

# National GHG Inventory of Kazakhstan 2024



Ministry of Ecology and Natural  
Resources of the Republic of  
Kazakhstan



**Zufar Tokpayev**, Deputy Director of the GHG Inventory Department



# Legal Foundation

1

UNFCCC

2

Article 12  
Submission of  
information  
concerning  
implementation

Decision  
24/CP.19 Structure of the  
National Report; Basic  
Requirements

3

Paris Agreement

Decision  
18/CMA.1

4

Environmental Code of the  
Republic of Kazakhstan

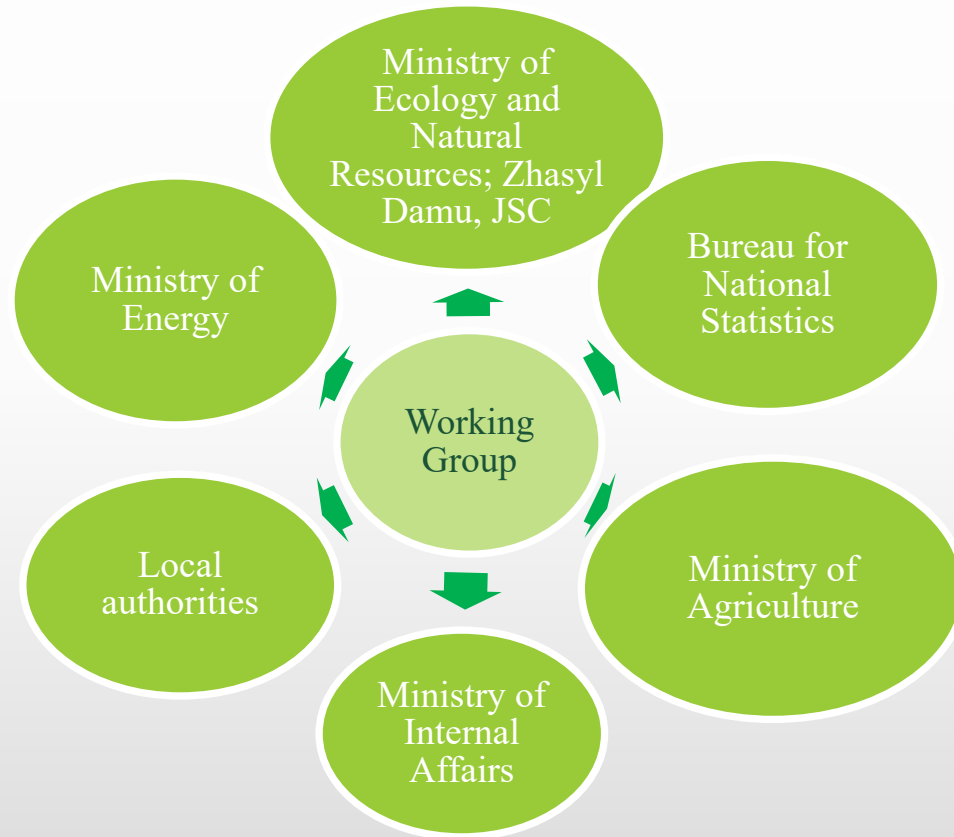
Article 302

5

***•Order of the Minister of Ecology,  
Geology and Natural Resources of  
the Republic of Kazakhstan dated  
22.02.22 No. 46 "On approval of the  
Rules for monitoring the  
completeness, transparency and  
reliability of the National Inventory  
of greenhouse gas emissions and  
absorptions"***



# Working Group on preparation of the National GHG Inventory



## Goals

- **Providing Activity Data for calculating GHG emissions and removals;**
- **Review and approval of the QA/QC plan;**
- **Verification of data and emissions calculation as part of the preparation of the NIR;**
- **Approval of the NID and CRT**



# National GHG Inventory

## SECTORS:

Energy

IPPU

Agriculture

LULUCF

Waste

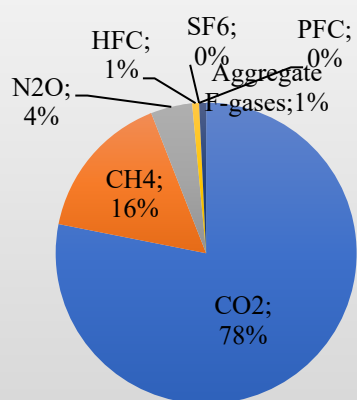
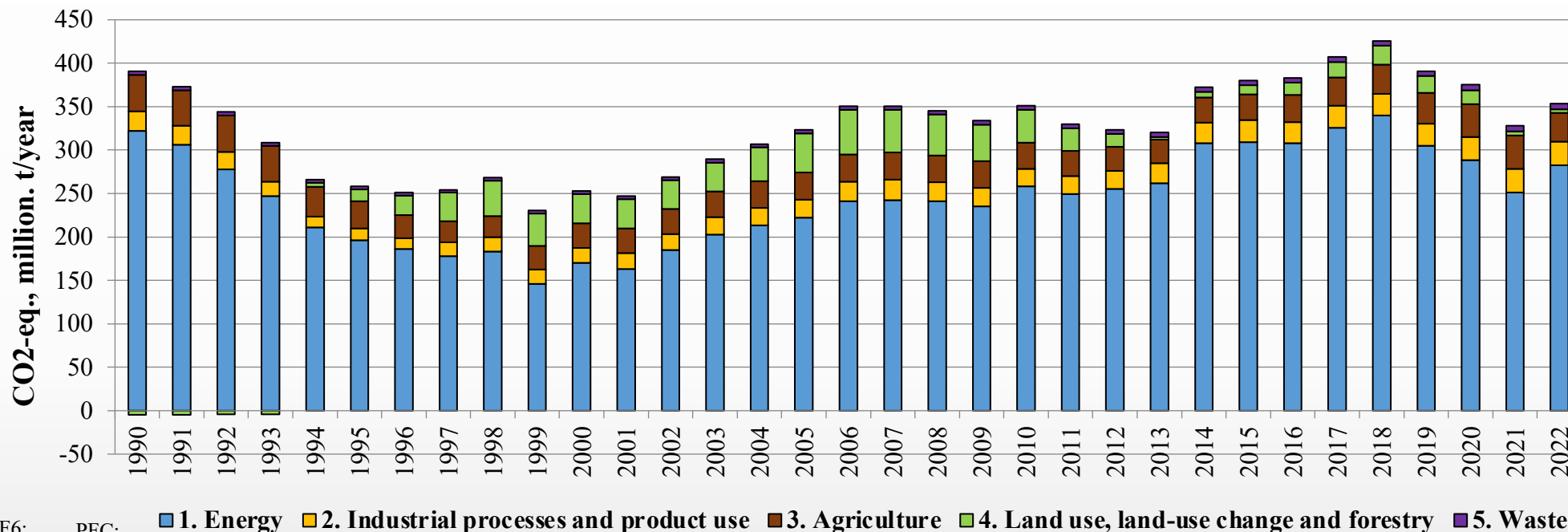
❖ National Inventory Document (NID)

❖ CRT tables

### Main changes in reporting (ETF)

1. CRF Reporter – ETF tool
2. NIR – NID, CRF – CRT
3. Adaptation CRT tables to IPCC Refinement 2019
4. Updated GWP (AR5 IPCC): CH<sub>4</sub> – 28, N<sub>2</sub>O – 265

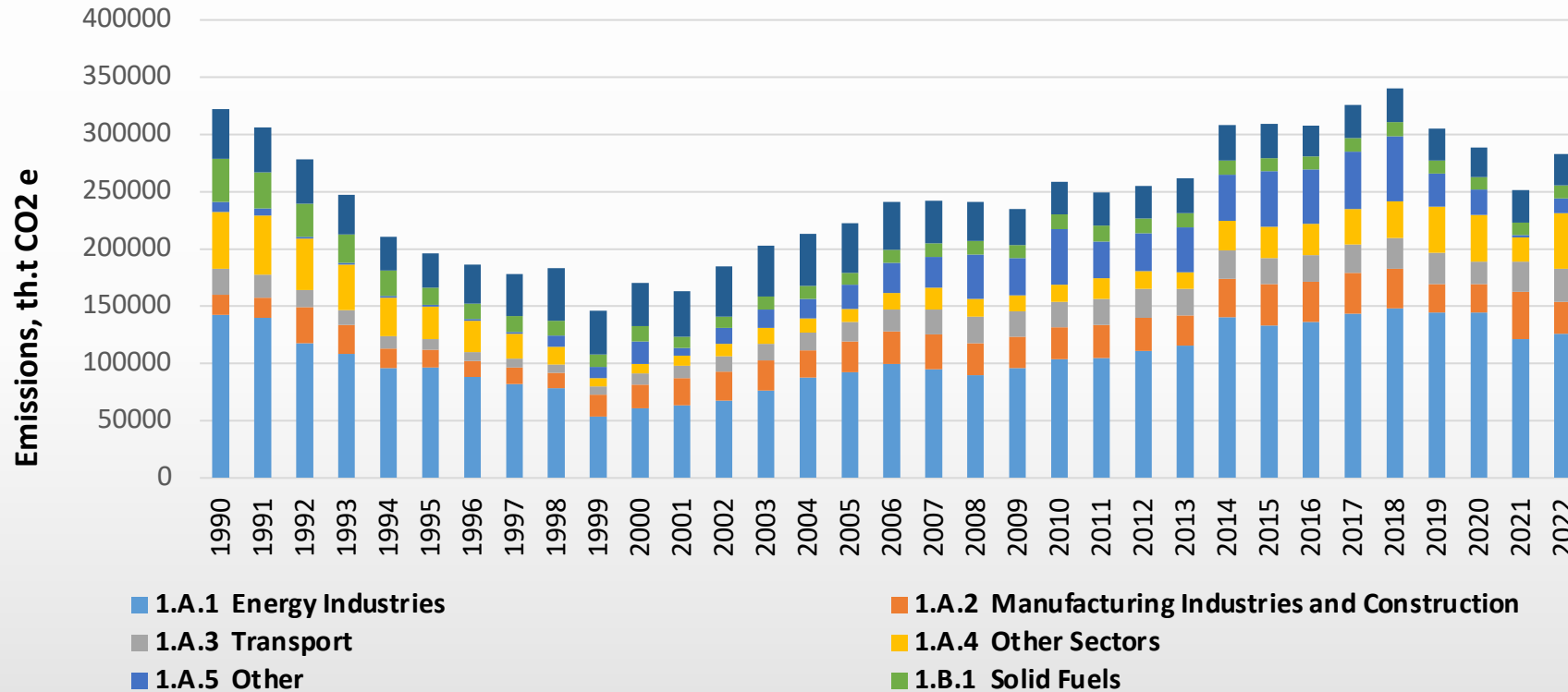
# National GHG Inventory 1990-2022



Key Category (95 % of national emissions): by level – 26  
by trend – 25



# Energy

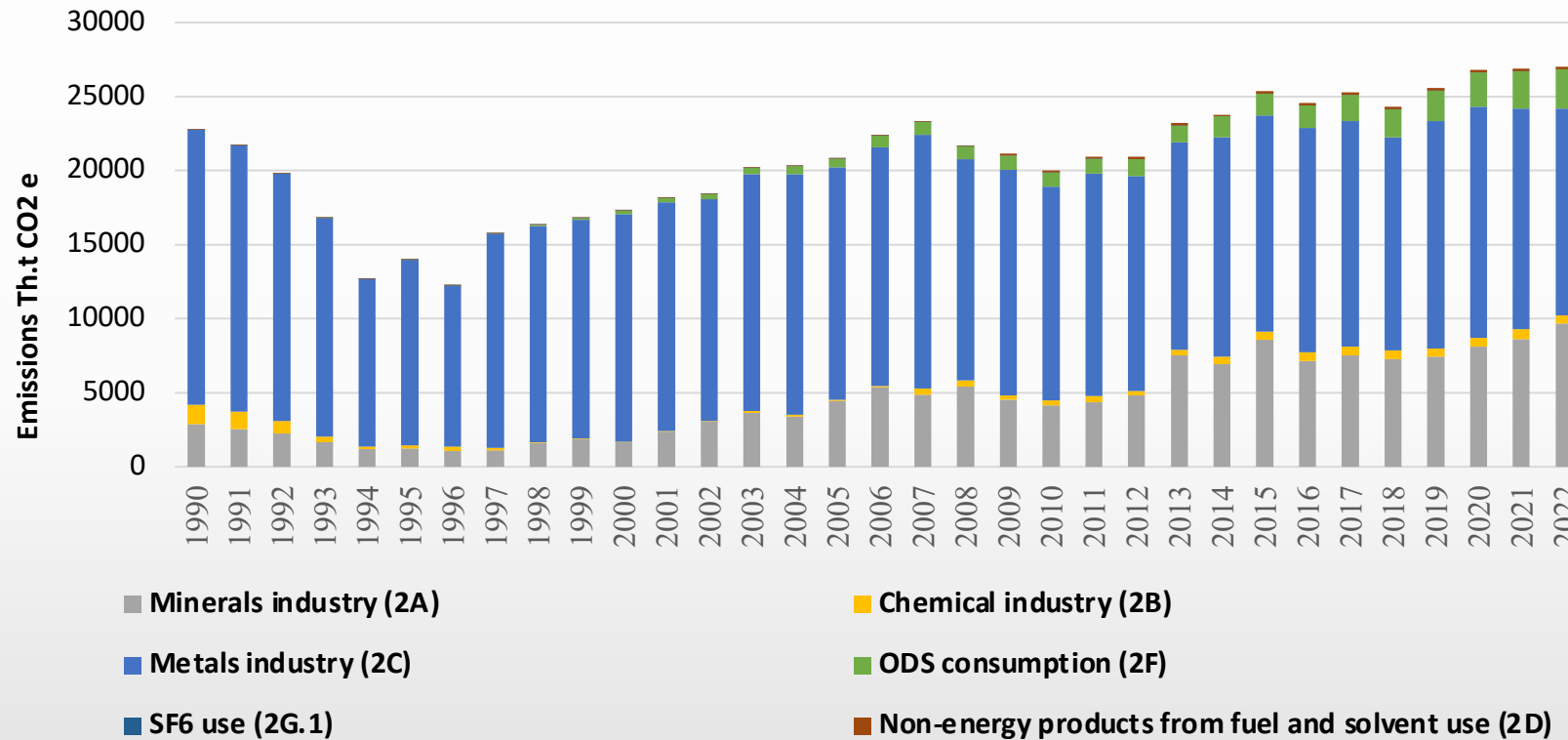


The sector includes all emissions associated with the extraction, processing, transportation, and use of fossil fuels. It is the primary source of CO<sub>2</sub> and other greenhouse gas emissions, resulting from fuel combustion for electricity generation, heating, transportation, and industrial use. The IPCC guidelines classify emissions based on fuel type and end-use, including stationary and mobile combustion, fugitive emissions, and other processes in the fuel industry.

Contribution of the sector to National GHG emissions - 80 %

Emission estimation method: IPCC GLs, 2006, Tier 1 and Tier 2

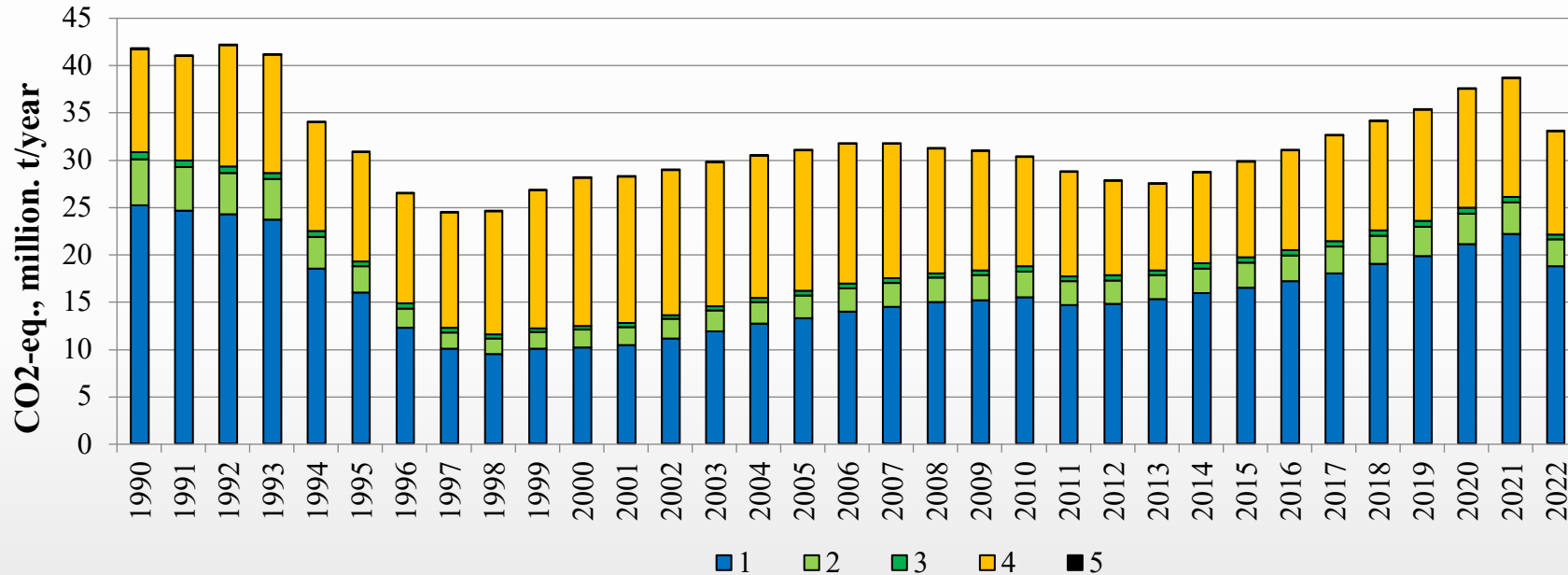
# Industrial Processes and Product Use (IPPU)



The sector accounts for emissions from industrial processes that occur in industrial production, as well as emissions from product use. The IPCC guidelines provide methods for estimating emissions from processes such as cement, steel, and aluminum production, and from the chemical industry, as well as emissions from products like refrigerants and solvents.

Contribution of the sector to National GHG emissions - 8 %  
 Emission estimation method: IPCC GLs, 2006, Tier 1 and Tier 2

# Agriculture



1 - Enteric fermentation; 2 - Manure management; 3 - Rice cultivation; 4 - Agricultural soils; 5 - Urea application

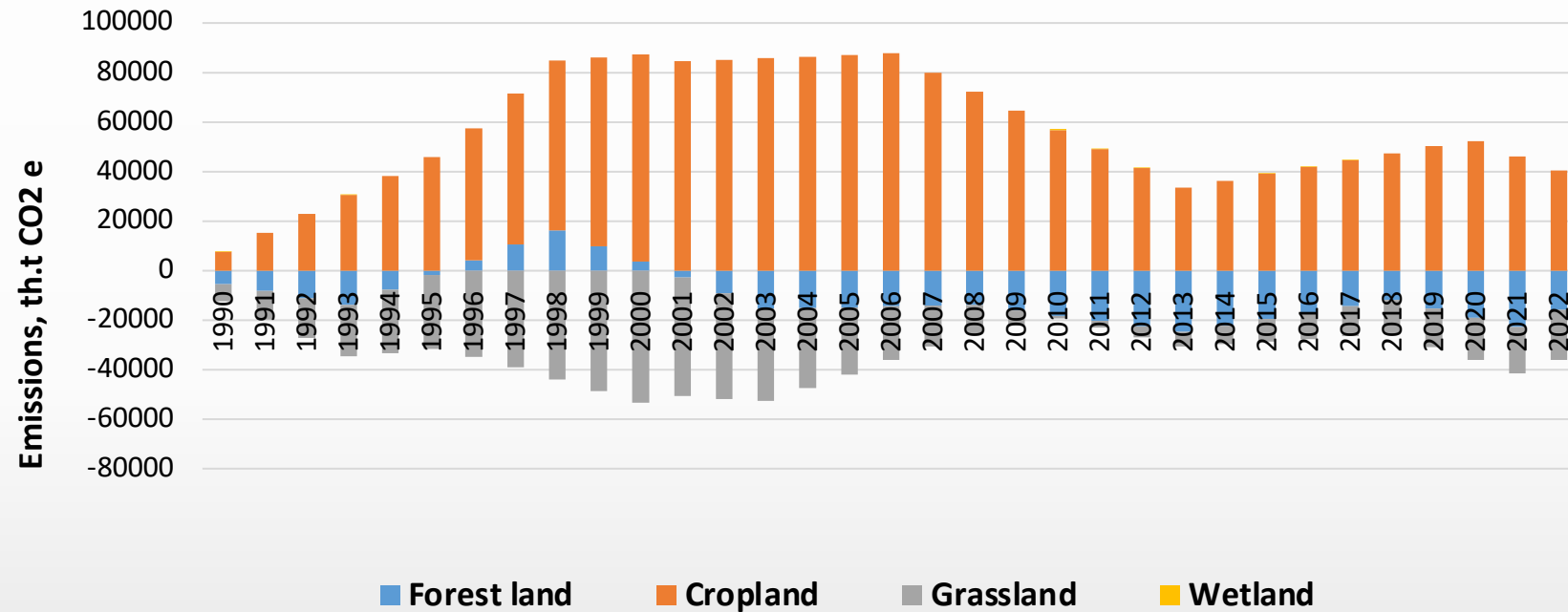
The sector covers methane and nitrous oxide emissions associated with biological processes in agriculture. According to the IPCC Guidelines, it includes emissions from enteric fermentation in livestock, manure management, rice cultivation, the application of mineral fertilizers and organic materials to agricultural soils, as well as the burning of agricultural residues.

Contribution of the sector to National GHG emissions - 9 %

Emission estimation method: IPCC GLs, 2006, Tier 1 and Tier 2



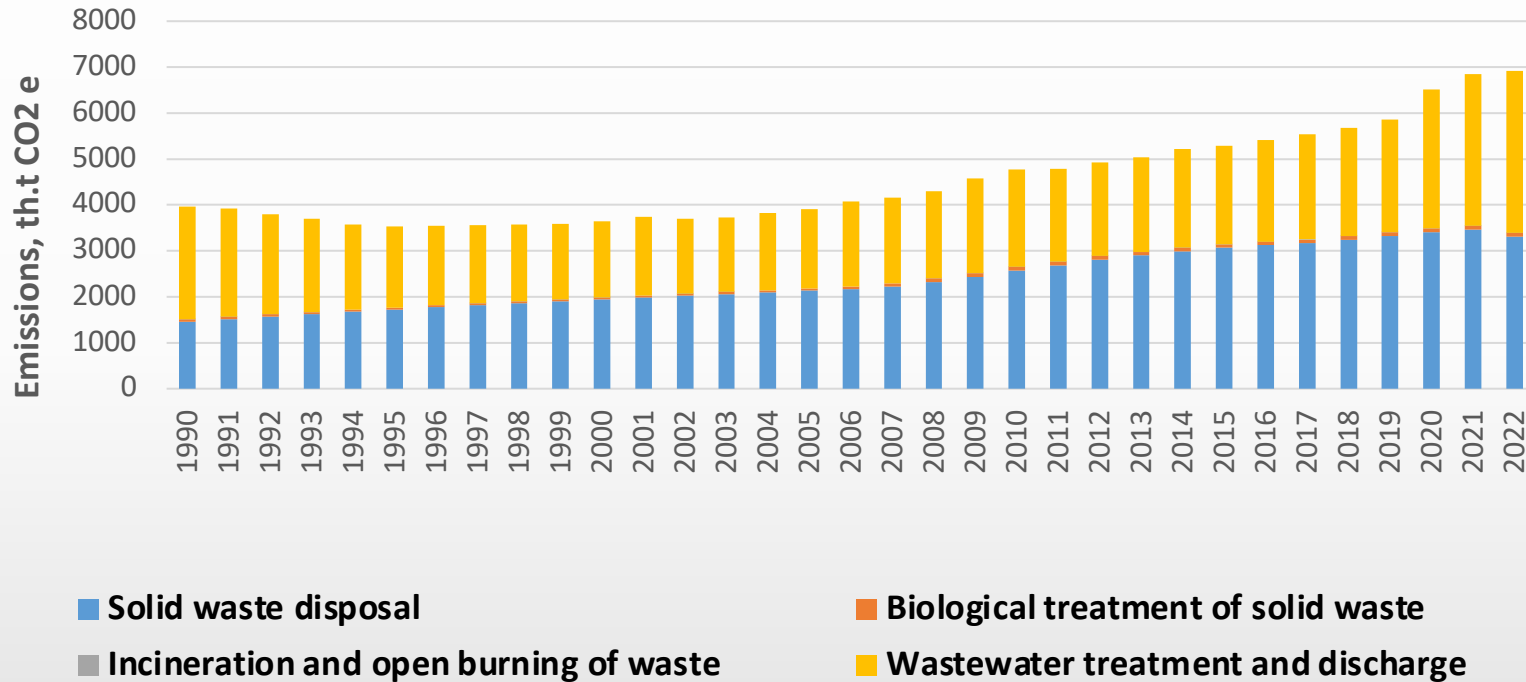
# Land Use, Land-Use Change and Forestry (LULUCF)



The sector shows emissions and removals of greenhouse gases associated with changes in land use, forest management, land restoration, and soil carbon. The IPCC guidelines provide methods for assessing changes in carbon stocks in forests, croplands, grasslands, and other ecosystems, as well as emissions from deforestation and land degradation.

Contribution of the sector to National GHG emissions - 1 %  
Emission estimation method: IPCC GLs, 2006, Tier 1 and Tier 2

# Waste



The sector includes emissions generated from waste management activities, including landfilling, composting, incineration, and wastewater treatment. The main greenhouse gases in this sector are methane and nitrous oxide. The IPCC guidelines describe methods for estimating emissions from various waste management processes, considering factors that influence the rate of organic material decomposition and gas release.

Contribution of the sector to National GHG emissions - 2 %

Emission estimation method: IPCC GLs, 2006, Tier 1 and Tier 2

# Nationally Determined Contribution (NDC)

1


Kazakhstan set an unconditional emissions reduction target of 15 % by 2030, compared to 1990 levels

3

Kazakhstan also has an conditional target - **25% reduction in emissions by 2030 compared to 1990 levels**, subject to international support

2

Kazakhstan plans to extend adaptation measures to all sectors, vulnerable to climate change

Party	Title	Language	Translation	Version	Status	Submission Date	Additional documents
 Kazakhstan	Kazakhstan First NDC (Updated submission)	English		2	Active	27/06/2023	

**Thank you!**