## Challenges of modern aerobiology



Contribution ID: 14 Type: not specified

## Personalized pollen allergy symptom forecasts over Europe

The number of pollen allergy sufferers is growing constantly in Europe and worldwide. A deeper understanding of the problem allows better solutions, such as forehanded therapy for allergy sufferers. Forehanded therapy and the lowest impact on human health is possible when the timing, approximate level of allergens and possible organism reaction on each individual are known. Currently running system PASYFO (personalized pollen allergy symptom forecasting system) allows allergy sufferers to be involved in symptom forecasting.

The system was developed in 2018, and since that time, it has been successfully running as a mobile application called PASYFO in Lithuania and Latvia. The forecast consists of several modules – (1) pollen forecast, (2) meteorological forecast, (3) air quality forecast, and (4) individual symptoms entered by the person.

In the frame of the Horizon project "AI-augmented ecosystem for Earth Observation data accessibility with Extended Reality User Interfaces for Service and data exploitation" EO4EU, implementation of the PASYFO module in European applications as Pollen+ and MASK-Air is performed, as well as expansion of updated PASYFO mobile application to the European level. The first release of the updated apps is expected in the spring of 2024.

The authors acknowledge the support of the Horizon project EO4EU (nbr 101060784)

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