

# On the state of protection of atmospheric air in the Republic of Kazakhstan in 2023

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## 1. Key indicators

In 2023, emissions of pollutants into the atmospheric air from stationary sources amounted to 2,257.5 thousand tons and their level decreased by 2.47% compared to the previous year.

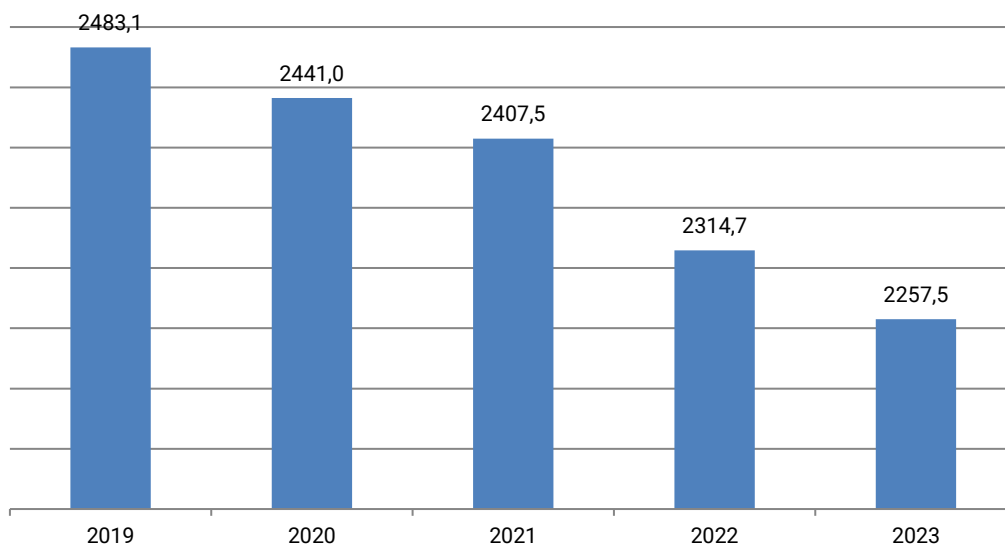
Of the total volume of pollutants released into the atmospheric air, 80.7% were gaseous and liquid substances, 19.3% were solid.

In 2023, enterprises of the republic captured and neutralized 93.4% of pollutants from the total amount of pollutants coming from all stationary sources of pollution.

## 2. Dynamics of pollutant emissions

Emissions of pollutants into the atmosphere

in thousands of tons



The main volumes of pollutants were formed in the territories of Pavlodar (694.2 thousand tons) and Karaganda (455 thousand tons) regions.

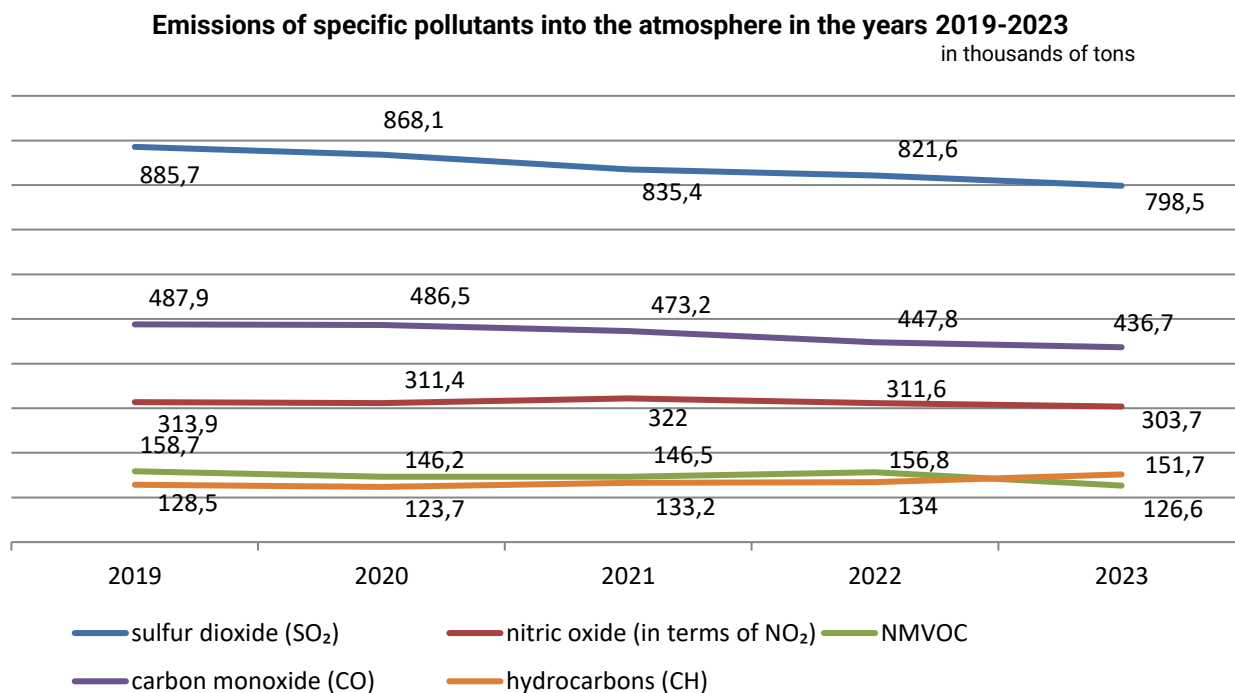
Emissions of pollutants by region

in thousands of tons

	2019	2020	2021	2022	2023
<b>Republic of Kazakhstan</b>	2483,1	2441,0	2407,5	2314,7	2257,5
Abay	-	40,7	40,9	39,0	38,5
Akmola	76,7	77,2	77,3	69,5	69,8
Aktobe	136,6	135,1	137,4	136,5	112,1
Almaty	48,1	26,3	30,3	28,8	28,4
Atyrau	164,5	153,9	160,3	132,1	140,1
Batys Kazakhstan	41,2	30,8	26,0	25,8	34,4
Zhambyl	55,8	55,0	55,8	52,9	51,2
Zhetisu	-	19,9	17,7	13,1	14,8
Karagandy	641,3	519,0	488,0	469,0	455,0
Kostanay	130,5	123,4	137,9	121,4	118,3
Kyzylorda	24,4	28,3	29,2	23,4	25,3
Mangystau	64,5	72,5	75,2	78,7	86,2
Pavlodar	721,5	723,0	736,1	724,2	694,2
Soltustik Kazakhstan	74,7	76,0	61,2	52,7	58,9
Turkistan	33,5	28,1	29,0	25,2	26,7
Ulytau	-	108,7	81,7	105,1	103,1

Shygys Kazakhstan	128,8	86,5	87,2	83,3	80,9
Astana city	65,1	62,4	62,2	57,7	46,4
Almaty city	46,1	44,5	40,8	41,4	44,0
Shymkent city	29,8	29,6	33,2	34,9	29,3

### 3. Dynamics of emissions of the main specific pollutants



In 2023, the republic's air basin received such specific pollutants as lead and its compounds in the amount of 243.5 tons, manganese and its compounds – 71.3 tons, copper oxide – 109.1 tons, sulfuric acid – 384.0 tons, chlorine – 46.7 tons, mercury – 166 kilograms. The actual release of these substances did not exceed the volume of the established maximum permissible emissions (MPI).

#### Spreadsheets:

[On the state of protection of atmospheric air in the Republic of Kazakhstan](#)

### 4. Glossary

Emissions of pollutants into the atmosphere – the entry into the atmospheric air of pollutants (having an adverse effect on the health or activity of the population, on the environment) from stationary sources of emissions (organized and unorganized).

Stationary organized sources include mobile sources from which pollutants enter through gas and air outlet systems (chimneys, aeration lights, ventilation shafts, etc.).

### 5. Methodological notes

To form an indicator of emissions of pollutants into the atmosphere from stationary sources, data from the annual national statistical observation on atmospheric air protection are used.

Data on the amount of substances leaving with gases used in technological processes of production of products as raw materials or semi-finished products are not included in the total volume of emissions of pollutants into the atmosphere. In particular, substances formed and disposed of during the purification of gases leaving the reactors during the production of soot at carbon black plants, the purification of gases leaving the ore-thermal furnaces during the production of yellow phosphorus at phosphorus plants, the purification of gases leaving the furnaces of the "fluidized bed" in the production of sulfuric acid are not taken into account. At chemical plants. At ferrous metallurgy enterprises, carbon monoxide contained in blast furnace gas, which is used as a process fuel, is not taken into account. The substances captured by installations and systems of "double adsorption" and double contacting, which serve to produce products from waste gases of non-ferrous and ferrous metallurgy, chemistry, petrochemistry plants, are not taken into account. Only pollutants entering the atmosphere as a result of incomplete capture and gas leaks due to non-tightness of technological equipment are subject to accounting.

Additionally, a methodological explanation is available at the following link:

[Methodology for the formation of environmental statistics indicators](#)

### 6. Links to related publications

[Statistical compilation «Environmental protection in the Republic of Kazakhstan»](#)

### 7. Useful links

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