

## **Assessing the Impact of Environmental Factors on Economic and Environmental Security at the Meso-Level: Econometric Modeling Using the Case of Primorsky Krai**

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**Keywords:** gross regional product; correlation and regression analysis; pollution level; factors; econometric modeling; economic security; environmental safety.

**Abstract:** This paper presents the construction and verification of an econometric model assessing the impact of key environmental factors on economic and environmental security at the mesoscale (using Primorsky Krai as an example) for the period 2008–2023. The explanatory variables used include investment in environmental protection, air pollutant emissions, and wastewater discharges into surface water bodies. The dynamics and relationships of these indicators with aggregated indicators of the region's economic and environmental security are analyzed, including GRP per capita, disease incidence, investment attractiveness, natural resource status, and environmental burden. Correlation analysis, multiple linear regression, and hypothesis testing using Python libraries (Pandas, NumPy, Statsmodels, Seaborn, Matplotlib) are used. The main hypothesis of the study was confirmed: environmental and economic security at the meso-level are closely interconnected, ignoring environmental risks creates systemic threats to the sustainable socio-economic development of the region.