



6-year ozone forecast for Poland – results, exposure, lessons learned and future plans

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The Chief Inspectorate initiated an operational tropospheric ozone forecast for Poland for Environmental Protection in 2013. The forecast was done using the GEM-AQ tropospheric chemistry model (Kaminski et al. 2008) as a part of the EcoForecast.pl air quality modelling system. Computational grid resolution was 5km over Central Europe. The forecast was issued every day for the subsequent three days.

Forecast results were extensively evaluated every year based on measurements from the national air quality monitoring network. In 2018 assimilation of NRT observation for ozone to generate initial conditions were implemented. Impact of temperature variability on ozone background over Poland was assessed. Also, ozone episodes were analyzed for each year in the synoptic contexts. Based on 24-hour forecast human and vegetation exposure indices were calculated over Poland. The model resolution was increased to 2.5km for forecast in January 2019.

We will present the performance of the modelling system as well as the spatial pattern of exposure indices. The interannual variability will be discussed in the meteorological context.