

## Environmental Assessment of Single-Industry Towns in Kazakhstan in the Context of Sustainable Development Goals

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**Abstract :** In this article, the regularities of the modern spatial and temporal distribution of main pollutants in the air space of single-industry towns are considered, and the level of pollutant emissions into the atmospheric air by urban areas of the Karaganda region is determined. We selected such cities as Temirtau, Abay, Saran, and Balkhash. Ecological and hygienic assessment of atmospheric air pollution in these cities for 2020 - 2023 and the beginning of 2024 was carried out on the materials of annual Information Bulletins on the state of the environment of the Republic of Kazakhstan, bulletins 'On the state of atmospheric air in Karaganda region'. The general assessment of atmospheric air pollution in the territory was high, especially in 2020 and 2021, and corresponded to the level of 'tense'. According to the results of the analysis of atmospheric air pollution, it was revealed that enterprises of thermal power engineering and mining industry (mines, enrichment plants, metallurgical production of 'ArcelorMittal' JSC) carry out emission of significant amounts of pollutants, particulate matter, and heavy metals into the atmosphere. The total number of ingredients present in the atmosphere of the city exceeds dozens, many of which belong to the first and second categories of hazard. The main pollutants were sulphur dioxide, carbon oxides, and nitrogen dioxide, as well as suspended solids. We have also considered and studied some types of major diseases of the population living in the region in different conditions in recent years. According to the results of the study, the cities with the highest rates and levels of morbidity were identified: Temirtau, Shakhtinsk, Abay, located in Karaganda region, where the main industrial facilities are concentrated, emitting harmful pollutants from 'Corporation Kazakhmys' LLP, 'Arcelor Mittal' JSC, Balkhash Mining and Metallurgical Combine.

**Keywords :** atmospheric air, pollutants, single-industry towns, Karaganda region, morbidity, sustainable development

**Conference Title :** ICEDU 2025 : International Conference on Environmental Degradation and Urbanization

**Conference Location :** London, United Kingdom

**Conference Dates :** July 26-27, 2025