

## Minutes of the POLLEN project meeting 23.09.2005

Participants:

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Agenda:

- Review of the current project status and the work done
  - WP1. Emission model development
    - Collected phenological, aerobiological and phenological data (HR, PS)
    - Data processing, analysis and recent findings (HR et al, PS & MS, TL?)
  - WP2. SILAM model updates
    - On-going developments and evaluation (MS)
- Next steps
  - WP1. Review of the emission model fitting procedure
  - WP2. Forthcoming SILAM extensions
  - WP3, WP4: any preparations for the next spring season?
- Phenological database: data collected, what next?
  - continue extending database to create continuous spatial structure
  - publication
- Project Web site: needed updates and available materials
- Next project annual meeting
- AOB

Discussions and decisions:

**WP1 – data collection.** A phenological database for Europe with ~2500 stations for the period of up to 70 years (main dataset is for last 10-15 years) is collected, pre-processed and its analysis has been started. Main represented countries (in terms of number of stations) are: Germany, UK, Finland, Switzerland. The longest dataset is available for Check Republic. Other countries are represented by a few stations for a few years. A separate dataset of Sarvas for Finland is also available as a limited in size but very detailed set of information, mostly suitable for derivation of the emission characteristics such as intensity variation and amount of released pollen.

It was specially noticed that this database is unique in Europe and none of the dedicated efforts to-date succeeded in collecting similar amount of information.

An identified difficulty is a spatial discontinuity of the dataset, which creates certain problems with space-wise smooth transformation of the emission model fitting.

Decided: continue collection of the database, with a special stress to Poland and Estonia, as well as Russia and the IPG network (in an attempt to get the printed bulletins of the network). Other countries (e.g. France) will be also involved if good contact points are found.

**WP1 – data analysis.** The analysis was pushed in two directions. In FMI, the collected phenological data are being unified with meteorological (ECMWF ERA-40) and their

spatial characteristics are reviewed in order to find the best horizontal resolution of the emission model fitting procedure. Interesting results are obtained, further needs for analysis were outlined. In UTU, the aerobiological data from EAN were considered to evaluate spatial and temporal correlations and stabilities of the total amount of pollen released annually. The estimated scale of the spatial inhomogeneities roughly coincided with that derived from phenological data but further refinement of estimates is also needed. In particular, the characteristic scale (and mere existence) of spatially correlated areas is to be investigated. Correlation of the total released amount with previous' year meteorological and flowering characteristics is another open question.

It was decided not to alter the fitting algorithm agreed at the spring meeting but rather use for the starting point the Sarvas data -based parameterization and make an attempt to smoothly transform it to central Europe.

**WP2. SILAM updates.** A set of recent SILAM updates and evaluation efforts, being not directly linked to the project, allowed improvement in the model reliability and quality of the output. Further planned developments, including the new advection routine and reshaped boundary layer features, are planned for the autumn-winter period.

**WP3. Real-time data.** So far the only source of in-situ near-real-time data on pollen counts seems to be DWD. It was decided to ask for such service for the coming spring as a pilot exercise to learn the inter-action of the model setup for the forecasts taking the real-time data into account.

It was also decided to try to publish the analysis of the phenological data (as well as to present the collected archive itself).

Updates on the project Web site were agreed.