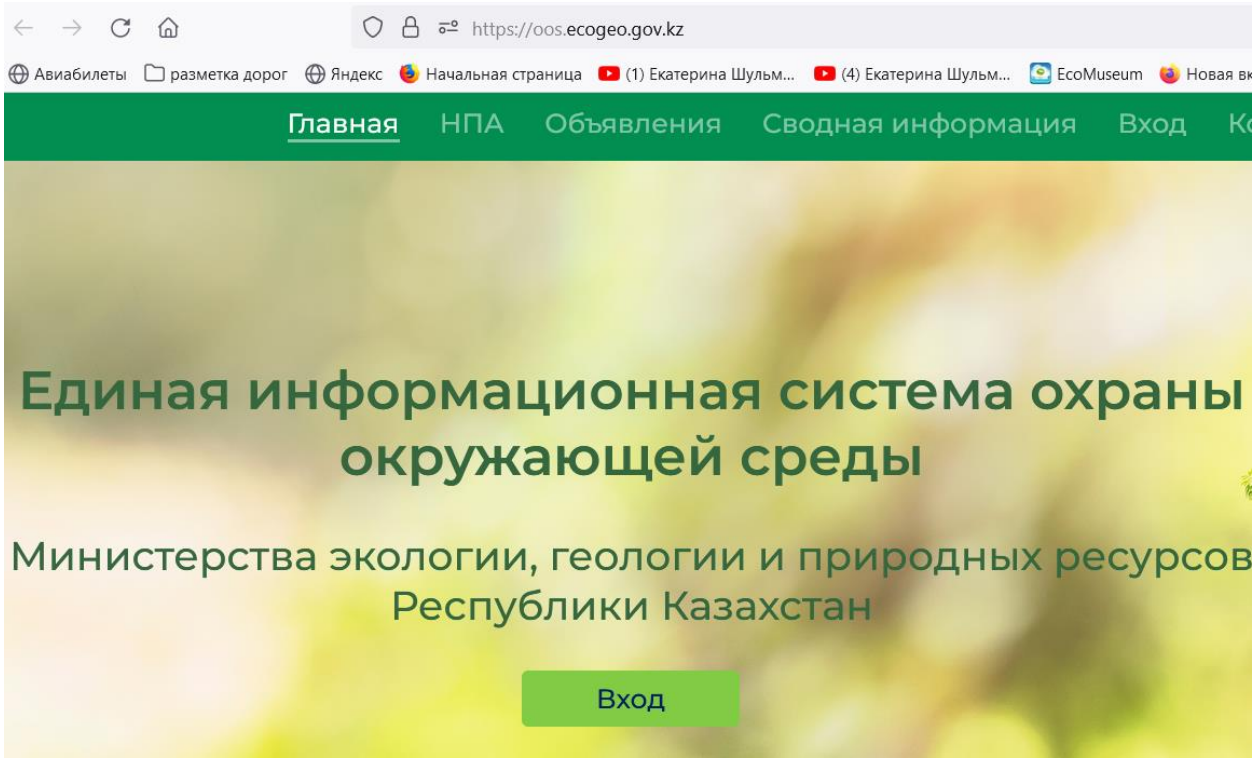

Figure 1-2 - Website of the Unified Information System for Environmental Protection (EIS OOS) of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan

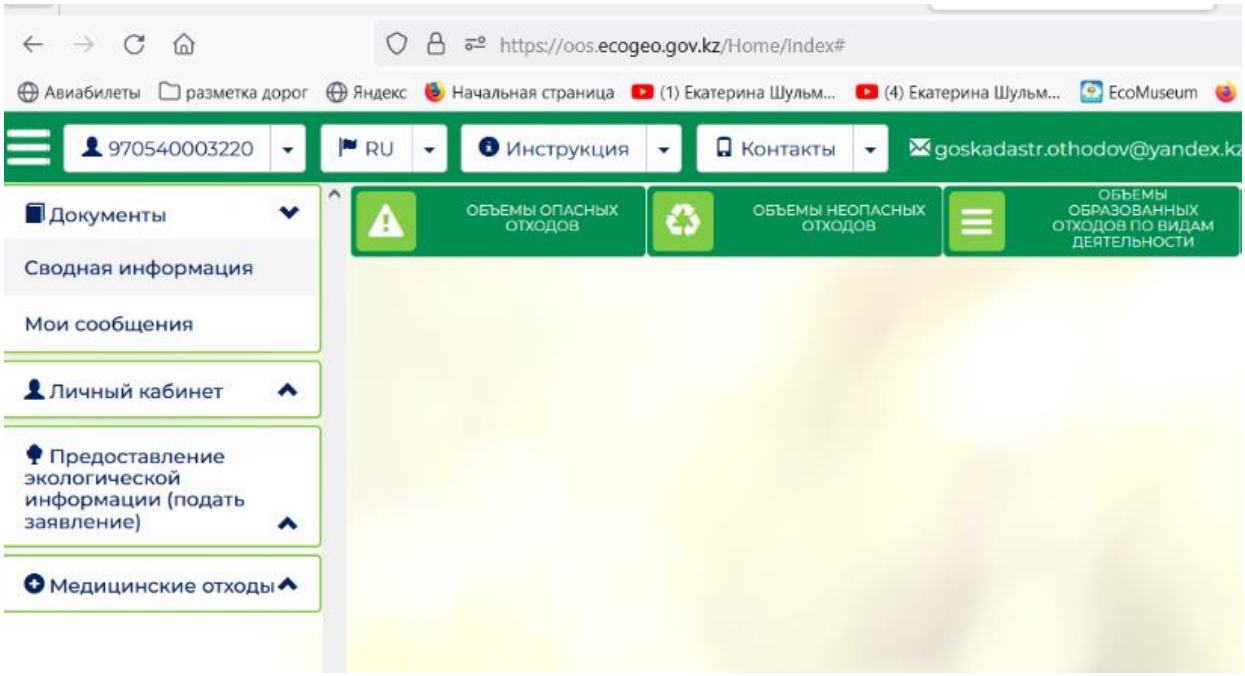

Figure 1-3 - Personal account interface on the UIS EP website, where the button "Provision of environmental information (submit an application)" is displayed

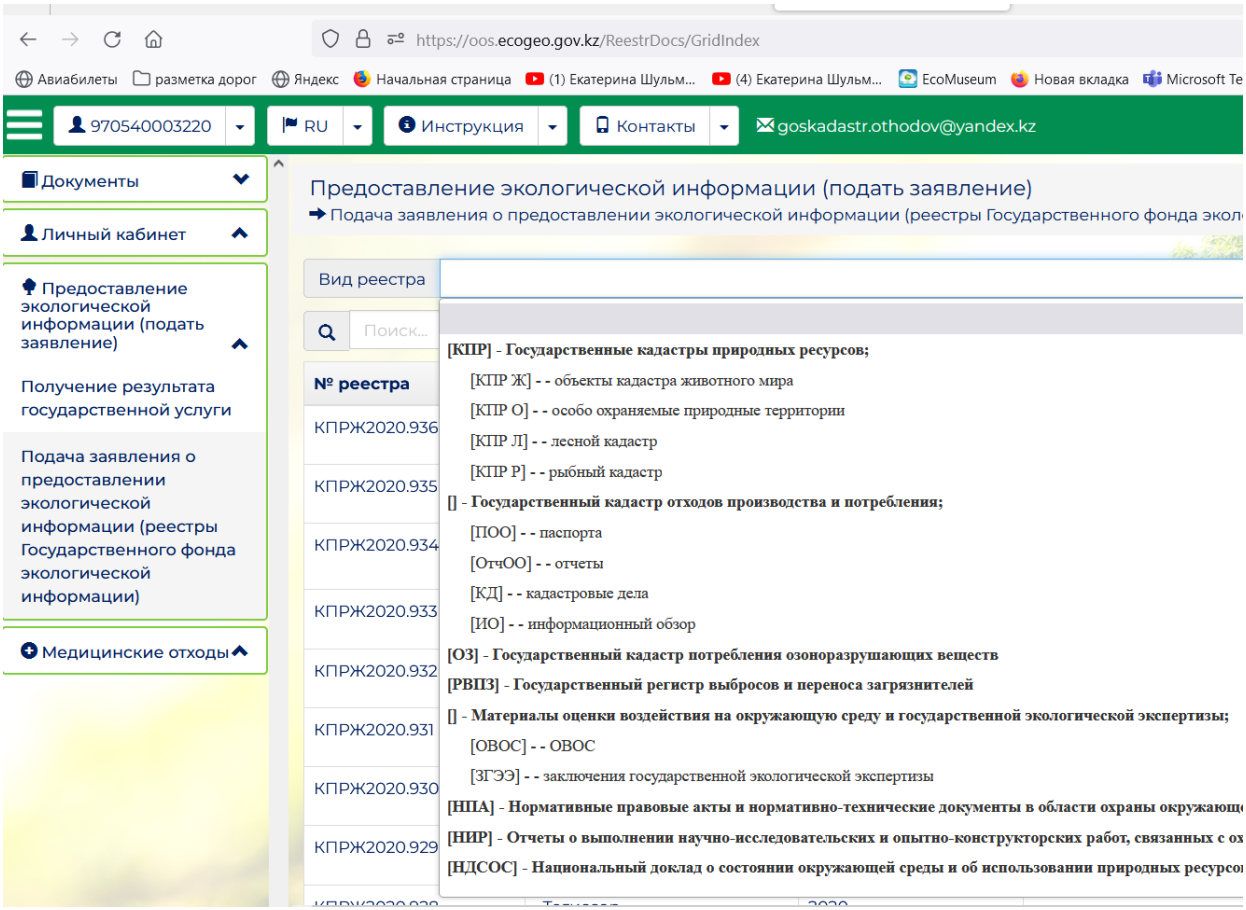

Figure 1-4 - Interface of the personal account on the UIS EP website with the list of available information. No Carbon Inventory available

2. Regulation of accounting for greenhouse gas emissions and removals

The Ministry of Ecology and Natural Resources of the Republic of Kazakhstan (MENR RK) is the operating body for the implementation of international treaties of Kazakhstan in the field of climate change and carries out state regulation in the field of GHG emissions and removals in order to ensure the achievement of national contributions of the RK, which are determined in accordance with the Ecological Code of the Republic of Kazakhstan.

State regulation of greenhouse gas emissions and removals in Kazakhstan is envisaged to be carried out through:

1) application of instruments of state regulation, including:
    - establishment of carbon budget;
    - carbon quotation;
    - administration of plant operators.
2) Establishing a market mechanism for trading in carbon units.

The carbon budget is understood as the maximum allowable amount set for the carbon balance of the Republic of Kazakhstan for a period of five consecutive calendar years.

Carbon quoting refers to the establishment by the state of quantitative restrictions on the total volume of GHG emissions and their distribution among the quota subject enterprises in the regulated sectors of the economy:

- electric power sector,
- oil and gas,
- mining,
- metallurgical,
- chemical industry,
- manufacturing industry - production of cement, lime, gypsum and bricks.

The Environmental Code requires six greenhouse gases to be subject to state regulation:

1) carbon dioxide (CO2);
2) methane (CH4);
3) nitrous oxide (N2O);
4) hydrofluorocarbons (HFCs);
5) perfluorocarbons (PFCs);
6) sulfur hexafluoride (SF6);

At the same time, the quota emissions of greenhouse gases are understood as GHG emissions converted into carbon dioxide equivalent in accordance with the global greenhouse potential of each greenhouse gas.

Volumes of GHG emissions and removals are measured and calculated in tonnes of carbon dioxide (CO2) equivalent, whereby a tonne of CO2 equivalent means one metric tonne of CO2 or mass of other greenhouse gas equivalent to one metric tonne of CO2 in terms of global warming potential. Calculation of GHG emissions and removals is carried out according to the methods developed and approved by the MENR of the RK.

The above list of types of greenhouse gasses may also include other substances that are defined as greenhouse gasses by the authorized body in the field of environmental protection in the event of entry into force of international obligations of the RK requiring state regulation measures in respect of such substances.

It should be noted that the list of greenhouse gases regulated by the Environmental Code within the framework of state regulation differs both from the list of greenhouse gases for which Kazakhstan carries out reporting under the requirements of the UNFCCC Convention and from the list of GHGs under the reporting requirements for the Pollution Release and Transfer Register (PRTR) of the Aarhus Convention.

State inventory of greenhouse gas emissions and removals is a series of organisational activities, during which actual volumes of GHG emissions and removals in Kazakhstan for a given period are determined: collection of necessary data, processing, storage and analysis of data.

The state inventory of GHG emissions and removals is carried out by the subordinate organisation of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan, - as of 2023 it is the joint stock company "Zhasyl Damu" - https://recycle.kz/en/parnikovye-gazy (Figure 2.1).

To determine GHG emissions and removals, the state inventory of GHG emissions uses:

- data from the fuel and energy balance of Kazakhstan,
- statistical reporting data,
- information from GHG emissions inventory reports submitted by enterprises recognised as accountable.

Control over completeness, transparency and reliability of the state inventory of GHG emissions and removals should be carried out annually in accordance with the rules approved by the MENR of the RK (clause 5, article 302 of the EC RK). Currently, the "Rules for control of completeness, transparency and reliability of the state inventory of greenhouse gas emissions and removals" approved by the Order of the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan dated 22 February 2022 No. 46 are in force.

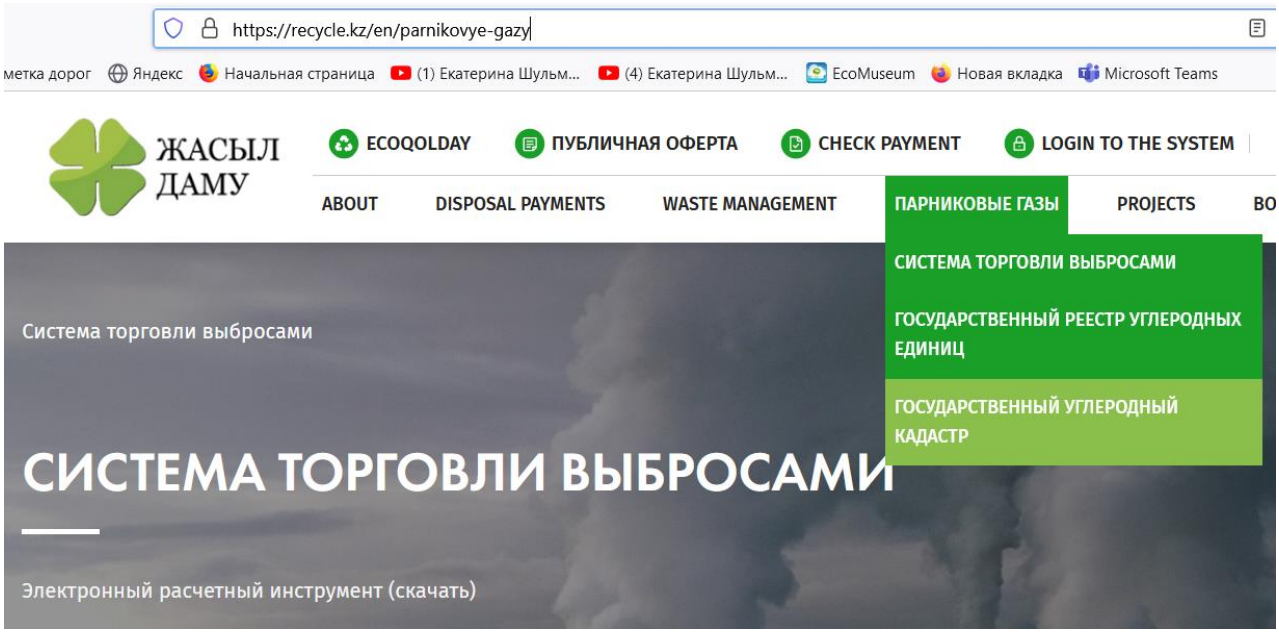

Figure 2-1– Interface of the website of JSC "Zhasyl Damu" - https://recycle.kz/en/parnikovye-gazy - subordinate organization of MENR RK, which prepares the national inventory of GHG emissions and removals

2.1. State carbon inventory

Brief description

The State Carbon Inventory contains:

1. information on sources of greenhouse gas emissions,
2. information on operators of installations,
3. information on the amount of emissions and removals of greenhouse gasses.

The Ministry of Ecology and Natural Resources of the Republic of Kazakhstan organizes the development and management of the State Carbon Inventory. Based on the data from the cadastre the Ministry also organizes the system of state control over the volume of GHG emissions and removals, ensuring the fulfillment of obligations of the Republic of Kazakhstan on annual reporting in accordance with international treaties.

With regard to GHG emissions in Kazakhstan the following terminology is used, the definitions of which are fixed at the legislative level:

Installation – a stationary source of GHG emissions or several stationary sources of GHG emissions, which are connected with each other by a single technological process and are located on one industrial site

Stationary source – a source of GHG emissions that cannot be moved without its dismantling and its location can be determined using a unified state coordinate system, or a source of GHG emissions that can be moved but requires a fixed (stationary) position relative to the earth's surface during its operation.

Installation operator – an individual or legal entity, who owns or legally uses the installation.

GHG emissions inventory reports for the following installations shall be submitted to the State Carbon Inventory on a mandatory basis:

1) Quota installations - installations whose emissions exceed the threshold value of 20 thousand tonnes of CO2 per year in the regulated sectors of the economy; the GHG emissions inventory report for the previous year for quota installations is filled in electronically in the State Carbon Inventory - at https://ecocarbon.gov.kz (Figure 2.2.) - and undergoes mandatory verification procedure carried out by an accredited validation and verification body;

2) Administered installations - installations with emissions of 10 thousand to 20 thousand tonnes of CO2 per year in regulated sectors of the economy; the GHG emissions inventory report for the previous year for administered installations is also filled in electronically in the State Carbon Inventory (https://ecocarbon.gov.kz); however, the report for administered installations is not subject to verification. At the same time, the operator of such an installation ("administered entity") has the right to participate as an applicant for a project aimed at reducing GHG emissions or increasing GHG removals in order to receive a carbon offset.

Information on GHG emissions from the above listed installations, provided to the state carbon inventory should be collected in the State Fund of Environmental Information (GFEI) at https://ecogosfond.kz.

Methodologies for calculating emissions and removals of greenhouse gasses, which are used in estimating the amount of GHG emitted from quota installations, are developed and approved by the authorized body in the field of environmental protection (Article 294 of the EC of the RK, paragraph 3).

Transparency, availability of information

Currently, the data from the State Carbon Inventory is not available.

The State Carbon Inventory is listed as part of environmental information on the GFEI website, however, the information of this cadastre is currently unavailable for downloading and review (Figure 2.3.).

As part of this work, in order to collect data on GHG emissions in Karaganda region, requests for information on the state carbon inventory were sent to the following organizations:

1) request to the State Environmental Information Fund from 20.03.2023 (Annex 1), which responded that it does not have such information, as the data is not provided to it by the relevant state bodies and agencies, as stipulated by the legislation (Annex 2);
2) request to the Department of Climate Policy of the Ministry of Ecology and Natural Resources of the RK - dated 18.04.2023 (Annex 3), which as of June 2023 did not provide any information on our request in violation of the deadlines for response provided by the Law of the RK "On Provision of Information" (paragraph 10, Article 11).

Due to inaccessibility of GHG data in GFEI and lack of response from the Department of Climate Policy of MENR RK, we initiated inquiries directly to enterprises – major sources of GHG emissions in Karaganda region (example of enquiry - Annex 4). A significant part of such enterprises, e.g. Karaganda-Energocentre LLP (CHPP-1, CHPP-3), promptly responded to the requests, providing information on emissions, which is currently being processed by us.

It should also be noted that on the website of the organisation JSC "Zhasyl Damu", subordinate to the MENR RK, which maintains both the state register of carbon units and the State Carbon Inventory, any data from these registers are not published.

Data quality

The quality of the state carbon inventory data cannot be assessed due to the lack of access to this inventory database. According to indirect signs and available information, it can be concluded that the state carbon inventory contains incomplete data, as it does not include information on emissions of all subjects of administration.

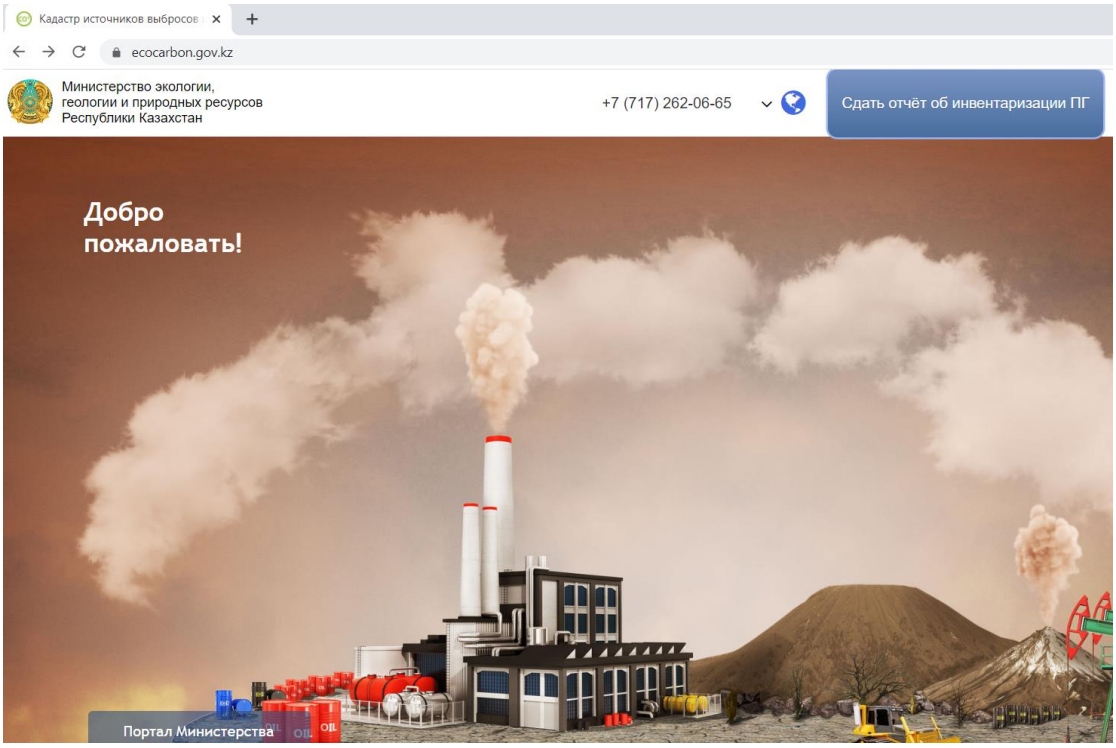

Figure 2-2 - Screenshot of https://ecocarbon.gov.kz where GHG inventory reports are completed and submitted electronically

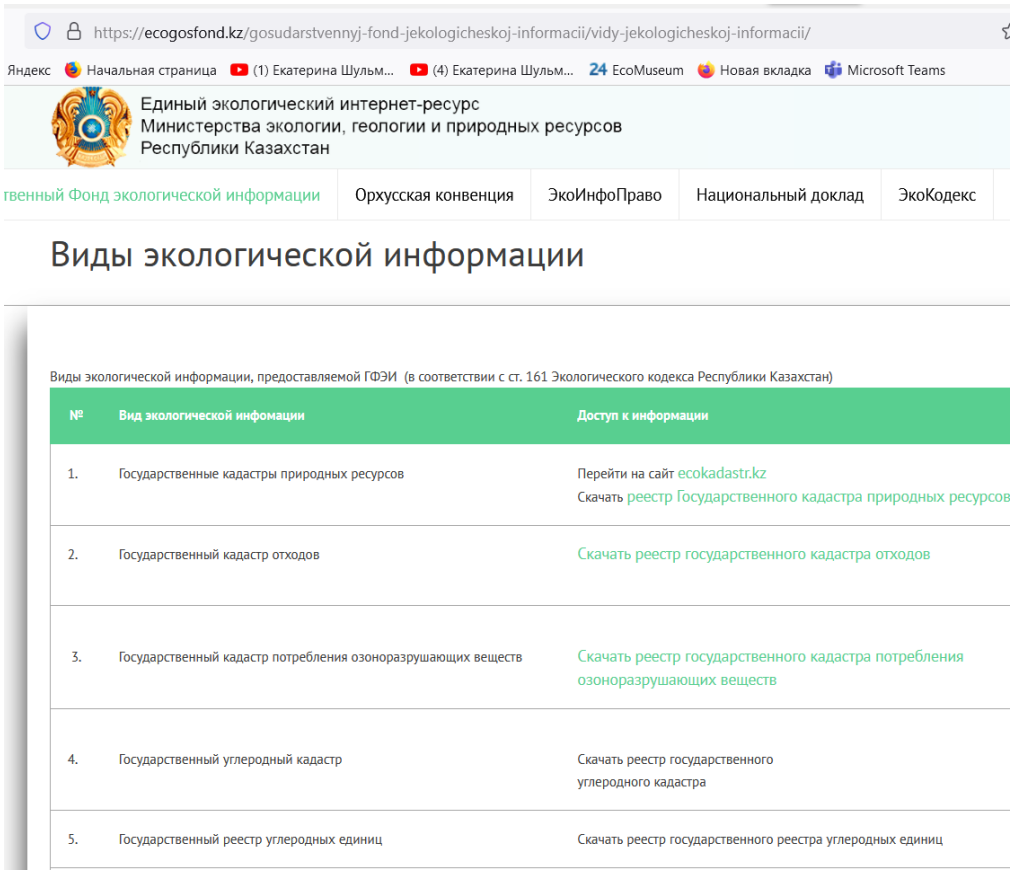

Figure 2-3 - Screenshot of the website of the State Environmental Information Fund of Kazakhstan https://ecogosfond.kz with the list of provided data (paragraph 4 indicates the State Carbon Inventory, which cannot be downloaded)

2.2. National Carbon Quota Plan

Brief description

The National Carbon Quota Plan is a document that establishes the total number of carbon quota units to be distributed among the quota subjects for the regulated sectors of the economy, as well as the volume of the reserve of carbon quota units. The list of quota units to be included in the National Carbon Quota Plan is formed on the basis of GHG emissions inventory reports provided by the quota subjects (see chapter 2.1 of this report) to the State Carbon Inventory.

The National Carbon Quota Plan is developed and approved by the MENR RK. The period of the National Carbon Quota Plan should correspond to the period of carbon budgeting (five-year period). Reporting period of the National Plan of carbon quotas is one calendar year.

The total number of carbon quota units subject to free distribution among the subjects of quotation on regulated sectors of the economy, is calculated in accordance with the rules of state regulation in the field of emissions and removals of greenhouse gasses. The number of carbon quota units for quota installations subject to free allocation is calculated by applying benchmarks.

According to the National Carbon Quota Plan for the period 2022-2025, approved by the Order of the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan dated 11 July 2022 № 525, the number of quota units is 199 units, while the amount of quotas for 2023 is 163,663,379 tonnes of CO2. Most of the quotas are granted, as expected, in the electric power sector (57.35%).

Table 2-1 - National Carbon Quota Plan. Total amount of carbon credits by regulated areas of activity for 2022-2025

Regulated field of activity	**Number of installations**	**Quota volume for 2022, tonnes CO_2**	**Quota volume for 2023, tonnes CO_2**	**Quota volume for 2024, tonnes CO_2**	**Quota volume for 2025, tonnes CO_2**
Electric power	89	95 304 595	93 872 608	92 469 647	91 076 361
Oil and gas	49	23 039 146	22 692 974	22 353 819	22 017 003
Mining	21	7 334 212	7 224 012	7 116 047	7 008 826
Metallurgical	19	30 747 135	30 285 148	29 832 525	29 383 023
Chemical	7	1 715 105	1 689 335	1 664 087	1 639 013
Manufacturing (in terms of production of building materials: cement, lime, gypsum and bricks)	14	8 019 802	7 899 302	7 781 244	7 664 000
In total	199	166 159 995	163 663 379	161 217 369	158 788 226
Overall volume		649 828 969			
Reserve		11 816 923	11 643 887	11 460 288	11 299 264

Transparency, availability of information

The data of the National Carbon Quota Plan is available:

1. On the website of the subordinate organization of the MENR of the RK, carrying out the

state inventory of greenhouse gasses of RK, JSC "Zhasyl Damu" - https://recycle.kz/ru/parnikovye-gazy ;

2. in the State Environmental Information Fund - the organization's website presents a register of such plans (Figure 2.4) - https://ecogosfond.kz/gosudarstvennyj-fond-jekologicheskoj-informacii/vidy-jekologicheskoj-informacii/, which can be obtained upon request;
3. on the website of the Information and Legal System of Regulatory Legal Acts of the Republic of Kazakhstan - https://adilet.zan.kz/rus/docs/V2200028798 - Order of the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan dated 11 July 2022 № 525 "On Approval of the National Carbon Quota Plan".

It should be noted that with the introduction of the new Environmental Code of the Republic of Kazakhstan from 02 January 2021, the **"National Carbon Quotas Allocation Plans"** includes data only on the total number of carbon quota units broken down by regulated areas of activity, but without a breakdown by specific quota installations.

Prior to the introduction of the 2021 Environmental Code, **"National GHG Quotas Allocation Plans"** were approved, which included information on both total allowance values by regulated industry and a breakdown of allowances allocated to specific allowable installations (including the issuance of additional allowances). It is currently unclear whether the currently unavailable data on the distribution of quotas among specific quota installations will be made public.

The data on carbon qcredits is not transparent. In particular, there are no calculations of greenhouse gas emissions and justification of the size of quotas.

Quota-receiving organizations provide the state with "Greenhouse Gas Emission Reduction Programmes". These programmes are not available to the public.

Data quality

It is not possible to assess the quality of carbon quota data due to incomplete, opaque and inaccessible data justifying them.

№ п/п	Дата регистрации	Реестровый номер	Наименование материала	Организация - исполнитель	Инвентарныйномер	Государственный орган(юридическое лицо),предоставивший материалы	Формат хранения (бумажный, электронный)	Местонахождение материала в архиве (стеллаж,полка)	Количество экземпляров и приложений	шифр
1.	29.11.2021	НП 2020.1	Национальный план распределения квот на выбросы парниковых газов на 2018 - 2020 годы	-	62491	ДКПЗТ МЭГПР	Э	-	1	НП 2020.1
2	29.11.2021	НП 2021.1	Национальный план распределения квот на выбросы парниковых газов на 2021 год	-	62494	ДКПЗТ МЭГПР	Э	-	1	НП 2021.1
3	23.12.2022	НП 2022-2025.1	Об утверждении национального плана углеродных квот Приказ Министра экологии, геологии и природных ресурсов Республики Казахстан от 11 июля 2022 года № 525. Зарегистрирован в Министерстве юстиции Республики Казахстан 13 июля 2022 года № 28798	МЭГПР РК	80951	ДКПЗТ МЭГПР	Э	-	1	НП 2022-2025

Table 2-2 - Register of National Carbon Quota Plans presented on the website of the State Environmental Information Fund of the Republic of Kazakhstan

2.3. State Register of Carbon Units

Brief description

The State Register of Carbon Units is an electronic system for recording operations related to the introduction into circulation, storage, transfer, acquisition, reservation, blocking, redemption, cancellation, withdrawal from circulation of carbon units.

Carbon unit is defined as a unit of carbon quota or carbon offset, which is equal to one tonne of carbon dioxide equivalent (carbon unit=unit of carbon quota=unit of carbon offset=unit of carbon offset= 1 tonne eq. CO2).

Carbon unit (carbon quota unit, offset unit) is a commodity that is allowed for circulation among the subjects of the carbon market in Kazakhstan.

Information from the State Register of Carbon Units reflects the accounting data of carbon units, which were distributed among the subjects of quoting and underwent a particular operation (were put into circulation, transferred, reserved, cancelled, etc.). At the same time, only carbon dioxide is currently subject to quotas.

Transparency, availability of information

Free Internet access to the data of the State Register of Carbon Units, as well as access to the data of the State Carbon Register is not available. On the website of the subordinate organization of MENR RK JSC 'Zhasyl Damu', which maintains the State Register of Carbon Units and the State Carbon Cadaster, any data of these registers are not published.

In response to written requests for such information MENR RK and JSC 'Zhasyl Damu' in violation of the requirements of the legislation of the RK does not provide data on emissions and unlawfully responds that 'information on GHG emissions is a commercial secret' (see Annex 5 - Response of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan from 14.08.2023 on the request for data on greenhouse gas emissions).

Data quality

The quality of data from the State Register of Carbon Units cannot be assessed due to the lack of access to this inventory.

3. United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) was ratified in Kazakhstan on 4 May 1995 (Presidential Decree N 2260 of 4 May 1995).

The Kyoto Protocol to the UN Framework Convention on Climate Change was signed on 12 March 1999 (Presidential Decree No. 84 of 12 March 1999) and ratified on 26 March 2009 (Law № 144-IV of 26 March 2009).

3.1. Nationally determined contributions (NDCs)

Kazakhstan aims to reduce the country's carbon balance[1] by at least 15% of the 1990 carbon balance by 31 December 2030. This goal is set out in the main environmental law of the country - the Environmental Code of the Republic of Kazakhstan, Article 283 'National Contributions of the Republic of Kazakhstan to the Global Response to Climate Change'. This goal is also stated in the nationally determined contribution of the Republic of Kazakhstan (NDC) to the global response to climate change in accordance with Kazakhstan's commitments under the Paris Agreement to the UNFCCC.

The carbon balance in the Eco Code is defined as the volume of actual GHG emissions minus the volume of actual GHG removals over a specified period. The volumes of actual GHG emissions and removals are determined in the course of the state inventory of GHG emissions and removals, which is summarized below.

Nationally determined contributions are approved by the Decree of the Government of the Republic of Kazakhstan 'On Approval of the Updated National Contribution of the Republic of Kazakhstan to the Global Response to Climate Change' dated 19 April 2023 № 313, and are freely available, for example, on the website of the Information and Legal System of Regulatory Legal Acts of the Republic of Kazakhstan - https://adilet.zan.kz/rus/docs/P2300000313.

At the same time, it should be noted that Kazakhstan's NDC does not contain any measurable indicators of achieving carbon balance reduction targets for regulated sectors of the economy, but defines 'absolute reduction of GHG emissions across the economy'.

3.2. Reports of the national inventory of greenhouse gas emissions and removals

Brief description

After the ratification of the Kyoto Protocol in 2009, Kazakhstan annually submits reports on the national inventory of greenhouse gas emissions to the UNFCCC Secretariat in the form of national inventory reports (NIR) and 'spreadsheets of common reporting format' (CRF), the form of which assumes the presentation of data on greenhouse gas emissions and removals by sector:

[1] 'The carbon balance of the Republic of Kazakhstan is defined as the volume of actual greenhouse gas emissions minus the volume of actual greenhouse gas removals for a specified period', Article 283. EC

- Energy Sector Activities,
- Industrial Processes and Product Utilisation (IPUP),
- Agriculture,
- Land Use, Land Use Change and Forestry (LULUCF),
- Waste.

The IPCC 2006 methodology set out in the IPCC Guidelines for National Greenhouse Gas Inventories, as well as the 2019 Update to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, approved on 12 May 2019 by IPCC Decision IPCC-XLIX-9, is used in the preparation of the reports.

Information from the reports on the national inventory of GHG emissions cannot be used to obtain data on GHG emissions of a particular administrative-territorial unit of Kazakhstan (oblast/city/district), as GHG emissions are calculated in general for Kazakhstan, and the breakdown is made only by sectors of the economy provided for in the form of reports submitted to the UNFCCC Secretariat ('Energy Activities', 'Industrial Processes and Product Use' (IPPU), 'Agriculture', 'Land Use, Land Use Change and Forestry', 'Waste').

Transparency, availability of information

Reports on the national inventory of GHG emissions are available and can be obtained by making a relevant request to the State Environmental Information Fund, whose website (https://ecogosfond.kz) mentions a register of such reports in the list of types of environmental information, which can be downloaded (Figure 3.1). As of May 2023, Kazakhstan's latest available report on GHG emissions and removals is for the period from 1990 to 2020[2] (Figure 3.2).

National inventory reports are also freely available on the website of the UNFCCC Secretariat[3] in the form of National Inventory Reports (NIR) and Common Reporting Format (CRF) spreadsheets.

It should also be noted that there are no references, information and/or links to the reports on the national inventory of GHG emissions (national reports) on the website of the subordinate organisation JSC Zhasyl Damu, responsible for the preparation of the national inventory of GHG emissions and removals in Kazakhstan.

Baseline data used to calculate GHG emissions for national electrification is not available.

Data quality

Reports on the national inventory of GHG emissions contain values of GHG emissions in Kazakhstan, which are the closest to the actual total emissions, as they include both GHG emissions from enterprises (subjects of quotas and administration) and GHG emissions for which no separate accounting is kept (e.g., GHG emissions from fuel combustion for private sector heating, public and private transport, etc.).

It is not possible to assess the quality of data from the national inventory of GHG emissions because the source data used to obtain them are not available.

[2] Kazakhstan. 2022 National Inventory Report (NIR) | UNFCCC, https://unfccc.int/documents/461955

[3] Documents | UNFCCC, https://unfccc.int/documents?f%5B0%5D=country%3A1379

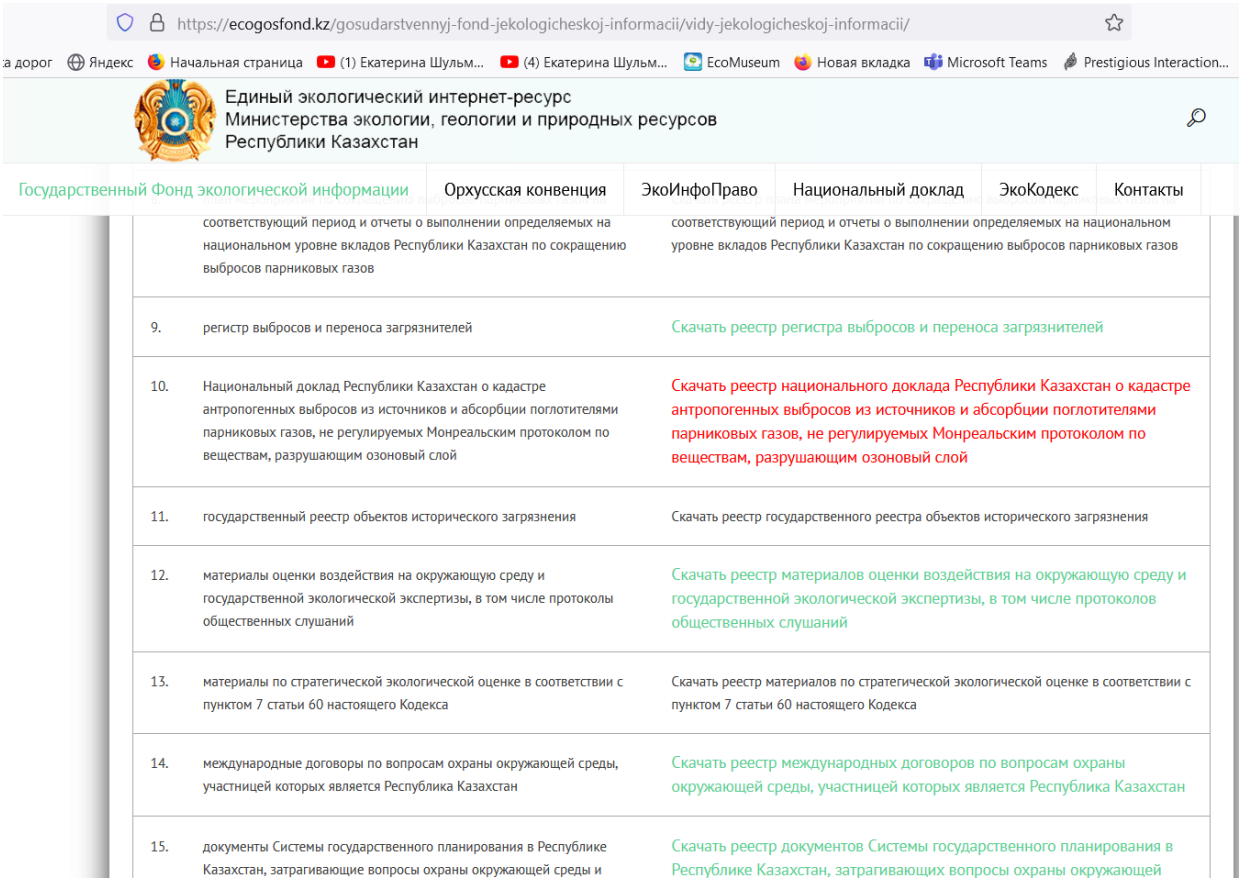

Figure 3-1 - Screenshot of the GFEI RK website https://ecogosfond.kz Register of national reports of the RK on the inventory of anthropogenic emissions by sources and removals by sinks of GHGs

D6 | Национальный доклад Республики Казахстан о кадастре антропогенных выбросов из источников и абсорбции поглотите

№ п/п	Дата регистрации	Реестровый номер	Наименование материала	Организация - исполнитель	Инвентарный номер	Государственный орган(юридическое лицо),предоставивший материалы	Формат хранения (бумажный, электронный)	Местонахождение материала в архиве (стеллаж, полка)	Количество экземпляров и приложений	шифр
1	06.03.2013	НД КАВ 2009.1	Национальный доклад Республики Казахстан о кадастре антропогенных выбросов из источников и абсорбции поглотителями парниковых газов, не регулируемых Монреальским протоколом, за 1990 - 2009 гг.	МООС РК, РГП "КАЗНИИЭК"	2847, 2849	МООС РК	Б/Э	Архив №2	2	НД КАВ 2009.1
2	06.03.2013.	НД КАВ 2010.1	Национальный доклад о Кадастре антропогенных выбросов из источников и абсорбции поглотителями парниковых газов, не регулируемых Монреальским протоколом за 1990-2010 годы	МООС РК, РГП "КАЗНИИЭК"	2846	МООС РК	Э	Архив №2	1	НД КАВ 2010.1
3	29.11.2021	НД КАВ 2018.1	Национальный доклад Республики Казахстан о кадастре антропогенных выбросов из источников и абсорбции поглотителями парниковых газов, не регулируемых Монреальским протоколом, за 1990-2018 гг.	-	62493	МЭГПР РК	Э	-	1	НД КАВ 2018.1
4	29.11.2021	НД КАВ 2019.1	Национальный доклад Республики Казахстан о кадастре антропогенных выбросов из источников и абсорбции поглотителями парниковых газов, не регулируемых Монреальским протоколом, за 1990 - 2019 гг.	-	62492	ДКПЗТ МЭГПР	Э	-	1	НД КАВ 2019.1
5	07.06.2022	НД КАВ 2020.1	Национальный доклад Республики Казахстан о кадастре антропогенных выбросов из источников и абсорбции поглотителями. парниковых газов не регулируемых Монреальским протоколом, за 1990-2020 гг.	АО"Жасыл даму"	68810	ДКПЗТ МЭГПР	Э	-	1	НД КАВ 2020.1

Figure 3-2 - Register of National Reports of the RK on the inventory of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol on Substances that Deplete the Ozone Layer, available on the website of GF

4. UNECE Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters

Aarhus Convention is the - Convention of the United Nations Economic Commission for Europe. The purpose of the Convention is to protect every person's right to live in a healthy environment. The Aarhus Convention is based on three fundamental principles of public participation:

- Access to environmental information.
- Public participation in environmentally relevant decision-making
- Access to justice in environmental matters.

In 2003, the Parties to the Convention adopted the Kiev Protocol on Pollutant Release and Transfer Registers (PRTR). In Kazakhstan, the PRTR Protocol was ratified and entered into force in 2019. The Aarhus Convention and the Kiev Protocol impose a number of obligations on state authorities to support and ensure the realisation of public rights under all three fundamental principles. The authorised state body for implementation of the Convention is the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan.

In accordance with the requirements of the Environmental Code of the RK, the Pollutant Release and Transfer Register (PRTR) is 'a structured electronic database on the status of emissions of pollutants into the environment and levels of environmental pollution, placed in the public domain on the official Internet resource'[4]. 'PRTR is maintained in order to ensure the right of everyone to access environmental information and public participation in decision-making on environmental issues, as well as to contribute to the prevention and reduction of environmental pollution.'

To date, MENR RK continues to declare the compliance of PRTR in Kazakhstan with the above requirements of the legislation, including at the international level[5]. It claims that the Register is a 'database' and allows users to search for emissions and identify them by: 1) the facility and its geographic location; 2) the type of activity; 3) the operator of the facility; and 4) the pollutant and/or waste.

For the purposes and objectives of the 'Our Response to Climate Change' initiative, within the framework of which this study is being carried out, finding data on emissions by their geographical location, pollutant and facility operator is a key prerequisite, as it is necessary to understand the current level of greenhouse gas emissions in order to plan activities for Karaganda region.

This study argues that **'de facto' there is no electronic 'structured database' of PRTRs**. Such a database does not exist 'on the official Internet resource' as required by the legislation, and, to

[4] official website https://prtr.ecogosfond.kz/

[5] Myrzabay Togzhan Orazbaykyzyzy. Current Status of PRTRs in Kazakhstan, Information and Analytical Centre of the MEGNR of the RK, Geneva, Switzerland, 2022. (unece.org)

our knowledge, does not exist as such despite the allocation of funding for its development.

Reporting to the Pollutant Release and Transfer Register (PRTR, Kiev Protocol of the Aarhus Convention) shall be provided by enterprises ('operators' according to the terminology of environmental legislation) obliged to report on the activities listed in the 'Rules for the maintenance of the PRTR'[6], when their annual emission thresholds are exceeded.

The current PRTR Rules were approved by Order of the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan № 3461 dated 31 August 2021. The Rules define the procedure for maintaining PRTRs, as well as requirements for facility operators, who are obliged to provide information on their emissions and transfer of pollutants.

The methodology for estimating emissions of any substances, including greenhouse gas emissions, **is not regulated** by the 'Rules for PRTR Maintenance', which makes it problematic to assess the reliability and use of PRTR data.

In addition, the PRTR reporting system does not regulate the use of specific methodologies for calculating emissions of substances that are both greenhouse gasses and so-called 'standardized' pollutants according to the RK legislation. For example, methane emissions from a landfill as a regulated pollutant are estimated by the methodology stipulated within the procedures for obtaining environmental permits for activities. This calculation method differs from the methodology used to estimate methane emissions as a greenhouse gas under state greenhouse gas regulation reporting. The methane emissions values from a landfill estimated as part of the greenhouse gas emissions inventory will differ from the methane emissions values from the same landfill estimated in the methane emissions standardization process for environmental clearance.

The list of GHGs to be reported in the PRTR is not identical to both the list of GHGs subject to state regulation in the state inventory system and the list of GHGs reported by Kazakhstan to the UNFCCC (see Table 0.1 - Comparative analysis of data on GHG emissions collected in Kazakhstan by different accounting systems). In addition, the limitation of the list of enterprises by their GHG emission threshold for inclusion of their data in the PRTR should be taken into account. Annual emission thresholds are used both in reporting in the course of state GHG regulation and in the PRTR, but these thresholds do not match each other. This important difference between the threshold data in PRTR and other reporting systems does not allow comparison of total emissions collected by these systems.

For example, CO2 emissions have to be reported to the PRTR if they exceed 100,000 tonnes/year, hence the CO2 volumes in the PRTR are underreported compared to the data reported to the State Carbon Inventory, where data are reported starting from 10,000 tonnes/year. The PRTR reporting does not include, among others, the so-called 'administering entities', which include industrial plants that emit CO2 equivalent from 10 to 20 thousand tonnes/year and are obliged to report to the state carbon inventory.

Transparency, accessibility of data

As part of the 'Our Response to Climate Change' initiative, work was carried out to assess the availability, transparency and quality of PRTR data on the official Internet resource of the MENR RK - https://prtr.ecogosfond.kz/ [7]. The website presents PRTR data in a fragmented

[6]Order of the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan dated 31 August 2021 №. 346

[7] The site is unavailable at the time this report was issued (06/02/2024)

manner, the site is usually not available on the MENR RK website.

PRTR database is missing and/or inaccessible, - PRTR reporting data are not summarised in a 'structured database' as required by law and declared by the MENR at the national and international level. PRTR data are not available even in the form of a simple summary table. All information is presented on the official Internet resource https://prtr.ecogosfond.kz in the form of separate files of different formats (*.pdf; *.jpg; *.png, etc.) with images of scanned paper reports of enterprises for MENR. Low quality of many files does not allow their use due to unsatisfactory scanning resolution and strong file compression. In violation of the requirements of the Environmental Code (Article 22, p.7, p.15)[8], due to the lack of a database and appropriate query interface, it is impossible to search for information on specific parameters listed in the Environmental Code, including:

- facility and its geographical location;
- type of activity;
- operator of the facility;
- pollutant substance and/or waste;
- the component of the environment into which emissions are made (atmosphere, aquatic environment, land resources, subsoil);
- final point of transfer of pollutants
- type of waste disposal or recovery operations.

The official web portal of the PRTR is inaccessible most of the time (https://prtr.ecogosfond.kz/otchety-rvpz/). The technical analysis of the accessibility times carried out during the survey showed that the website was not working during the study period.

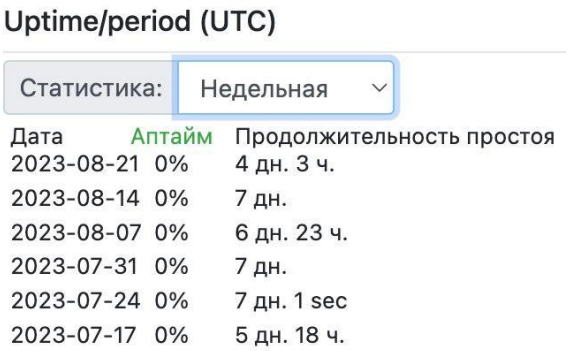

Figure 4-1 Availability of the website with the PRTR reports during the study period (uptime shows how much of the time the website was available)).

Completeness of reported data. Lack of declared files with reports on the PRTR website. For Karaganda Oblast enterprises, the website declared the availability of 501 PRTR reports for the period 2016-2021. Of these, 73.65% of the reports are available for download, the remaining files are missing or have incorrect links.

[8] Article 22. Pollution release and transfer register.

Data quality

Company names are not standardized and differ in reports for different years for the same enterprise, which makes it impossible to trace changes in emissions for a particular company.

The names of substances do not comply with the requirements of the PRTR Rules. The names of GHGs in the reports often do not correspond to those required by the PRTR Rules, which makes it impossible to summarize emissions. In the reports only 43.51% of the given data are correctly named and assigned to the reporting groups of substances. Only 32% of all published emission data are available and usable, taking into account the availability of downloadable files with reports.

There is no regulated methodology for accounting of substances for submission to the PRTR reports. The methods of calculation of greenhouse gas emissions for the PRTR report are not regulated. Methodologies used by enterprises do not comply with international standards and guidelines (e.g. ISO 14064-1 or IPCC Guidelines for National Greenhouse Gas Inventories).

Procedures for quality control and verification of greenhouse gas emissions data in PRTRs are not regulated by the legislation of Kazakhstan. Verification and quality control are not carried out at all stages of data collection, processing and reporting.

5. Results of comparative analysis of availability, quality, accessibility and comparability of information on greenhouse gas emissions in different accounting and reporting systems

According to the results of the conducted comparative analysis of data on GHG emissions and removals, prepared in compliance with the requirements of the national legislation and international legislation within the framework of obligations adopted by Kazakhstan under the FCCC and the Aarhus Convention (Table 4.1), the following conclusions can be drawn.

Three parallel greenhouse gas emission accounting systems

In Kazakhstan, there are several simultaneously functioning systems for accounting of emission data, which are practically unrelated, not correlated and not comparable with each other:

- state inventory, which is used for the formation of national reports to the UNFCCC;
- reporting of enterprises, subjects of carbon quotas and administration, to the State Carbon Inventory;
- reporting of enterprises to the Pollutant Release and Transfer Register.

State inventory of GHGs for reporting to the UNFCCC is conducted by JSC 'Zhasyl Damu', a subordinate organization of the MENR RK. The result of the state inventory is the Reports on the national inventory of GHG emissions of the RK which are submitted to the UNFCCC Secretariat in the form of national inventory reports (NIR) and spreadsheets of common reporting format (CRF).

GHG emissions are estimated in this system for 5 economic sectors:

- energy sector activities,
- industrial processes and product use (IPPU),
- waste,
- agriculture and land use,
- land use change and forestry (LULUCF).

Estimation of emissions in this system is based on calculations carried out according to the 2006 IPCC methodology set out in the IPCC Guidelines for National Greenhouse Gas Inventories, using mainly data on the fuel and energy balance (TEB) of Kazakhstan, which is collected and prepared by the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan.

The list of GHGs that are present in the UNFCCC reporting forms, for which the inventory is conducted, includes 12 greenhouse gasses and groups of substances, - carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), non-methane organic compounds, carbon monoxide (CO), nitrogen trifluoride (NF_3), ammonia (NH_3), nitrogen oxides (NO_x), sulphur dioxide (SO_2).

Data availability and quality

Final reporting data in the form of National Inventories (NIR) and Electronic Data Sheets (EDS) are available on the official websites of the UNFCCC.

Data quality cannot be assessed due to lack of access to baseline and interim data on GHG emissions calculation according to the IPCC methodology.

Reporting is subject to 6 regulated sectors of the economy:

- Electric power;
- oil and gas;
- mining;
- metallurgy;
- chemical industry;
- manufacturing industry - production of cement, lime, gypsum and bricks.

It should be noted that the regulated sectors do not include the 'Waste' and 'Agriculture' sectors, for which GHG emissions are estimated in the state GHG inventory system.

Estimation of emissions in this system is based on the methodology approved in Kazakhstan, which differs from the IPCC 2006 methodology used in the state GHG inventory system. For some GHGs there are no approved methodologies for emission assessment, for example, for assessment of emissions of sulfur hexafluoride (SF6) and hydrofluorocarbons (HFCs). The previously valid methodology was invalidated by the order dated 02.11.2022 and a new one has not been introduced.

The list of GHGs for which the enterprises conduct GHG inventory includes 6 greenhouse gases and groups of substances according to the requirements of the Ecocode - carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6).

Data availability and quality

Data is not available in violation of national and international legislation. It is not possible to assess data quality.

Reporting to the Pollutant Release and Transfer Register (PRTR, Kiev Protocol of the Aarhus Convention) should be provided by enterprises ('operators' in accordance with the terminology of environmental legislation). If their annual emissions thresholds are exceeded, operators are obliged to report in accordance with the requirements of the 'Rules for the Maintenance of the PRTR'[9] and in correspondence with the activities listed there.

The thresholds of annual GHG emissions for PRTR reporting do not coincide with the thresholds for reporting of GHG emissions by enterprises to the state carbon inventory. This important difference between the data on thresholds in PRTR and other reporting systems does not allow comparing the total emissions collected by these systems.

The list of GHGs to be reported in PRTR is not identical to both the list of GHGs subject to state regulation in the state inventory system and the list of GHGs reported by the RK to the UNFCCC.

The list of GHGs that are present in the PRTR reporting forms includes 11 greenhouse gases and groups of substances, - carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6), non-methane organic compounds, carbon monoxide (CO), ammonia (NH3), nitrogen oxides (NOx), sulphur dioxide (SO2).

[9]Order of the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan dated 31 August 2021 № 346

Data availability and quality

Data from the PRTR are partially available on the website of the MEGNR of the RK during the brief moments when the website is operational. Most of the time, the website is inaccessible.

The methodology for estimating emissions of any substances, including greenhouse gas emissions, is not regulated by the "Rules for the Maintenance of the RPTR," making it problematic to assess the quality, reliability, and suitability of PRTR data.

The quality of the available data is extremely low. The legislatively required structured database is absent, and the available data consist of scanned paper forms. A significant portion of these files do not correspond to the reporting forms established by the legislation. Only half (43.51%) of substance names in the reports match the list of substances required by the RPTR Rules. For enterprises in the Karaganda region, only 73.65% of reports are available for download. Thus, only 32% of data from all reports are suitable for limited use.

The unavailability, fragmentation, and low quality of RPRTR data prevent a quantitative assessment of greenhouse gas emissions for the Karaganda region.

Data on greenhouse gas emissions for the administrative territories of Kazakhstan and their use for state planning

None of the three existing greenhouse gas accounting systems in Kazakhstan track emissions with reference to administrative units' territories. This makes it impossible to assess greenhouse gas emissions within regions, districts, and cities. It should be noted that linking emission sources to their locations is required by legislation both for greenhouse gas inventory by enterprises and for reporting by enterprises under the PRTR. According to the requirements of the Environmental Code, the PRTR database should provide the ability to extract data by the location of emission sources.

The absence of data on greenhouse gas emissions tied to administrative territories makes it impossible to assess and target the planning of greenhouse gas emission reduction volumes for the territories of regions, districts, and cities.

The problem of **the lack of publicly available reliable and comparable data** on greenhouse gas emissions and removals, including by region, appears critically acute. This data is necessary for akimats (administrations of the capital, regions, and cities of republican significance) when creating "Target indicators for environmental quality"[10] for a 5-year period. Among the required indicators are **aggregate volumes of greenhouse gas emission reduction**. "Target indicators" should contain indicators both for the region as a whole and for the districts of the region and settlements with a population of over 100,000 people; specially protected natural territories and other settlements and areas (aquatic) where violations of environmental quality standards have been identified. The current "Target indicators" do not contain the required data on greenhouse gas emissions[11].

[10] Environmental quality targets are a set of quantitative and qualitative characteristics of the state of individual environmental components and other indicators, ..., to be achieved over a certain period of time

[11] As of 2023, "Target indicators for environmental quality" for the Karaganda region are currently being developed and approved.

Conclusions

1. In violation of the requirements of the Environmental Code of the Republic of Kazakhstan, a large part of environmental information regarding greenhouse gas emissions and removals in Kazakhstan is not freely available: the State Carbon Inventory, the State Register of Carbon Units, plans for reducing GHG emissions, information on the distribution of quotas according to National Carbon Quota Plans, and the database and information of the PRTR.

2. The accounting of greenhouse gas emissions and absorptions is not conducted by administrative-territorial units (regions, cities of republican significance, and the capital), making it impossible to localize NDCs[12], develop Target Indicators for environmental quality, plans for reducing greenhouse gas emissions, and regulate them at the local level. Not only do local executive bodies lack data on emission volumes within administrative units' territories, but the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan itself does not possess such information.

3. The parallel existence of three accounting and reporting systems for greenhouse gasses (state inventory of GHG as part of the preparation of National Reports to the UNFCCC, greenhouse gas inventory by enterprises for submission to the State Carbon Inventory, PRTR) raises serious concerns about the accuracy and quality of the data presented in them. All three systems account for different sectors of the economy and different enterprises, use different annual emission threshold values, account for different lists of GHG, and assess GHG emissions using different methodologies. The data from these three systems are not comparable.

4. The lack of a unified approach to accounting for GHG emissions and removals also raises doubts about the compliance of the quota sizes determined for regulated sectors of the economy and enterprises. The state inventory of greenhouse gas emissions for the entire country in preparing the National Report to the UNFCCC is based on the methodology of the Intergovernmental Panel on Climate Change (IPCC), while national carbon quotas are prepared based on inventory data of quota and administration subjects, which are evaluated according to the methodology approved in the Republic of Kazakhstan and differ from the IPCC methodology. The methodological approach to calculating data for the PRTR is not regulated in any way. There is no possibility of comparing data from different accounting systems.

[12] NDCs - Nationally Determined Contributions to Greenhouse Gas Reductions, in accordance with Kazakhstan's commitments under the Paris Agreement to the UNFCCC.

Table 0-1- Comparative analysis of information on greenhouse gas emissions collected in Kazakhstan by different accounting systems

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
	Краткая характеристика Brief description	After Kazakhstan's ratification of the Kyoto Protocol in 2009, Reports on the national inventory of greenhouse gas emissions are annually submitted to the UNFCCC Secretariat in the form of National Inventory Reports (NIR) and CRF spreadsheets (Common Reporting Format)	The State Carbon Inventory contains information on: ● sources of GHG emissions, ● operators of the plants, ● amount of GHG emissions and removals	Pollutant Release and Transfer Register is a structured electronic database on pollutant releases (harmful substances entering the environment), placed in the public domain on an official Internet resource, which is maintained to ensure the right of everyone to access environmental information and public participation in the decision-making process on environmental issues, as well as to contribute to the prevention and reduction of environmental pollution
1.	The basis upon which the data are formed	Statistical data by sector of the economy and, according to the wording of the ecocode, 'data from enterprises' (the NIR does not specify	Reports on inventory of greenhouse gas emissions	Reporting to the Pollutant Release and Transfer Register

[13] In brackets are the numbers of reporting tables in the Common Reporting Format (CRF)

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
		whether or not enterprise data were used).		
2.	The entity responsible for conducting GHG emissions inventories and preparing reports	Подведомственная организация Министерства экологии и природных ресурсов РК – АО «Жасыл Даму» (по состоянию на 2023 год) https://recycle.kz/en/parnikovye-gazy Subordinate organisation of the Ministry of Ecology and Natural Resources of the RK - Zhasyl Damu JSC (as of 2023) https://recycle.kz/en/parnikovye-gazy	Enterprises-operators of quota-based (GHG emissions more than 20 thousand tonnes of CO2 per year) and administered (GHG emissions from 10 to 20 thousand tonnes of CO2 per year) installations	Operators engaged in activities subject to PRTR reporting requirements
3.	Types of activities covered by the requirement to report GHG emissions	Sectors (5): Energy activities (Energy Industry (1.A.1 CRF), Manufacturing and	Regulated sectors of the economy (6): Energy	Types of activities (9): Energy sector

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
		Construction (1.A.2 CRF), Transport (1.A.3 CRF), Other Sectors (1.A.4 CRF), Other sources (1.A.5 CRF), Fugitive emissions (1.B CRF)		
		Industrial Processes and Product Use (IPPU) Mineral materials production (2.A), chemical industry (2.B), metallurgical industry (2.C), use of solvents and non-energy products from fuels (2.D), electronics industry (2.E), use of fluorinated ODS substitutes (2.F), manufacture and use of other	Oil and gas Mining Metallurgy Chemical Manufacturing in terms of production: ● cement, ● lime, ● gypsum ● brick	Metal production and processing Mineral processing industry Chemical industry Manufacture and processing of paper and wood

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
		products (2.G).		
		Waste Disposal of municipal solid waste (MSW) (CRF category 5.A); Treatment and discharge of domestic and industrial wastewater (WWTP) (CRF Category 5.D); Nitrous oxide emissions from domestic wastewater (CRF category 5.D); incineration of medical waste (CRF category 5.C).	Missing	Waste and wastewater management
		Agriculture CH4 emissions from internal fermentation of livestock (CRF Category 3A); CH4 and N2O emissions from manure management systems (CRF	Missing	Intensive animal husbandry and aquaculture Products of animal husbandry and crop production from the food and beverage production sector

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
		category 3B); CH4 emissions from rice cultivation (CRF category 3C); N2O emissions from managed soils (CRF category 3D); CO2 emissions from urea fertilization (CRF category 3H).		
		Land use, land-use change and forestry LULUCF: Forest Land (F), Cropland (C), Grazing Land (G), Wetlands (W), Settlements (E), Other Land (Other), and Harvested Timber (HLWP).	Missing	
		Missing	Missing	Other kind of activities
4.	Threshold values for types of activities covered by the requirement	Not provided for	CO2 equivalent emissions - more than 10 thousand tonnes of CO2 per year, including: – 10-20 thousand tonnes of	Threshold values for production capacity are established for certain types of activities (Appendix 1 to the Rules for the Maintenance of the

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
	to provide information on GHG emissions		CO2 per year - administered (non-quota) installations (reporting is not verified, quotas are not determined, does not participate in quota trading) – more than 20 thousand tonnes of CO2 per year - quota installations (reporting is verified, participates in quota trading)	PRTR)
5.	The methodology used to assess GHG emission	IPCC 2006 methodology as outlined in the IPCC Guidelines for National Greenhouse Gas Inventories The global warming potential (GWP) values contained in the annex to decision 24/CP.19, Revision of the UNFCCC reporting guidelines on annual inventories for Parties included in Annex I to the Convention, were used to convert emissions to	Methodologies for calculation of emissions and absorption of greenhouse gases, approved by the Order of the Minister of Ecology and Natural Resources of the Republic of Kazakhstan dated 17 January 2023 № 9, including 10 methodologies for calculation of GHG emissions: – from combustion of flammable	The PRTR rules do not define the methodology for estimating emissions of pollutants related to greenhouse gases, information on which should be submitted to the PRTR. Information on GHG emissions in the PRTR is provided by enterprises on the basis of GHG emissions inventory reports, which they are obliged to

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
		CO2 equivalent. The GWP value for methane is 25 and for nitrous oxide is 298. Calculations are partly performed at methodological Tier 1. For key source categories, Tiers 2 and 3 are mainly used.	gases – from boilers of TPPs, CHPPs and boiler houses – from oil and gas production – from production of pig iron, steel, sinter and pellets – from the production of cement and lime – from the production of aluminium, ferroalloys, lead and zinc – forestry – from open cast and closed coal mining – from the chemical industry production – from the production of glass, ceramics and mineral	prepare if they are classified as subjects of administration or quotas. Otherwise, operators, who are subject to the requirement to submit data to the PRTR instead of the GHG inventory reports, fill in information on GHG emissions at their discretion (most often, they do not report it at all, considering this data irrelevant to their activities).

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
			materials	

No.	Parameters assessed	Sources of data on greenhouse gas emissions		
		Reports on national inventory of greenhouse gas emissions to the UNFCCC[13]	**State Carbon Inventory**	**Pollutant Release and Transfer Register (PRTR)**
6.	Перечень парниковых газов, по которым представляется информация List of greenhouse gases for which information is provided	Carbon dioxide (CO2) Methane (CH4) Nitrous oxide (N2O) Hydrofluorocarbons (HFCs) Perfluorocarbons (PFCs) Sulfur hexafluoride (SF6) Non-methane organic compounds Carbon monoxide (CO) Nitrogen trifluoride (NF3) Ammonia (NH3) Nitrogen oxides (NOx) Sulfur dioxide (SO2)	Carbon dioxide (CO2) Methane (CH4) Nitrous oxide (N2O) Hydrofluorocarbons (HFCs) Perfluorocarbons (PFCs) Sulfur hexafluoride (SF6)	Carbon dioxide (CO2) Methane (CH4) Nitrous oxide (N2O) Hydrofluorocarbons (HFCs) Perfluorocarbons (PFCs) Sulfur hexafluoride (SF6) Non-methane organic compounds Carbon monoxide (CO) Ammonia (NH3) Nitrogen oxides (NOx) Sulfur dioxide (SO2)

Annexes (in Russian)

Annex 1 - Request for information from the State Environmental Information Fund on the State Carbon Inventory data

Карагандинский областной
Экологический Музей

100012 Казахстан, Караганда,
пр. Бухар Жырау 47
E-mail: tp@ecomuseum.kz
t/f (7212) 41-33-44
50-45-61, 50-45-62

Исх. № 44/03 от «20» марта 2023 г.
< запрос сведений государственного углеродного кадастра >

И.о Генерального директора
РГП на ПХВ «Информационно-аналитический центр охраны окружающей среды»
Министерства экологии и природных ресурсов РК
Г-ну Айдарханову Р.Р.

Уважаемый Рустам Рамазанович!

ОО Карагандинский областной Экологический Музей при поддержке Европейского союза реализует проект «Участие гражданского общества в смягчении последствий изменения климата в Карагандинской области», в рамках которого планируется оценить вклад Карагандинской области в выбросы парниковых газов Казахстана и разработать для данного региона план мероприятий по смягчению воздействия на климат.

Согласно Экологическому кодексу РК Государственный фонд экологической информации (ГФЭИ) ведется в целях обеспечения реализации права общественности на доступ к экологической информации (п.2, ст.25), источником информации для которого, среди прочего, является Государственный углеродный кадастр (пп.4) п.6, ст.25).

Настоящим письмом просим оказать содействие в предоставлении сведений Государственного углеродного кадастра Республики Казахстан по объемам выбросам и поглощению парниковых газов (ПГ) субъектами квотирования и администрирования всего Казахстана за период с 2015 по 2021 годы.

Указанные сведения просим предоставить в разбивке по операторам установок и регионам Казахстана и направить в электронном виде на следующие реквизиты:

1) Организация, запрашивающая сведения: ОО Карагандинский областной Экологический Музе (БИН 970540003220)
2) Адрес электронной почты: tp@ecomuseum.kz
3) Контакты для связи: 87072523676 Маликова Айгуль Дуйсембаевна, директор

Также отмечаем, что указанные сведения не могут быть нами запрошены в электронном виде посредством портала www.egov.kz, как это предусмотрено Правилами оказания государственной услуги «Предоставление экологической информации», так как в выпадающем списке реестровых книг базы данных ГФЭИ такой вид реестра, как «Государственный углеродный кадастр» вообще отсутствует.

Благодарим за сотрудничество,
С уважением, директор
ОО Карагандинский областной
Экологический Музей **Маликова А.Д.**

Annex 2 Response of the State Environmental Information Fund on the absence of information from the State Carbon Inventory/

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ЭКОЛОГИЯ, ГЕОЛОГИЯ ЖӘНЕ ТАБИҒИ
РЕСУРСТАР МИНИСТРЛІГІ

«Қоршаған ортаны қорғаудың
ақпараттық-талдау орталығы»
шаруашылық жүргізу құқығындағы
республикалық мемлекеттік кәсіпорны

МИНИСТЕРСТВО ЭКОЛОГИИ,
ГЕОЛОГИИ И ПРИРОДНЫХ РЕСУРСОВ
РЕСПУБЛИКИ КАЗАХСТАН

Республиканское государственное
предприятие на праве хозяйственного ведения
«Информационно-аналитический центр
охраны окружающей среды»

010000, Астана к., Мәңгілік ел даңғылы, 11/1
тел.: +7 7172 24 83 45, e-mail: iac.info@mail.ru

010000, г. Астана, пр. Мангилик Ел, 11/1
тел.: +7 7172 24 83 45, e-mail:iac.info@mail.ru

№ 04-2-17/2282
05.04.2023

Директору
ОО «Карагандинский
областной Экологический
музей»
г-же Маликовой А.Д.

На письмо №44/03
от 20 марта 2023 г.

Уважаемая Айгуль Дуйсембаевна,

РГП «Информационно-аналитический центр охраны окружающей среды» МЭПР РК относительно предоставления сведений Государственного углеродного кадастра Республики Казахстан по объемам выбросов и поглощению парниковых газов субъектами квотирования и администрирования всего Казахстана за период с 2015 по 2021 годы сообщает следующее.

В соответствии с пунктом 11 Правил ведения Государственного фонда экологической информации (утвержденных постановлением Правительства Республики Казахстан от 09 августа 2021 года №316) государственные органы в рамках своей компетенции предоставляют по запросу подведомственной организации достоверную и полную информацию за предыдущий год.

Согласно подпункту 4 пункта 6 статьи 25 Экологического кодекса источником информации государственного фонда экологической информации является государственный углеродный кадастр. В 2022 году на запрос экологической информации в МЭПР РК по реестру углеродного кадастра экологическая информация в ГФЭИ не предоставлялась.

В связи с тем, что сведения Государственного углеродного кадастра Республики Казахстан по объемам выбросов и поглощению парниковых газов субъектами квотирования и администрирования всего Казахстана за период с

00589

2015 по 2021 годы отсутствуют в Государственном фонде экологической информации, ваш запрос перенаправлен в Министерство экологии и природных ресурсов Республики Казахстан (копия письма прилагается).

Приложение: на 1 л.

С уважением,

И.о. Генерального директора **Р. Айдарханов**

исп. Ескендирова Г. А.
т.. 8 (717) 24 88 92

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ЭКОЛОГИЯ, ГЕОЛОГИЯ ЖӘНЕ ТАБИҒИ
РЕСУРСТАР МИНИСТРЛІГІ

«Қоршаған ортаны қорғаудың
ақпараттық-талдау орталығы»
шаруашылық жүргізу құқығындағы
республикалық мемлекеттік кәсіпорны

МИНИСТЕРСТВО ЭКОЛОГИИ,
ГЕОЛОГИИ И ПРИРОДНЫХ РЕСУРСОВ
РЕСПУБЛИКИ КАЗАХСТАН

Республиканское государственное
предприятие на праве хозяйственного ведения
«Информационно-аналитический центр
охраны окружающей среды»

010000, Астана қ., Мәңгілік ел даңғылы, 11/1
тел.: +7 7172 24 83 45, e-mail: iac.info@mail.ru

010000, г. Астана, пр. Мангилик Ел, 11/1
тел.: +7 7172 24 83 45, e-mail:iac.info@mail.ru

№ 04-2-17/2281
05.04.2023

**Қазақстан Республикасының
Экология және табиғи
ресурстар министрлігі**

*Көшірме: ҚБ «Қарағанды
облыстық экологиялық
мұражай»*

«Қоршаған ортаны қорғау ақпараттық-талдау орталығы» РМК-на «Қарағанды облыстық экологиялық мұражайы» ҚБ-нен Қазақстан Республикасының Мемлекеттік көміртегі кадастры бойынша мәліметтерді ұсынуға қатысты 2023 жылғы 20 наурыздағы №44/03 хаты келіп түсті.

Экологиялық кодекстің 25-бабының 6-тармағының 4-тармақшасына сәйкес мемлекеттік экологиялық ақпарат қорының бекітілген ақпарат көзі мемлекеттік көміртегі кадастры болып табылады.

Мемлекеттік органдар Экологиялық ақпараттың мемлекеттік қорын жүргізу қағидаларының (Қазақстан Республикасы Үкіметінің 2021 жылғы 9 тамыздағы №316 қаулысымен бекітілген) 11-тармағына сәйкес мемлекеттік органдар өз құзыреті шегінде ведомстволық бағыныштағы ұйымның өтініші бойынша өткен жылға сенімді және толық ақпаратты ұсынады. 2022 жылы көміртегі кадастрының тізімі бойынша ҚР ЭТРМ экологиялық ақпаратты сұратуы бойынша МЭАҚ-на экологиялық ақпарат ұсынылмаған.

Жоғарыда айтылғандарға байланысты 2015 жылдан бастап 2021 жылға дейінгі кезеңге Қазақстан Республикасының бүкіл аумағында квоталар мен әкімшілік субъектілерінің парниктік газдар шығарындылары мен жұтылуының көлемдері туралы, Мемлекеттік экологиялық ақпарат қорында олардың болмауына Қазақстан Республикасының Мемлекеттік көміртегі кадастрынынан ақпарат алуға жәрдемдесуіңізді сұраймыз.

Қосымша: 1 бет.

Құрметпен,

Бас директордың м.а **Р. Айдарханов**

орн. Ескендирова Г. А.
т.. 8 (717) 24 88 92

000587

Annex 3- Request for information of the State Carbon Inventory sent to the Department of Climate Policy and Green Technologies of MENR RK

Карагандинский областной
Экологический Музей

100012 Казахстан, Караганда,
пр. Бухар Жырау 47
E-mail: tp@ecomuseum.kz
t/f (7212) 41-33-44
50-45-61, 50-45-62

Исх. № 40/03 от «13» марта 2023 г.
< запрос сведений государственного углеродного кадастра >

Заместителю
Директора департамента климатической политики и зеленых технологий
Министерства экологии и природных ресурсов Республики Казахстан
Г-же Сабиевой С.С.

Уважаемая Сауле Сагдатовна!

ОО Карагандинский областной Экологический Музей при поддержке Европейского союза реализует проект «Участие гражданского общества в смягчении последствий изменения климата в Карагандинской области», в рамках которого планируется оценить вклад Карагандинской области в выбросы парниковых газов Казахстана и разработать для данного региона план мероприятий по смягчению воздействия на климат.

Настоящим письмом просим оказать содействие в предоставлении сведений Государственного углеродного кадастра Республики Казахстан по объемам выбросам и поглощению парниковых газов (ПГ) субъектами квотирования и администрирования Казахстана за период с 2015 по 2021 годы.

Просим направить сведения в электронном виде в разбивке по операторам установок и регионам на адрес: tp@ecomuseum.kz.

Благодарим за сотрудничество,
С уважением, директор
ОО Карагандинский областной
Экологический Музей **Маликова А.Д.**

Annex 4 Request for reporting information submitted to the State Carbon Inventory and PRTR addressed to Karaganda Energy Centre LLP

Карагандинский областной
Экологический Музей

100012 Казахстан, Караганда,
пр. Бухар Жырау 47
E-mail: tp@ecomuseum.kz
t/f (7212) 41-33-44
50-45-61, 50-45-62

Исх. № 57/04 от «06» апреля 2023 г.
< запрос сведений отчетности ПГ и РВПЗ>

Генеральному директору
ТОО «Караганда Энергоцентр»
Г-ну Идрисову С.М.

Уважаемый Сабыргали Мухаметкалиевич!

ОО Карагандинский областной Экологический Музей при поддержке Европейского союза реализует проект «Участие гражданского общества в смягчении последствий изменения климата в Карагандинской области», в рамках которого планируется оценить вклад Карагандинской области в выбросы парниковых газов Казахстана и разработать для данного региона план мероприятий по смягчению воздействия на климат.

Во исполнение указанного проекта мы осуществляем сбор сведений по выбросам парниковых газов источниками выбросов Карагандинской области, в связи с этим просим предоставить следующие данные:

1) данные отчетов об инвентаризации парниковых газов вашего предприятия за 2015-2022 годы – объемы выбросов парниковых газов в разбивке по годам и по парниковым газам, а также в общем объеме тонн экв. CO2;
2) данные отчетов в регистр выбросов и переноса загрязнителей (РВПЗ) за 2015-2022 годы – объемы выбросов загрязнителей в атмосферный воздух в разбивке по годам и по загрязнителям.

Обращаем Ваше внимание, что запрашиваемые данные относятся к экологической информации в соответствии с Экологическим кодексом РК (глава 4, ст.17, п.1, пп.2, 4 и 8), и обладатели экологической информации, к которым относятся, среди прочих, физические и юридические лица в части обладаемой ими экологической информации (ст.18 ЭК РК, п. 3, пп.4) – обязаны предоставлять экологическую информацию по запросу, при этом «никто не вправе требовать от заявителя, обратившегося с запросом о предоставлении экологической информации, представления обоснования своей заинтересованности в получении такой информации».

Кроме того, информация о количественных и качественных показателях эмиссий в окружающую среду не может быть признана коммерческой или иной охраняемой законом тайной (ст. 20 ЭК РК).

Указанные данные просим предоставить в срок не более пятнадцати календарных дней согласно Закону РК «О доступе к информации» (ст.11, п.10) в электронном виде на языке запроса на следующие реквизиты:

1) Организация, запрашивающая сведения: ОО Карагандинский областной Экологический Музей (БИН 970540003220)
2) Адрес электронной почты: tp@ecomuseum.kz
3) Контакты для связи: 87072523676 Маликова Айгуль Дуйсембаевна, директор

Открытость вашего предприятия и готовность к сотрудничеству поможет достоверно оценить выбросы парниковых газов в регионе и выработать эффективные меры для смягчения воздействия на климат.

Надеемся на плодотворное сотрудничество,
С уважением, директор
ОО Карагандинский областной
Экологический Музей **Маликова А.Д.**

Annex 5 Response of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan from 14.08.2023 to the request for data on greenhouse gas emissions

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ЭКОЛОГИЯ
ЖӘНЕ ТАБИҒИ РЕСУРСТАР
МИНИСТРЛІГІ

МИНИСТЕРСТВО
ЭКОЛОГИИ
И ПРИРОДНЫХ РЕСУРСОВ
РЕСПУБЛИКИ КАЗАХСТАН

010000, Астана қ., Мәңгілік Ел даңғылы, 8
«Министрлктер үйі», 14-кіреберіс
тел.: +7 7172 74 08 44

010000, г. Астана, пр.Мангилик Ел, 8
«Дом министерств», 14 подъезд
тел.: +7 7172 74 08 44

№ _____

ОО «Карагандинский областной Экологический Музей»

На № 40/03
от 23 апреля 2023 года

Министерство экологии и природных ресурсов Республики Казахстан *(далее – Министерство)* рассмотрев ваше письмо, касательно предоставлении сведений Государственного углеродного кадастра Республики Казахстан по объемам выбросов парниковых газов субъектами квотирования, сообщает следующее.

Согласно пункту 8 статья 28 Предпринимательского кодекса Республики Казахстан от 29 октября 2015 года информация, составляющая коммерческую тайну, не может быть разглашена без согласия субъекта предпринимательства, за исключением информации, по которой имеется вступившее в законную силу решение суда, или иных случаев, установленных настоящим Кодексом.

В этой связи, необходимо получить разрешения от субъектов квотирования о получении данных.

Первый Вице-министр **Н. Шарбиев**

Дата: 14.08.2023 10:42. Копия электронного документа. Версия СЭД: Documentolog 7.16.3. Положительный результат проверки ЭЦП

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Согласовано

Learn more about our climate initiatives:

https://www.ecocitizens.kz и https://ecomuseum.kz

The EcoMuseum was established in Karaganda in 1995. Its mission is to collect and disseminate environmental information on the territory of Central Kazakhstan in order to increase the role of the public in solving urgent environmental problems and in the development of democratic processes. The EcoMuseum focuses on raising public awareness, engaging the public in environmental protection activities, research and implementation of environmentally friendly technologies.

ARNIKA

www.arnika.org

'Arnika' is uniting people striving for a better environment. We believe that natural wealth is not simply a gift, with it comes a responsibility to preserve it for the future. Since its foundation in 2001, Arnika has become one of the most important ecological organizations in the Czech Republic. In our activities, we rely on three components - public involvement in the decision-making process, expert opinions and justified requests. We conduct public campaigns both in the Czech Republic and abroad. Arnika focuses on nature conservation, toxic substances and waste, and environmental justice.

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