Interreg
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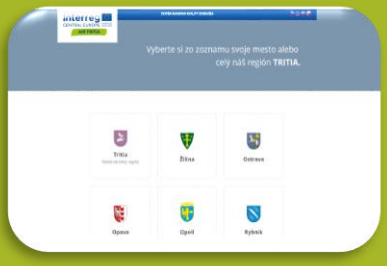
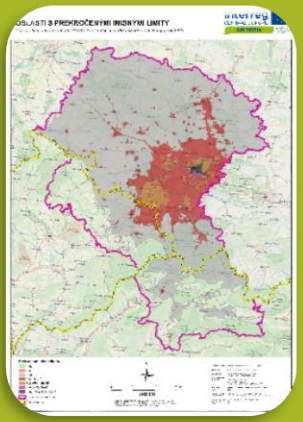
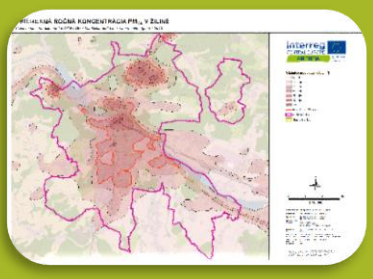
AIR TRITIA

Newsletter

May 2019







PROFESSIONAL ACTIVITIES

AQMS - AIR QUALITY MANAGEMENT SYSTEM

One of the goals of the AIR TRITIA project is to create tools for efficient and transparent air quality management AQMS (Air Quality Management System) in accordance with decision-making support based on evidence.

AQMS is a tool supporting long-term strategic decision-making. It is an information system, that through a user friendly environment (in the form of interactive maps) provides state administration bodies with scientific knowledge based data necessary for strategic planning and decision-making in the field of air quality. At the same time, at a different user level, the system provides information on air quality and planned measures to the general public, what makes the entire decision-making process transparent.

The system within the AIR TRITIA project includes five cities and their associated urban areas (Opava, Ostrava, Opole, Rybnik and Žilina) and the entire TRITIA area (Moravian-Silesian Region, Opole and Silesian Voivodeship and Žilina Region), as well.

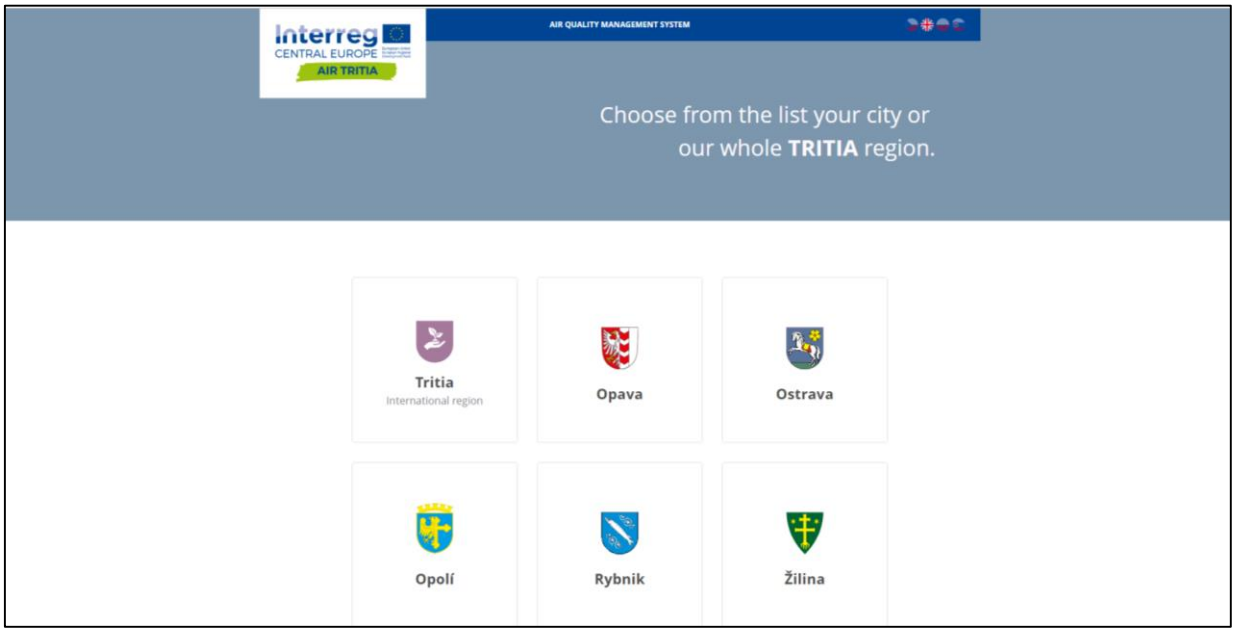


Fig. 1 – AQMS –menu selection

The impulse for creating this system was an effort to unify decision-making processes and to design common strategies to improve air quality in the TRITIA region, where air pollution limits set by both - European legislation and WHO, have been exceeded for a long time. The results of previous studies have shown that sources emitting pollution in the Polish part of the area of interest provably affect air quality in the Czech Republic and Slovakia, because air pollution knows no boundaries. Therefore, a common approach based on uniform and trustworthy information is needed.

The AIR TRITIA project has created the necessary information base with a common objective - air quality management. The database provides comprehensive information consolidated on the level of all three concerned countries (Czech Republic, Poland and Slovakia). It's created in a geographic information system environment (GIS) and includes comprehensive files of spatial data. It contains uniform geological data, socio-economic data, epidemiological data, meteorological data, data on air pollution sources (car traffic, domestic boilers, industry) and related emissions, data on the detailed distribution of air pollution, including the origin of pollution for dust particles PM_{10} and $PM_{2,5}$, NO_2 and benzo[a]pyrene in the years 2006, 2010, 2015, data on the health risks resulting from related air pollution load and data from specialized measurements.

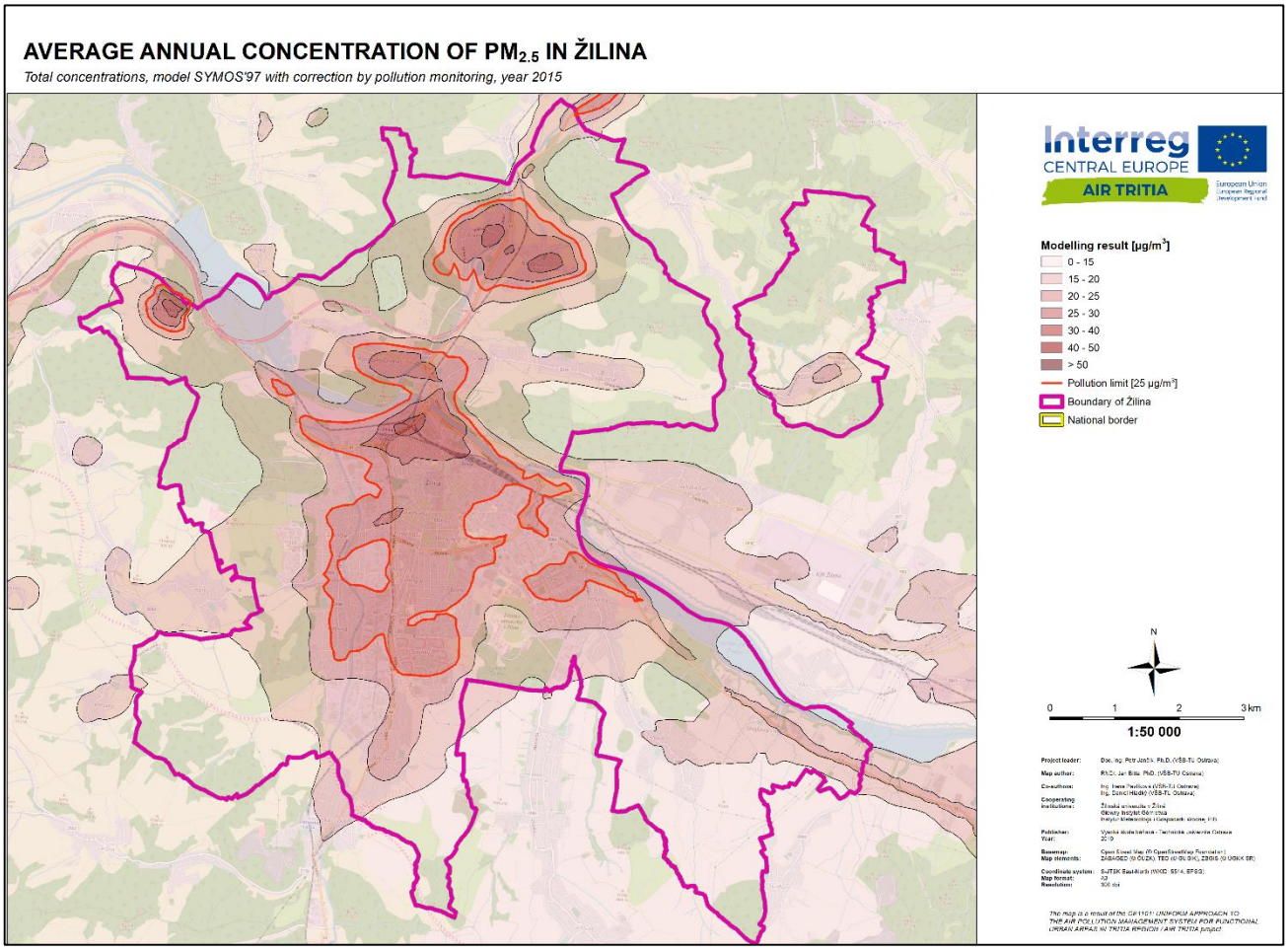


Fig.2 Air pollution in the Žilina Region caused by solid particles $PM_{2.5}$, year 2015

As a part of the evaluation of the whole area we have prepared a map showing the parts of the solved area, where the limits of some of the pollutants are exceeded – Fig. 3.

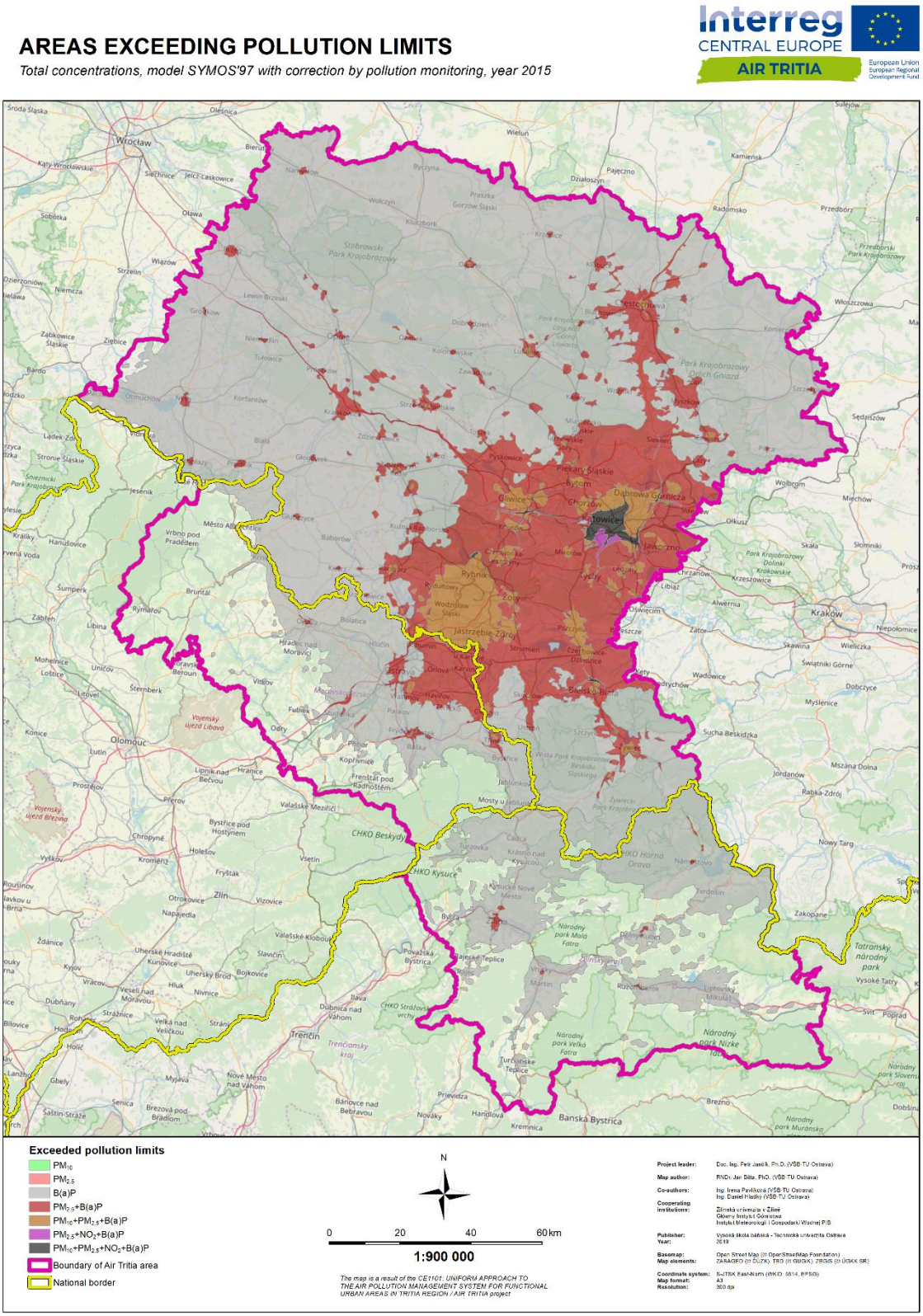


Fig. 2 Exceeding of the emission limits in the solved area of TRITIA, year 2015

The modeling system ADMOSS (Analytical Dispersion MOdeling Supercomputer System), which was developed at the University of Mining - Technical University of Ostrava, was used to asses emission relations in TRITIA region. This system allows to model the dispersion of pollutants in the air from a large number of sources over a large area with a detail corresponding to dispersion study of one source, which is crucial for the design of measures at both- local and regional level. The output of the model in the form of a detailed distribution of emissions in the TRITIA area of interest and contributions from individual source groups, including remote transmission from the territory of the other states, are then displayed in the AQMS environment. Additionally, ADMOSS system allows subsequent analysis and testing of the impact of measures to improve air quality in order to reach the level of legislative limits and levels with minimal risk to public health. Another step towards fulfilling the AQMS mission is defining of these measures and determining of their impact on air quality and public health is.

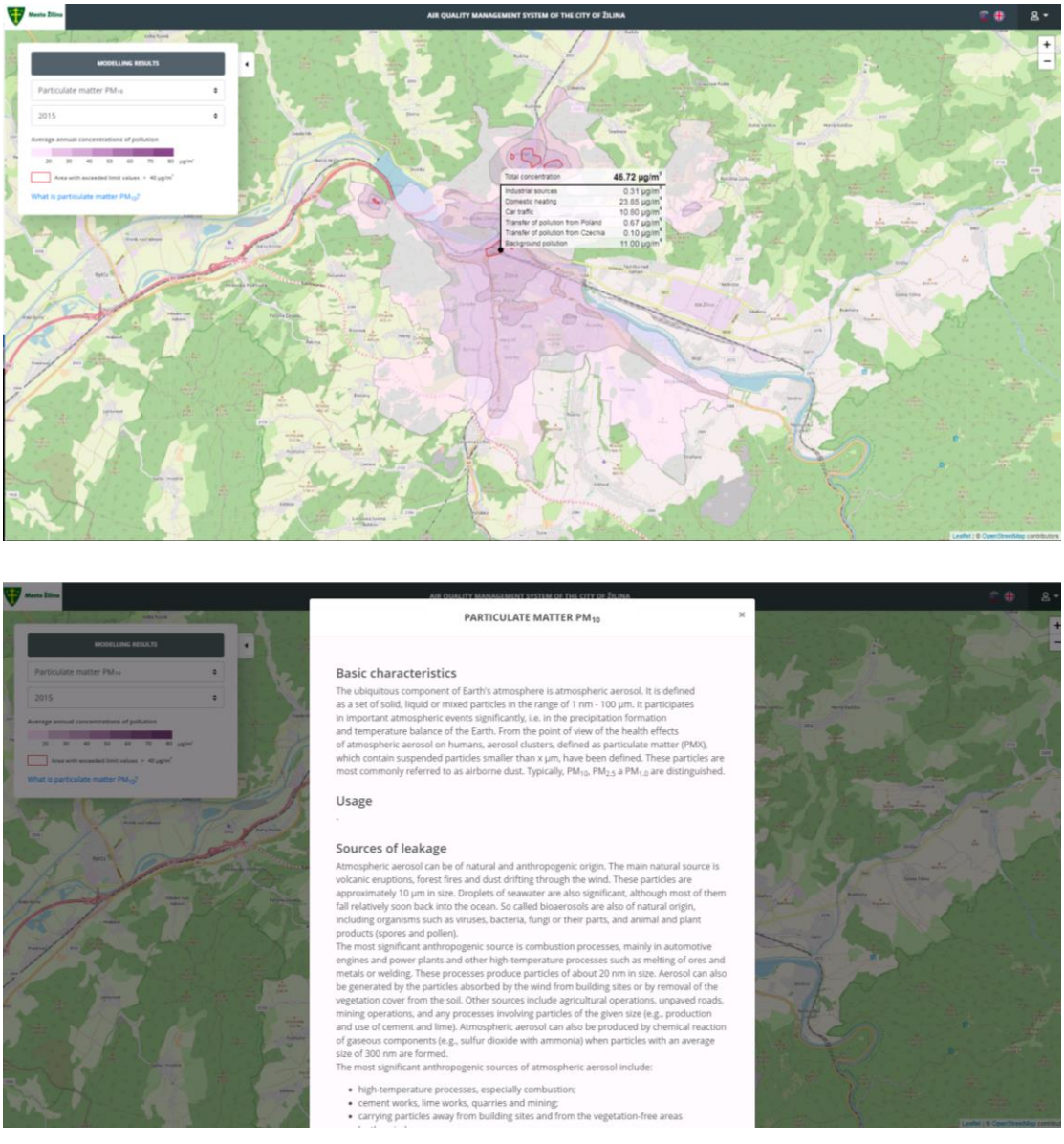
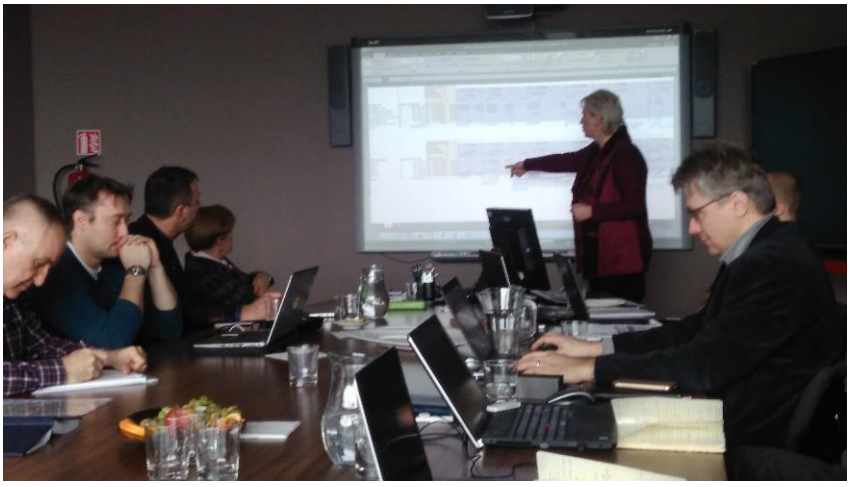


Fig. 4, 5 – AQMS – menu selection

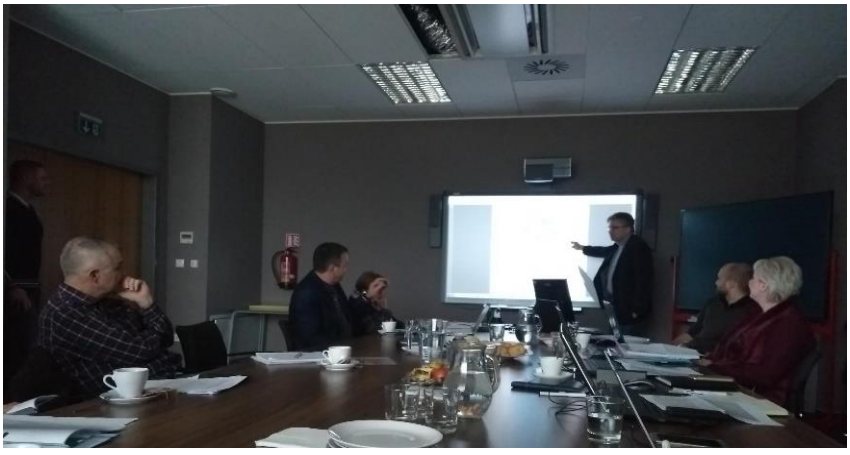
EVENTS

Project team meeting and the Mid-term evaluation of the AIR TRITIA project

Project team meeting and the mid-term evaluation of the project AIR TRIITA with members of Joint Secretariat in Vienna, took place at VSB – Technical University of Ostrava (VSB – TUO) on February 26, 2019. Members of Joint Secretariat in Vienna were connected to the meeting via videoconference. Project partners presented results of individual project`s work packages, management, communication and financial part from the first half of the project implementation.

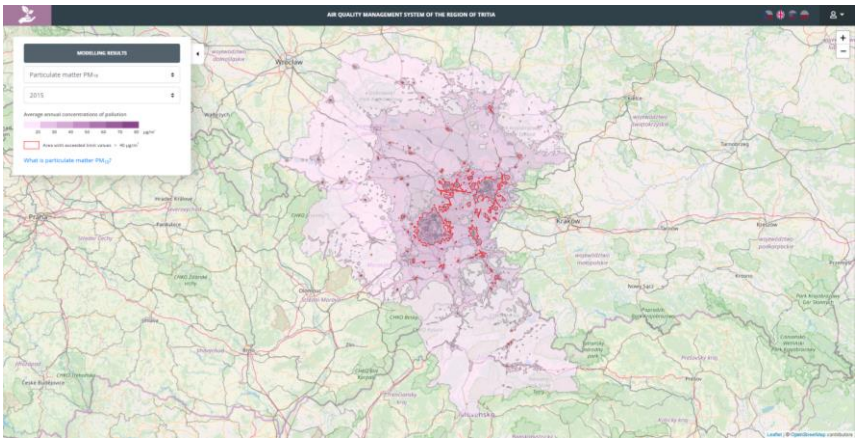


All activities within the Work Package T1 – Current State Analysis (data collection, modelling and measurement), were successfully implemented. Altogether, 19 deliverables were successfully delivered and integrated into the first main project output - ***Unified Spatial Database***.



Within the Work Package T2, project partners from VSB – TUO presented the current state of creating and testing ***AQMS tool (Air Quality Management System)***. Testing version of AQMS is now available for all project partners. The tool uses data from Unified Spatial Database and will presents data related to the air quality in different layers to relevant target groups.

The AQMS tool is in English and national languages of project partners: Czech, Slovak and Polish. The final working prototype of AMQS will be finished in May 2019 and after that, the AQMS will be implemented by the partner cities (Ostrava, Opava, Rybnik, Opole and Žilina).



Project representatives also presented the second project tool - ***Prediction Warning System (PWS - Prediction Warning System)***, which contains a prediction algorithm, that predicts critical risk situations associated with air quality. Currently, the prediction algorithm is tested at the level of all partner cities.

The possibility to merge both systems into one tool webpage will be tested during the implementation of AQMS and PWS.

Currently, the project team members are within the Work Package T3 (Integral Strategic planning for air quality management) developing strategies for improving air quality and reduction of emissions from various sources, on the level of five FUAs - partner cities - Ostrava, Opava, Rybnik, Opole, Žilina and 3 regions – Czech Republic, Slovakia, Poland. The analytical part of Opava Air Quality Strategy was presented during the meeting.

Project partners answered the questions of the JS Vienna representative concerning the implementation of the project, project budget and the progress of the project partners after the completion of the AIR TRITIA project. Representative of the JS Vienna expressed his satisfaction with the project implementation so far and wished everyone a lot of success with further activities.

At the end of the project meeting, project partners discussed the possibility of continuation their cooperation within the new Central Europe project, related to air protection.

PUBLIC EVENTS

HEALTHY AIR INFO DAY IN OSTRAVA

On May 7, 2019 took place **HEALTHY AIR INFO DAY** at VŠB - Technical University of Ostrava within **the AIR TRITIA project - UNIFORM APPROACH TO THE AIR POLLUTION MANAGEMENT SYSTEM FOR FUNCTIONAL URBAN AREAS IN TRITIA REGION.**

The educational event for VŠB - TUO students was focused on presenting information on improving air quality. At the information stand, students were informed about the territory of the TRITIA region, the regions and cities involved in the project, and the ways in which students themselves can contribute to improving the quality of the air they breathe.

Students completed the quiz about air pollution. The quiz results proved their good knowledge of the air pollution issue.

The students also appreciated watching the thematic video presentation "Country TRITIA", which they found both fun and shocking at the same time.

All participants were rewarded with small promotional items and leaflets.

BIKESHARING – Shared Bicycle System

On March 29, 2019 was AIR TRITIA project, it`s goals and results presented to students and general public during the event – BIKESHARING – Shared Bicycle System in Žilina, which enables ecological transport. Participants learned, how they can contribute to the environmental protection, we live in.

As part of these events, information about the AIR TRITIA project will be presented on

HEALTHY AIR INFO DAY – UNIVERSITY OF ŽILINA, SLOVAK REPUBLIC – October 2019

MORE INFORMATION TO BE FOUND ON THE AIR TRITIA PROJECT WEBSITE

https://www.interreg-central.eu/Content.Node/AIR-TRITIA.html

This NEWSLETTER was created thanks to the implementation of the AIR TRITIA project UNIFORM APPROACH TO THE AIR POLLUTION MANAGEMENT SYSTEM FOR FUNCTIONAL URBAN AREAS IN TRITIA REGION - CE1101, funded by Interreg CENTRAL EUROPE Program from European Regional Development Fund.