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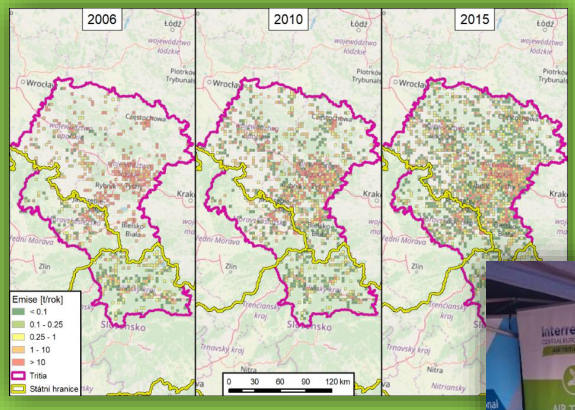
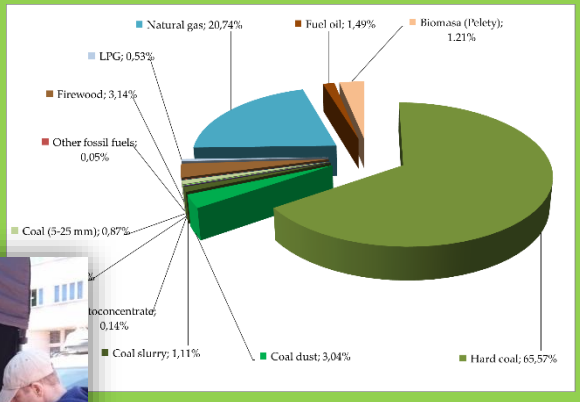
AIR TRITIA

Newsletter

November 2019





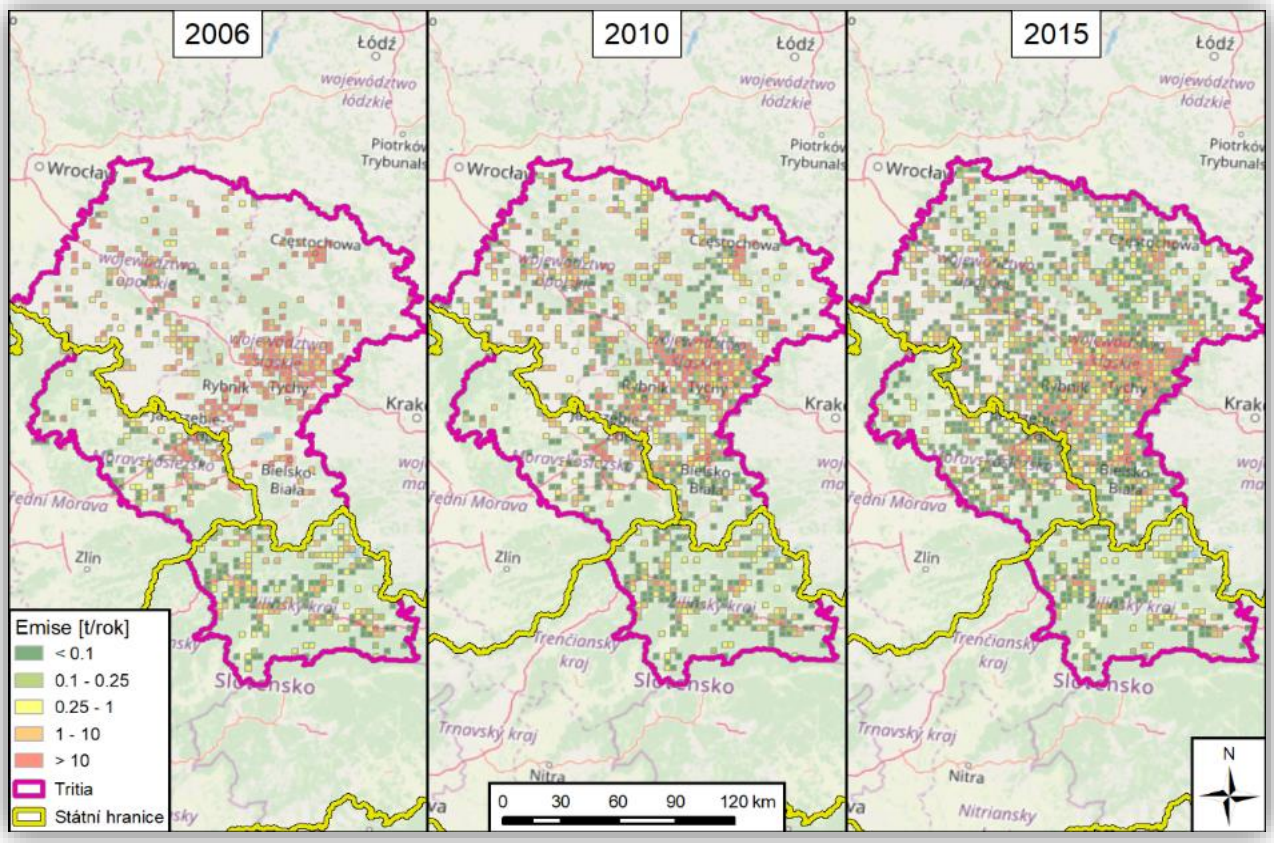
PROFESSIONAL ACTIVITIES

DEVELOPMENT OF AIR QUALITY MANAGEMENT STRATEGIES CONTINUES BY SCENARIOS CREATION

Within the AIR TRITIA project, team led by ACCENDO research institute is developing air quality management strategies both for the entire EGTC TRITIA region and in detail for functional urban areas (FUAs) of cities Ostrava, Opava, Rybnik, Opole and Žilina. The aim of strategies is to contribute positively to air quality in Central Europe through the implementation of evidence based policies and result based management in the framework of international cooperation.

At the beginning of strategy development, extensive analytical work was carried out using data and information from results of WP1: studies, databases and models. Analysis was created for each developed strategy, with SWOT analysis and identification of the biggest air quality problems that need to be solved in the future.

Example of analysis results: Industrial emissions of PM_{10} in the TRITIA region



Currently, the development of strategic parts of strategies is being processed. These will include recommended measures to improve air quality and their combination in the form of scenarios, which will present their actual impacts and financial demands. In accordance with the project plan, all strategies will be completed and implemented to the management of cities and regions by May 2020.

Strategies are developed in close cooperation between project team and representatives of the above-mentioned FUAs in the form of strategic groups, involving the cities experts with focus to strategic planning, environment, technical infrastructure, traffic, etc. Similar strategic groups are created at Moravian-Silesian region, Žilina region, and Silesian voivodship and Opole voivodship, as there regions will implement the common strategy for the TRITIA region. To this date, three meetings of the project team and strategic groups took place in each city and region, and the intensive cooperation is also carried through telephone and electronic communication.

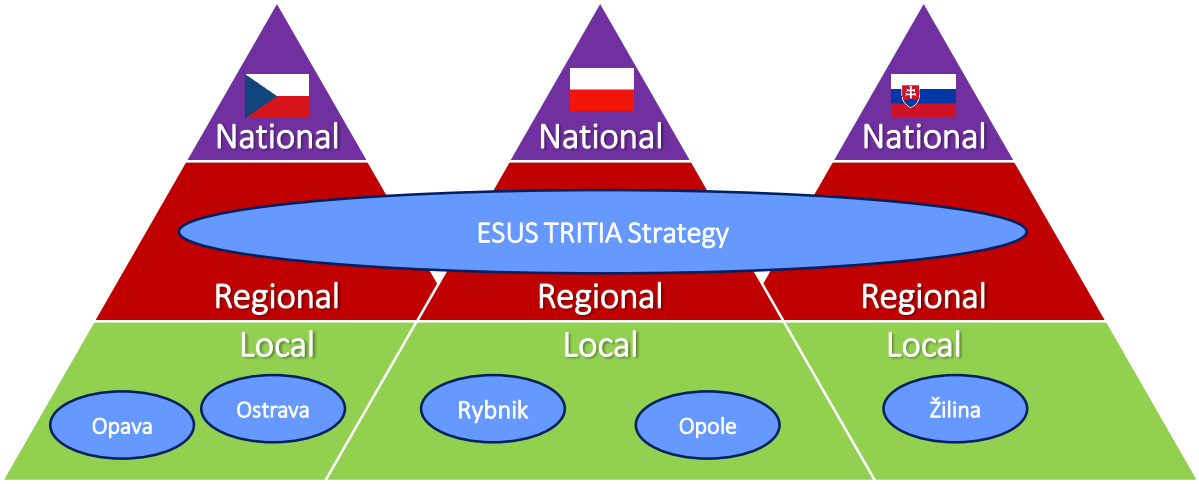
Strategic Management Outputs:

1/Recommendations for the national level CZ, PL, SK

2/Common Strategy for regional level (TRITIA EGTC)

3/Strategies for local levels of cities and their functional urban areas (FUA)

Three levels of strategic approach in AIR TRITIA project



Source: ACCENDO, 2018.

MONOGRAPH

One of the projects results will be Monograph "AIR QUALITY MANAGEMENT". Monograph is the result of three years' work of the international AIR TRITIA project team. Authors from 3 countries and 5 institutions contribute to Monograph:

- University of Žilina
- VŠB – Technical University Ostrava
- ACCENDO - Center for Science and Research, Institute, Ostrava
- The Central Mining Institute, Katowice
- Institute of Meteorology and Water Management – National Research Institute (IMGW-PIB), Warsaw

GIG has prepared chapters for a joint Monograph, summarizing the work carried out under the AIR TRITIA project.

Chapter entitled *Sources of pollution* presents the state of knowledge about transport (so-called linear emission), municipal (so-called low emission) and industrial pollution in the TRITIA area. In its part, GIG presents the characteristics of energy sources used for heating apartments and the structure of heating techniques in the Polish part of the TRITIA area, i.e. in the Śląskie and Opolskie voivodships. The source of data were the Low Emission Plans of communes of both voivodships.

As shown in the figure below, carbon fuels comprise over 70% of the energy used for heating apartments.

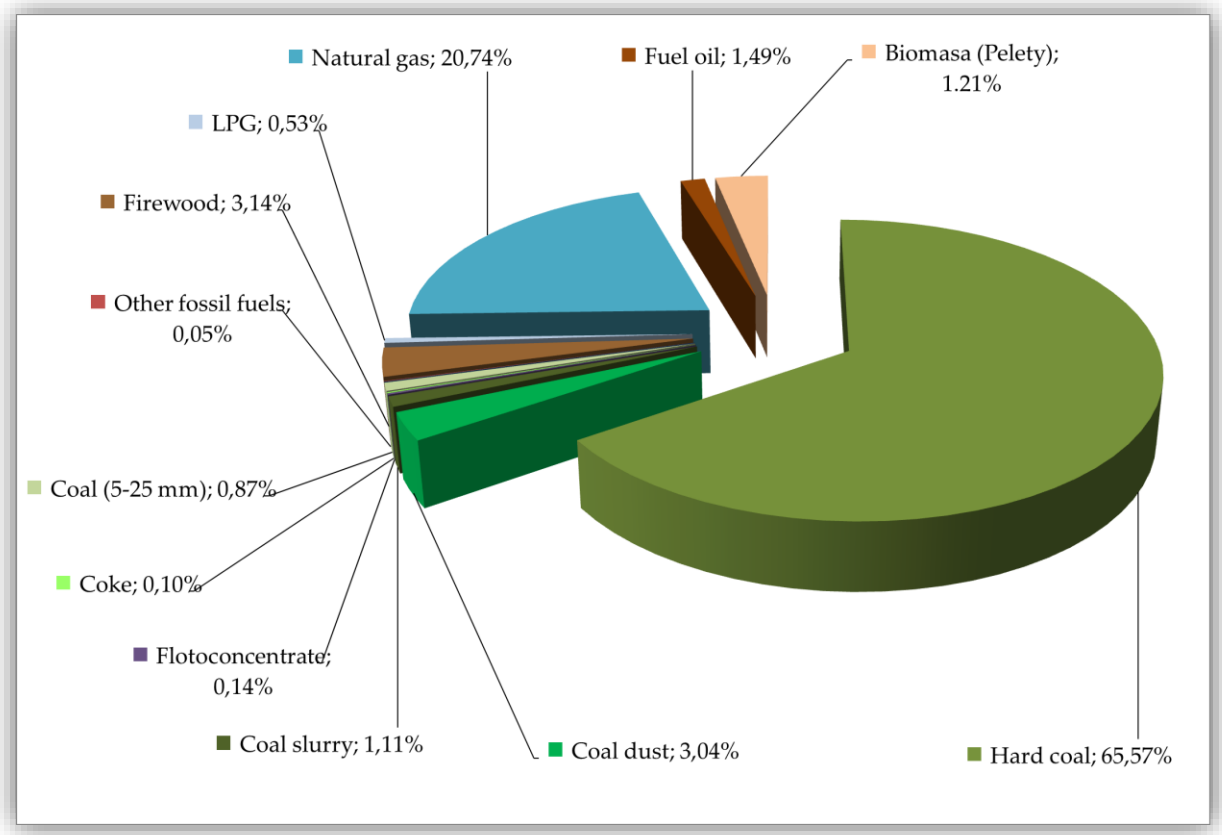


Fig. 1 The share of energy carriers in the total energy consumption [MWh] for heating residential buildings in the Silesian voivodship

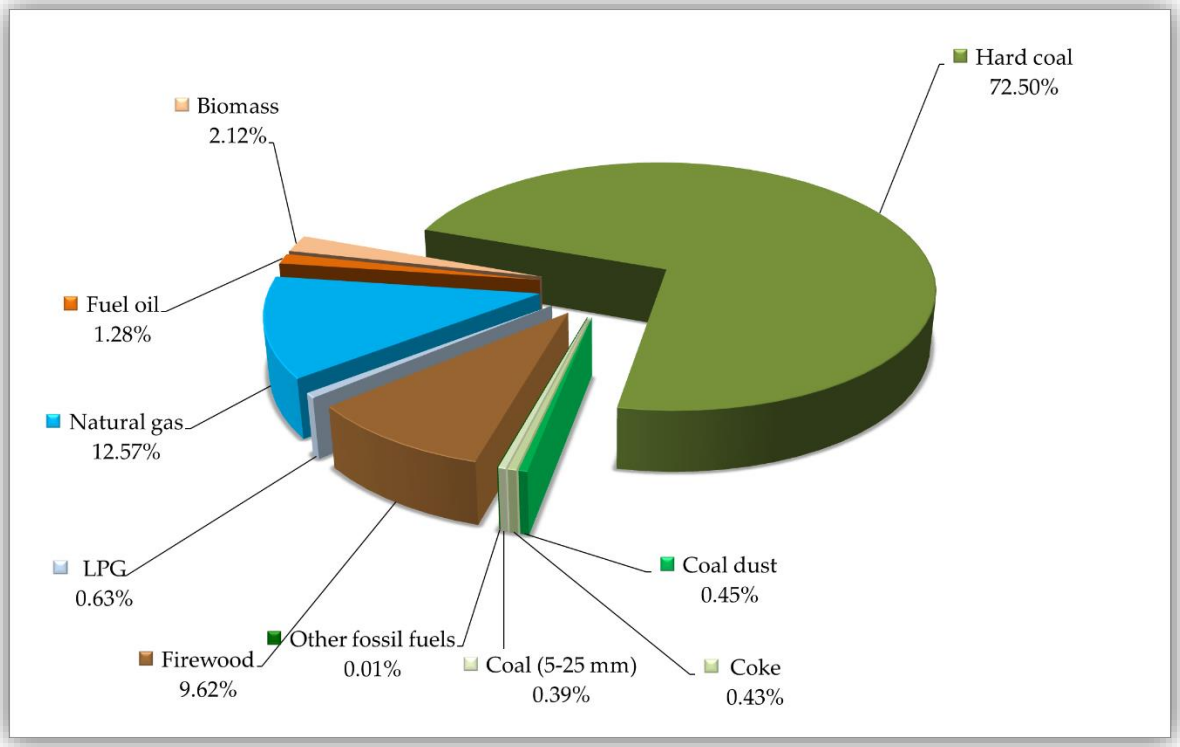


Fig. 2 The share of energy carriers in the total energy consumption [MWh] for heating residential buildings in the Opole voivodship

The energy consumption per capita of energy derived from the combustion of coal fuels and firewood as well as energy from other energy carriers, generally referred to "clean", due to less harmful air emissions, were calculated. Figure 3 shows the prevailing share of coal fuels and firewood in both voivodships.

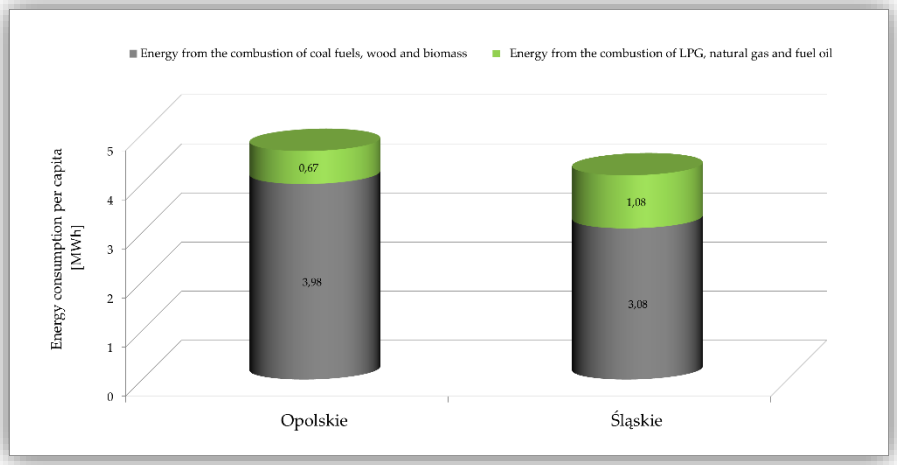


Fig. 3 Comparison of energy consumption per one inhabitant from various sources for heating buildings in the Śląskie and Opolskie voivodships

Chapter 5 of the Monograph is devoted to techniques of air pollution measurements. GIG has prepared a chapter called *Aerosol Granular Distribution at Selected Points of the Polish-Czech Borderland*. The need to measure the contribution of fine and ultra-fine particles to air pollution is due to the current state of knowledge about their impact on our health. Research results from the last twenty years clearly show a significant negative impact of small particles on the human body, especially on the respiratory system. Inhalation of some substances present in the air in the form of ultra-fine particles (i.e. smaller than 0.1 μm) has been proven to even lead to the induction of lung cancers. Size distribution measurements were performed on both sides of the Polish-Czech border: on the roof of the František shaft tower in Horní Suchá (Czech Republic) and in Racibórz (Poland).

REALIZED EVENTS

HEALTHY AIR INFO DAY at the University of Žilina

On Saturday 28th September 2019 project partner University of Žilina organized Healthy Air Info Day on its premises within the AIR TRITIA project (CE 1101: UNIFORM APPROACH TO THE AIR POLLUTION MANAGEMENT SYSTEM FOR FUNCTIONAL URBAN AREAS IN TRITIA REGION / AIR TRITIA), supported by INTERREG CENRAL EUROPE. It was a part of the event Wide Open University.
Program was aimed at all age categories – students, children and adults.
The slogan of the event was ***"How can I contribute to the healthier air"***. Educational event provided students, children and adults with information on what they could do to improve the air quality in their surroundings.

At the information stand, visitors were provided with information about the AIR TRITIA project, its results so far, as well as about the regions and cities involved.

Associate professor Daniela Ďurčanská presented the Air Quality Management System (AQMS). Video presentation Country TRITIA was attractive especially for children.

REALIZED EVENTS

The participants engaged with interest in a knowledge quiz focused on air pollution prevention and geography of AIR TRITIA project region.

Participants could visit during the event the mobile air quality monitoring station and get information on measurement of air pollutants and current state of air quality at the University of Žilina.

V. DAYS OF ENERGY IN KATOWICE

On 21st of September 2019 project partners from GIG presented the AIR TRITIA project, its goals and achieved results during the event V. Days of Energy in Katowice. Problems with air pollution and possibilities to overcome them were discussed with the youngest participants during the event.

The Measuring device: Aerodynamic Particle Sizer from TSI (USA), allowing specific particle size distribution measurements, was also presented to the participants.

BICYCLE ON THE SQUARE

Project AIR TRITIA, its goals and achieved results were presented to the students and general public on 17th of September on Andrej Hlinka Square in Žilina, during the event Bicycles on the Square. Participants had also opportunity to learn from project partners, how they can themselves contribute to protect the environment we live in.

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

CHRISTMAS AT THE UNIVERSITY OF ŽILINA – December 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.