

FIXED SOURCES OF ATMOSPHERIC AIR POLLUTION IN THE BALTI URBAN ECOSYSTEM

Țugulea Andrian

Institute of Ecology and Geography, Chisinau, Republic of Moldova

E-mail: andrusha_tugulea@yahoo.com

Stationary sources of pollution (excluding the household sector) in the Balti urban ecosystem eliminate a huge volume of pollutants into the atmosphere. The number of economic agents registered in the municipality that eliminate pollutants in the atmosphere in the production process for the period 2014 - 2021 is decreasing: from 408 to 222. The dynamics of the volume of emissions in the municipality is increasing for the period 2014-2021 from 855.13 t to 1544.86 t. (Fig. 1).

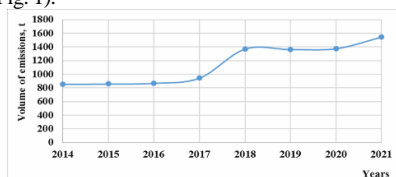


Fig. 1 The dynamics of the volume of emissions from stationary sources in Balti municipality (2014 - 2021)

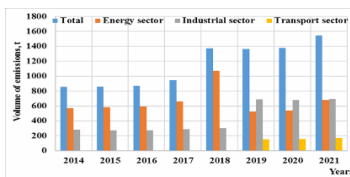


Fig. 2 The dynamics of the volume of emissions by activity sectors in Balti municipality (2014 - 2021)

For the period 2014 - 2018, the largest volumes, about 70%, were emitted by the energy sector, and the rest from the industrial sector (Fig. 2). Starting with 2019, the industrial sector emits about 700 tons of emissions into the atmosphere compared to about 300 tons by 2018. Among the largest companies in the thermal energy sector with increased emission volumes is J.S.C. "CET-Nord" with 50.29 t in 2021 and Î.M. „Termogaz Bălți” with 9.102 t. Regarding the transport services sector, there is an increase in the volume of emissions from 151.107 t in 2019 to 170.819 t in 2021. Among the biggest polluters in this field are LTD "Lukoil Moldova" - 36,069 t considering all the fuel supply points from the municipality, followed by LTD „Dominic” – 34.441 t, LTD „Petrom Moldova” – 29.382 t, LTD „Bemol Retail” - 12, 563 t, etc. In the food production sector for 2021 stand out J.S.C. „Floarea Soarelui” with 604.287 t, J.S.C. "Incomlac" – 29.548 t, J.S.C. "Vinăria din Vale" - 7,449 t, J.S.C. "Basarabia Nord" - 6,008 t. The sector of production of construction materials in the Balti municipality is represented by Î.M. MG „CMC-Knauf” with 26.953 t, LTD „Dolomita Prim” (with the specificity of producing concrete articles) with 6.673 t. and others with a lower volume. An increased volume of emissions for the Balti urban ecosystem is also represented by LTD "Gloring Engineering", which in the process of activity for 2021 emitted into the atmosphere 241.863 t. The composition of the emissions of this economic agent is 69% hydrocarbons (CH), followed by CO - 21% and solids - 3%. Nitrogen and sulphur dioxide (NO₂ and SO₂) accounted for 1% each.

Acknowledgments: The results of the research presented in this article were obtained from the Project 20.80009.7007.11 "Assessment of the stability of urban and oral ecosystems in order to ensure sustainable development", as well as support from the National Scholarship Program offered by the World Federation of Scientists.

Keywords: air pollution, polluters, economic agents, urban ecosystem, emissions.