

C.1. DESCRIPTION FOR THE GENERAL PUBLIC

Allergies are very common problem and cause a number of ailments – e.g. conjunctivitis, hay fever or even asthma. The one of the most frequent allergens are pollen from trees. According to studies conducted by Global Asthma and Allergy European Network, almost 28% citizens of Poland is sensitized to birch pollen, in Europe it is 24%. On emission and transport of pollen, the huge impact have meteorological conditions – from temperature, through solar irradiance, humidity or precipitation.

Very common tools, to investigation of pollen dispersion, are deterministic models. To their appropriate run, the essential are input data - the information on the amount of pollen released. (the emission data) and meteorological conditions.

The aim of this study is:

- development of emission model for birch pollen in the area of Wrocław
- run of HYSPLIT numerical model, in order to investigate the dispersion of pollen
- to investigate the relations between meteorological conditions, as a circulation types, and the concentration of birch pollen

The implementation of this aims, will increase the knowledge on the influence of meteorological factors on the pollen concentration. The use of numerical models allow in the future for forecast the pollen concentration for the whole Poland. This is important for sensitized people – forecast allows them to prepare themselves for days in which would be exceeded the concentration of pollen that cause allergic symptoms.