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Assessment of the Risks of Environmental Factors on the Health of Kazakhstan Cities in Promoting the SDGs

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Abstract : In order to adapt projects to promote Sustainable Development Goal 11. «Ensuring openness, security, resilience and environmental sustainability of cities and human settlements», presented in the UN Concept, it is necessary to assess the environmental sustainability of cities. From the analysis of the problems of sustainable development of cities in Kazakhstan, it can be seen that the industrial past created a typical range of problems -transport, housing, environment, and, importantly, image. Most studies on air pollution have focused on assessing the impact of pollutants on sustainability in megacities, but little is known about their relationship in cities whose economies are dominated by a single industry or company. Based on the data of ecological, economic, and social indicators of five single-industry towns of the Karaganda region of Kazakhstan, an assessment of the risks of the negative impact of environmental factors on the health of the population was carried out, including by paying special attention to air quality. In order to investigate the relationship between the structure of industry, environmental pressure, and environmental sustainability of resource-oriented cities, an analysis of the main components was carried out to measure the structure of industry, environmental stress, and environmental sustainability of single-industry towns. It has been established that in resource-based cities, economic growth mainly depends on the development of one main industry, which primarily depends on local natural resources. Empirical results show that the regional structure of industry has a significant negative impact on the environmental sustainability of cities, in particular on the health of the population living in them. The article complements the study of the theory of urban sustainability and clarifies the relationship between industrial structure and environmental pressure on health safety and environmental sustainability of cities and towns, which is crucial for further promoting the "green" development of single-industry towns based on natural resources.

Keywords : public health risks, urban sustainability, suspended solids, single-industry towns, atmospheric air, environmental pollution
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