

THE APPLICATION OF CALMET/CALPUFF MODELS IN AIR QUALITY ASSESSMENT SYSTEM IN POLAND

WOJCIECH TRAPP

Abstract: The accession of Poland to the European Union involved the need of regional air quality assessment and brought radical change in requirements towards the software tools used for assessment purposes. According to Polish law, a region is an agglomeration of over 200 000 inhabitants, or a powiat (second level of local government administration in Poland), or a group of powiats, and assessment should consider both global and regional inflow of pollutants as well as the impact of local emission sources and significant sources in a voivodeship. These requirements have imposed a model range of over 250 km. Following an analysis of different models operating all over the world, the CALPUFF model together with the CALMET meteorological processor was chosen to be implemented in air quality assessment systems in Polish regions. This paper presents the results of model calculations performed within the air quality assessment in Mazowieckie voivodeship as well as compares them with the measurements obtained at automatic air monitoring stations.