

Klikocka, H., Wylupek, T., Narolski, B. Sulphur Content Analysis of Zamosc Region Biosphere. *Ochrona Srodowiska* 2015, Vol. 37, No. 1, pp. 33–42.

Abstract: The study assessed sulphur content in the biosphere of forested and agricultural areas of Zamosc region in the period 2000–2011, against the entire territory of Poland. Some areas of Silesian, Lower Silesian, Lesser Poland and Masovian Voivodships are the most polluted with sulphur dioxide regions in Poland. Several zones there were classed as exceeding acceptable or target levels. The analysis of Zamosc Region demonstrated that the sulphur content did not exceed the acceptable limits outlined in legal guidelines. Sulphur content in the air was confirmed at the level of $2.1 \div 6.9 \mu\text{gSO}_2/\text{m}^3$, while sulfate content in the rivers – at the level of $10.0 \div 76.7 \text{gSO}_4^{2-}/\text{m}^3$, in springs – $18.6 \div 24.2 \text{gSO}_4^{2-}/\text{m}^3$, in groundwater – $9.3 \div 166 \text{gSO}_4^{2-}/\text{m}^3$, in forest soils – $8.5 \div 77.7 \text{mgSO}_4^{2-}/\text{kg}$, in agricultural soils – $8.1 \div 18.8 \text{mgSO}_4^{2-}/\text{kg}$, in mosses – $610 \div 1090 \text{mgSO}_4^{2-}/\text{kg}$ and in cultivar plants – $1210 \div 1370 \text{mgSO}_4^{2-}/\text{kg}$. Assessment results of the levels of atmosphere, lithosphere, hydrosphere and phytocenosis pollution with sulphur in Zamosc Region are very favorable in comparison to other regions of Poland. Therefore, it may serve as a control region in biosphere pollution studies.

Keywords: Sulphur dioxide, sulfates, air, water, soil, agricultural crops, mosses.