Interreg - IPA CBC
Greece - Republic of North Macedonia
TRAP

TRAP
TRANSBOUNDARY AIR POLLUTION HEALTH INDEX DEVELOPMENT AND IMPLEMENTATION

Contents

TRAP – Transboundary Air Pollution Health Index Development and Implementation

Greece – Republic of North Macedonia

The main sources of air pollution at participants countries are caused by industrial activities, transportation and heating systems. Air quality problems from industrial sources mainly concern areas with thermo-electrical power stations and industrial units located close to residential areas. Other sources (e.g. transport and dust from deserts) and natural conditions (e.g. local topography and climatic conditions) also worsen urban air quality. Air quality is also strongly influenced by pollutants trapped due to thermal inversions caused from sea/land breezes and thermal internal boundary layers.

Strategic objective of TRAP project is the creation of an ICT application integrating air quality monitoring with health impact indexes in the participating countries and the Cross Border area.

The project aims to evaluate current situation regarding air quality in partners' areas, install air quality monitoring stations and create public health indexes for assessing air quality impact on human health and natural environment. TRAP will extend the already established network of air quality to both countries and cross-border area by establishing 4 new monitoring stations (2 per country).

Moreover, health indicators based on the effects of air pollution on human health, will be displayed on the project's website. TRAP is expected to go a step beyond the current of the art in air quality by correlating air quality and health and providing an integrated air quality-health ICT tool which will be accessible by stakeholders and general public.

TRAP Kick-off Meeting in Florina

The first partners' meeting of TRAP "Transboundary Air Pollution Health Index Development and Implementation" took place in the Multipurpose Hall of Florina in Florina, on September 18, 2018.

This meeting initiated the start of TRAP and also the project partners' collaboration. The kick-off meeting was quite fruitful for the project partners, as the overall work-plan was discussed and the project's timeframe, objectives and expected results were set.

Project partners had the opportunity to present their organisation's profile. Partners also referred to their expectations from the project implementation as well as their main priorities towards the project's achievements.

Assessment for basic demographic, health and public health profile in Thessaloniki

In this study, the objective was an analysis developed in the Greater area of Thessaloniki, regarding the main characteristics of the area; the demographic characteristics of the citizens; the socio-economic indicators and the general image of Thessaloniki.

In addition, the morbidity and mortality were analysed according to the available bibliography and sources. Hospitals' data from the Greater area of Thessaloniki were presented and analysed.

Air pollution is causing damage to human health and ecosystems. Large parts of the population do not live in a healthy environment, according to current standards. To get on to a sustainable path, Europe will have to be ambitious and go beyond current legislation.

Hans Bruyninckx, EEA Executive Director

Air Quality and Health Sensitization Campaigns

So far two (2) Air Quality and Health Sensitization Campaigns have been organised by PP3 – E.R.F.C. The 1st Campaign took place on 11th December 2018 and the 2nd Campaign on 17th October 2019 on the premises of Farm School of Aristotle University of Thessaloniki.

During the Campaigns, the main objectives of the project were presented.

Furthermore, some basic points that were presented and discussed were:

- The impact of air pollution on health
- The need of the coordination of infrastructure in order citizens to have direct access to air quality (at specific location and time)
- Good practices and strategies for the mitigation of the atmospheric pollution (e.g. Carbon Capture and Storage, Alternative Use of Lignite).

Many other relevant projects had the opportunity to publicize their results and to find ways for cooperation and exploitation of their data.

Emission sources in the Greater Thessaloniki Area

- Industry (industrial activities; Mineral dust; Construction)
- Production of energy (Power generation by lignite –from neighbour regions and countries-; Electricity by biogas plants
- Transportation (Road traffic; Road dust; Automobiles; Port; Airport)
- Heating (Biomass burning; Fuel oil)
- Other sources (Sea salt; Soil dust resuspension; Agricultural activities; Photochemical activity; Dust from Sahara)

Development of Regional Emission Inventory of Regional Unit of Florina, Greece

Emissions and releases to the environment are the starting point of every environmental pollution problem. Information on emissions therefore is an absolute requirement in understanding environmental problems and in monitoring progress towards solving these. Emission inventories provide this type of information.

Emission inventories are developed for a variety of purposes:

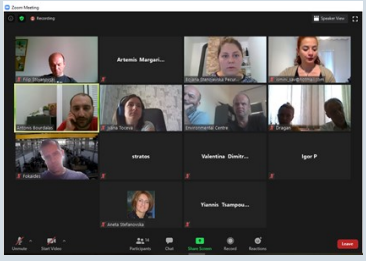
- Policy use: by policy makers to
  - track progress towards emission reduction targets
  - develop strategies and policies or
- Scientific use: Inventories of natural and anthropogenic emissions are used by scientists as inputs to air quality models

Two more or less independent types of emission reporting schemes have been developed:

- Annual reporting of national total emissions of greenhouse gases and air pollutants in response to obligations under international conventions and protocols; this type of emissions reporting aims at monitoring the progress towards agreed national emission reduction targets;
- Regular emission reporting by individual industrial facilities in response to legal obligations; this type of emission reporting is developed to support public participation in decision-making.

Governments use emission inventories to help determine significant sources of air pollutants and to target regulatory actions. Emissions inventories are an essential input to mathematical models that estimate air quality. The effect on air quality of potential regulatory actions can be predicted by applying estimated emissions reductions to emissions inventory data in air quality models. Emission trends over time can be established with periodic updates of the emissions inventory. Inventories also can be used to raise public awareness regarding sources of pollution.

An emissions inventory includes estimates of the emissions from various pollution sources in a geographical area. It should include all pollutants associated with the air quality problems in the area. For example, an emissions inventory to support the management of ground-level ozone should include sources of nitrogen oxides (NOx) and of volatile organic compounds (VOC).



The ICT tool

Strategic objective of TRAP project is the creation of an ICT application Air Quality Monitoring with Air Pollution Health Indicator, in the Cross Border area, which will be accessible by stakeholders and general public (vulnerable target groups). The purpose of this tool is to display real-time air-quality measurements.

During the technical meeting held on 24th June 2020 via teleconference, the elaboration of the ICT tool was discussed.

It was decided that the LP–KEPE, along with PP3–E.R.F.C will develop a web platform, which will be uploaded on TRAP's website and one mobile application for Android operating system, which will be developed by PP4-CCC. The mobile application will be developed in English, Greek and Macedonian.

Both web platform and mobile application will depict the measurements from the purchased monitoring equipment within the TRAP project.

Moreover, both will use google maps for showing the positioning of the monitoring stations.

NEXT EVENTS AND MEETINGS

5th Steering Committee Meeting in Florina	**December 2020**
Final International Conference in Ohrid	**May 2021**
Final International Conference in Florina	**May 2021**
Three (3) training workshops in Republic of North Macedonia (Pelagonia and Soutwest region)	**May and July 2021**
Two (2) training workshops in Greece (Thessaloniki and Florina)	**May and July 2021**

TRAP

TRANSBOUNDARY AIR POLLUTION HEALTH INDEX DEVELOPMENT AND IMPLEMENTATION

Website:

https://trap-project.eu/

Contact:

Email: research-studies@kepekozani.gr
Tel: +30 2463053666

Communication Manager:

Theodoros Stavrakas
Environmental Centre of Western Macedonia
1st km Ptolemaida-Kozani
50200
GREECE

The project is co-funded by the European Union and by National Funds of the participating Countries