Interreg - IPA CBC
CCI 2014 TC 16 I5CB 009
TRAP

TRAP

Transboundary Air Pollution Health Index Development and Implementation

MINUTES

Stakeholders Meeting – Round Table

2nd Action of Air Quality and Health Sensitization Campaign

"Air Pollution Effects on Health"

Farm School of AUTh, Thessaloniki, 17/10/2019

Organized by European Regional Framework for Co-operation (PP3)

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

1. INTRODUCTION

Air Pollution has been recognized as one of the most pressing problems in both Greece and North Macedonia, following the economic and social development of the two countries, the sources of air pollution are mainly industrial activities, transport and central heating. The major challenges of transport in urban areas are the rising number of vehicles, their increased average age, and traffic congestion. Air quality problems from industrial sources mainly concern areas with thermo-electrical power stations and industrial units located close to residential areas. Natural sources (e.g. transport of dust from deserts) and conditions (e.g. local topography and climatic conditions) also worsen urban air quality. Local meteorological conditions and topography have a major impact on air quality in CB cities and contribute to the generation of air pollution episodes. Air quality is then strongly influenced by pollutants trapped due to thermal inversions caused from land local breezes and thermal internal boundary layers. Exceedances of the mean hourly concentrations of nitrogen oxides and (8 hours limit) ozone target have been recorded mainly in major cities as Thessaloniki, while particulate matter and sulfur dioxide seems to be a problem at Western Macedonia and Bitola due to thermal power production. TRAP developed on the necessity for developing ICT applications in environmental protection, monitoring and management of the eligible areas. Environmental initiatives is a privileged field for developing cooperation in the cross-border area, contributing significantly to economic and social development of the population and public health, therefore, the opportunity for mutual cooperation and understanding between public authorities, scientific institutions and residents of the area. The major challenge is the development of an integrated approach including air quality monitoring, with providing health indicator for vulnerable groups of the population. Through TRAP project a series of issues will be addressed: a) Identification of the emission sources and development of regional and CB emission inventory, b) Assessment of each emission source, c) Development of air quality plans, d) Monitoring data, validation and analysis e) Basic demographic, health and public health profile, f) Air quality and Health Indicators g) Joint CB comparative analyses h) Capacity building at user level (health and authority stakeholders), i) Air quality and health sensitization campaigns, j) Protection of human health, k) Citizen involvement, l) Implementation of Air quality directives.

TRAP consortium has been constructed to ensure balance and complementarities between highly competent and experienced partners. The adequate choice of key actors with complementary types of knowledge (administrative, scientific, and practical) is reflected in the consortium and will be utilized in order to bridge the gap between research results and policy planning. TRAP comprises a total of 5 partners from both countries (Ministry, Municipality, Environment Enterprise and NGO), the composition is based on the multi-actor approach through the genuine

and sufficient involvement all along the project from participation in the planning of work, execution, until dissemination of results, covering the whole chain. The intervention areas are urban areas that have major pollution problems from all kind of types (industry, transport, heating). Furthermore, they face harsh and long winter periods that increase the heating needs of the households. The crisis led to less sustainable heating ways (wood burning), which also led to the increase of air pollutants during winter period. This situation creates the need for more adequate air quality monitoring and sensitization of general population to more sustainable transport and heating ways. The following target groups were identified and already added as the main communication addressees: Industry, local authorities, technology providers, research institutions, NGO's, athletic clubs, health providers.

2. AGENDA AND VENUE OF THE MEETING

Venue: Farm School of AUTh, Thessaloniki
Address: Thermi, 57001 https://goo.gl/maps/758RouoY4iv

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Transboundary Air Pollution Health Index Development and Implementation - TRAP

AGENDA

Stakeholders Meeting – Round Table

2nd Action of Air quality and Health Sensitization Campaign

Organized by ERFC

"Air Pollution Effects on Health"

Date: Thursday 17/10/2019
Venue: Farm School of Aristotle University of Thessaloniki
Address: Thermi, 57001 https://goo.gl/maps/758RouoY4iv

TIME	DESCRIPTION	
11:00-11:30	Arrival of participants – Registration	
11:30-11:40	Welcome speech – introducing all participants	
11:40-11:50	Presentation by ERFC	
11:50-12:10	Professor of Haematology – Haemostasis, Dr. Pantelis Makris	
12:10-12:25	Professor Dragan Gjorgjev, Institute for Public Health (Republic of North Macedonia) – *SKYPE Connection (TBC)*	
12:25-12:40	Professor Kungolos Athanasios – Department of Civil Engineering, AUTh	
12:40-12:55	Professor Sarigiannis Denis - Department of Chemical Engineering, AUTh	
12:55-13:10	Professor Papamitsou Theodora – School of Medicine, AUTh	
13:10-13:30	Open Discussion on: • The air pollution effects on Health • Morbidity and Mortality data from Hospitals • Future Research	Professor Makris Pantelis Professor Sichletidis Lazaros Professor Eleutheriadis Nikolaos Professor Papamitsou Theodora
13:30-13:45	Common Declaration	
13:45	Light Lunch	

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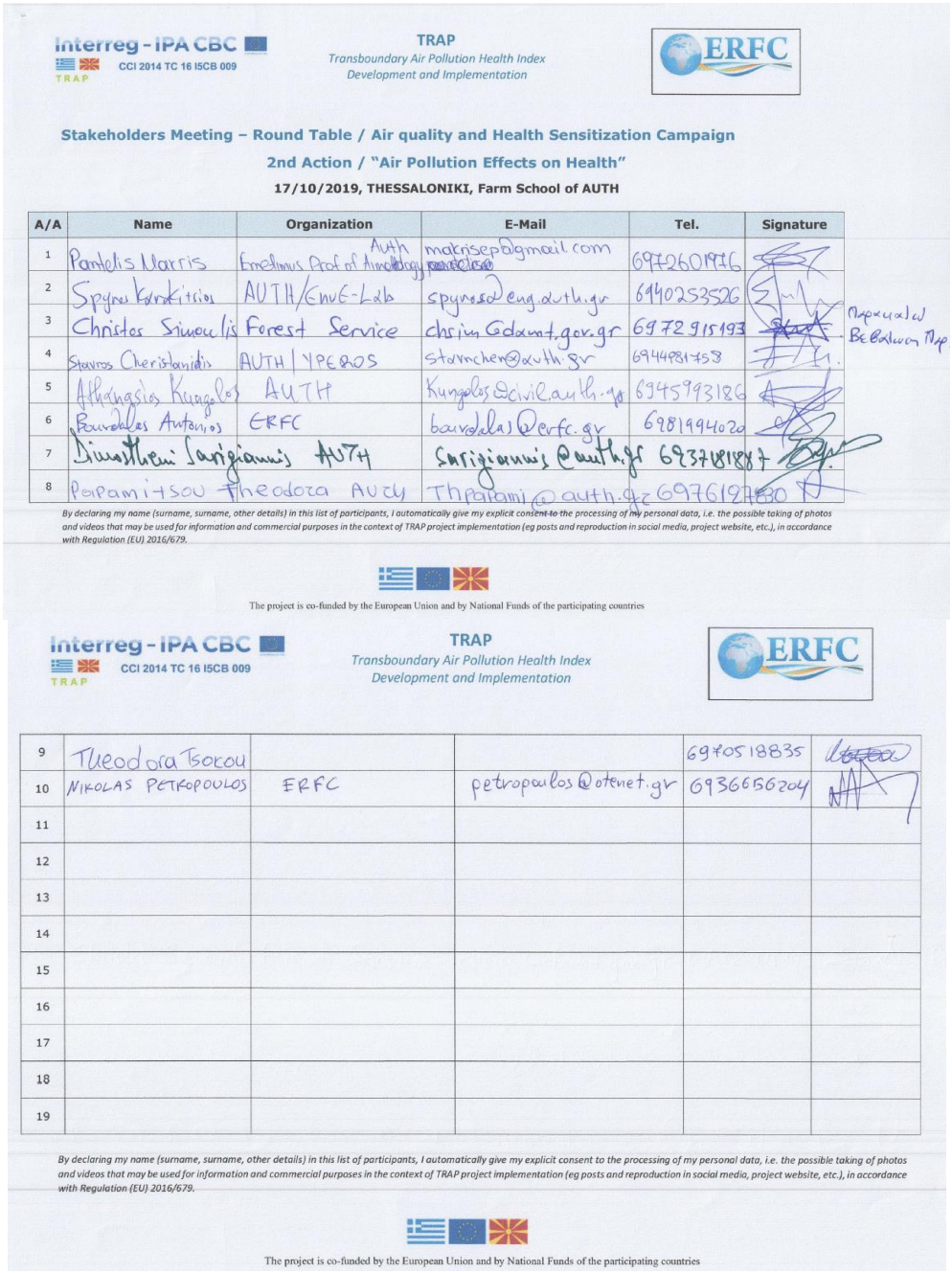
3. PARTICIPANTS

The meeting was attended by twelve participants, with representatives by AUTh (School of Medicine, School of Chemical Engineering, School of Civil Engineering, Postgraduate Programme "Health & Environmental Factors"), Enve-Lab, Forest Service, YPEROS.



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Stakeholders Meeting – Round Table / Air quality and Health Sensitization Campaign

2nd Action / "Air Pollution Effects on Health"

17/10/2019, THESSALONIKI, Farm School of AUTH

A/A	Name	Organization	E-Mail	Tel.	Signature
1	Pantelis Nearris	Emeritus Prof of Atmospheric Auth	matrisep@gmail.com	6972601916	
2	Spyros Karakitsios	AUTH/EnvE-Lab	spyrosk@eng.auth.gr	6940253526	
3	Christos Simeoulis	Forest Service	chsim@dasat.gov.gr	6972915193	
4	Stavros Cheristanidis	AUTH / YPEROS	starmchen@auth.gr	6944981758	
5	Athanasios Kungolos	AUTH	Kungolos@civil.auth.gr	6945993186	
6	Bourdalas Antonios	ERFC	bourdalas@erfc.gr	6981994020	
7	Dimitrios Sarigiannis	AUTH	Sarigiannis@auth.gr	6937181887	
8	Papamitsou Theodora	AUTh	Thpapami@auth.gr	6976127880	

By declaring my name (surname, surname, other details) in this list of participants, I automatically give my explicit consent to the processing of my personal data, i.e. the possible taking of photos and videos that may be used for information and commercial purposes in the context of TRAP project implementation (eg posts and reproduction in social media, project website, etc.), in accordance with Regulation (EU) 2016/679.

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9	Theodora Tsokou			6970518835	
10	NIKOLAS PETROPOULOS	ERFC	petropaulos@otenet.gr	6936656204	
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By declaring my name (surname, surname, other details) in this list of participants, I automatically give my explicit consent to the processing of my personal data, i.e. the possible taking of photos and videos that may be used for information and commercial purposes in the context of TRAP project implementation (eg posts and reproduction in social media, project website, etc.), in accordance with Regulation (EU) 2016/679.

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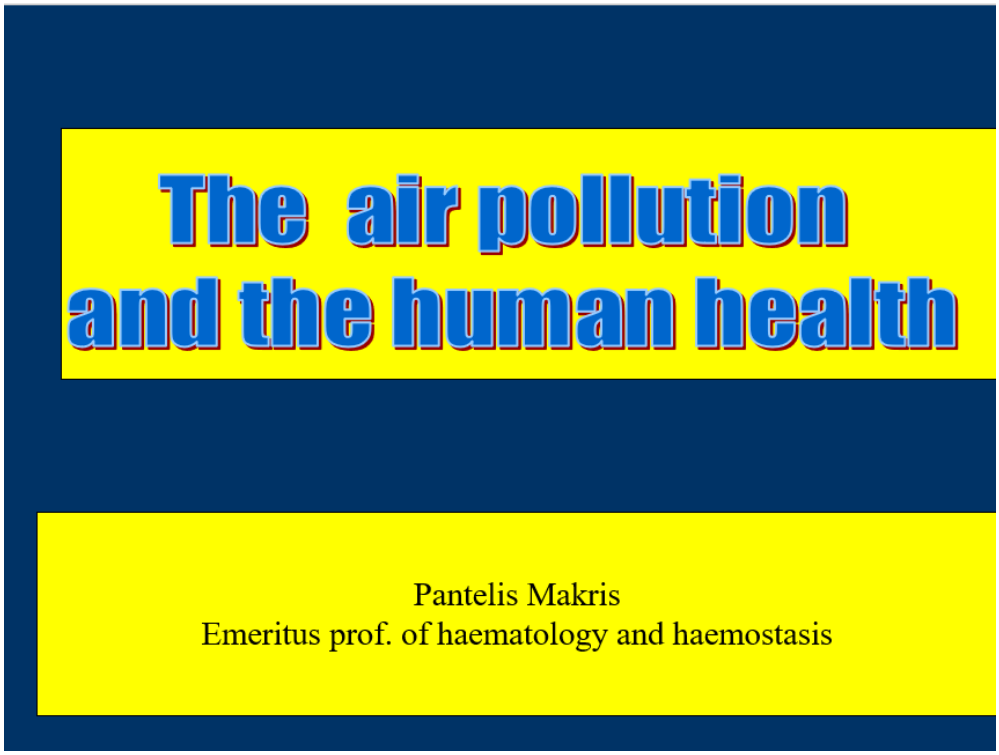
4. PRESENTATION MINUTES



The air pollution exposome

Dimosthenis A. Sarigiannis[1,2,3,4]

[1] Aristotle University of Thessaloniki, Department of Chemical Engineering, Environmental Engineering Laboratory, University Campus, Thessaloniki 54124, Greece
[2] HERACLES Research Center on the Exposome and Health, Center for Interdisciplinary Research and Innovation, Balkan Center, Bldg. B, 10th km Thessaloniki-Thermi Road, 57001, Greece
[3] University School for Advanced Study (IUSS), Science, Technology and Society Department, Environmental Health Engineering, Piazza della Vittoria 15, Pavia 27100, Italy
[4] EnvE.X, Thessaloniki, K. Palama 11, Thessaloniki, 55133, Greece

http://www.enve-lab.eu/

Air Pollution Effects on Health | Thessaloniki, Greece | October 17, 2019 | 1 / 16


ΔΠΜΣ
«ΥΓΕΙΑ ΚΑΙ ΠΕΡΙΒΑΛΛΟΝΤΙΚΟΙ ΠΑΡΑΓΟΝΤΕΣ»
«Health and Environmental Factors»
1

5. CONCLUSIONS

Emeritus professor of Haematology and Haemostasis
Mr Pantelis Makris

- The number of hospitalized patients with TED (thromboembolic disease) has been increased during the years 1953-2002 (AHEPA Hospital).
- The total number of hospitalized patients from 1953 up to 2002 has increased at 8,34 times, while the total number of TED has been increased at 59,2 times in the same time interval.
- The effects of environmental changes in deaths due to cancer and TED's
- The aim was to study all the death certificates of the last 40 years and to compare the death causes (induced by thromboembolic events (TED's) and malignancies between the West (industrial) and East (urban) side of Thessaloniki
- In the latest years of the study, in the areas of Eani, Krokos and Tranovaltos the number of deaths by TED had a significant difference with the deaths by cancer or other reasons.
- TEDs increased from 13,5% in 1953 to 35,3% in 2003. On the same period the frequency of cancers went from 2,3% to 2,06%.
- Final study area of the research was the city of Ptolemaida, studying the causes of death in the general population during the years 1950 to 2005. The unique characteristic of Ptolemaida is that around the city, are located factories producing electricity, which use as raw material lignite. Lignite mines are located nearby the city and a cloud of coal dust overcasts the city. In addition, seceral residents work as lignite miners. The total number of death certificates was 6457.
- During these years the percentage of death by TEDs was getting higher and more than deaths from cancer.

President of ERFC
Mr Nikolas Petropoulos

Presentation of Climate-KIC and opportunities that offers around the environmental issues.

Manager of environment and natural resources / PM TRAP
Mr Bourdalas Antonios

- Presentation of TRAP Project / Objectives / Partners
- Presentation of the latest results by TRAP studies / deliverables in the Greater Area of Thessaloniki
- Emissions from Industrial activities
- Emissions from biogas plants

- Emissions from transportation
- Residential heating emissions / other emission sources
- Health profile of Thessaloniki / Causes of death in the Region of Central Macedonia

Professor of Civil Engineering Departure / AUTh
Mr Athanasios Kungolos

Air pollution and greenhouse effect
Causes of Air Pollution
Greenhouse effect gases

Professor of Department of Chemical Engineering / AUTh
Mr Dimosthenis Sarigiannis

The air pollution exposome
ICARUS methodology / Integrated climate change and air pollution management
Exposure biology workflow / Rendering high dimension biology operational
Methodology / Environmental and exposure assessment
Results / PM size distribution and active surface – newer vs older vehicles
Newer diesel vehicles emit smaller particles, with a higher active surface and toxic content
Biological effects of air pollution: The complexity of biological responses following exposure to nanoparticles underlines the need for the development of dedicated and comprehensive methodologies to approach the potential health effects of nanomaterials.
Exposome science can overhaul the current environmental health risk assessment paradigm. This requires the combination of:
-Detailed assessment of the state of the environment and human exposure
-High dimensional biology and system science aiming at integration using big data analytics (multi-omics) and bioinformatics
ZThe multi-omics approach focusing on high dimensional biological connectivity permits the identification of molecular paths and biological processes underlying the onset or exacerbation of disease phenotypes associated to exposure to environmental stressors over one's lifecourse (the exposome)
Precise prevention towards environmental risks by identifying the susceptible or vulnerable individuals or age-groups and coast efficient risk management by identifying the susceptible or vulnerable individuals or age-groups and coast efficient risk management by identigying the most influential factors.

Associate Professor / School of Medicine / Laboratory of Histology – Embyology
Ms Theodora Papamitsou

Presentation of Postgraduate Programme "Health and Environmental Factors"

- Departments that participate to the Programme
- Objectives
- Scope
- Content
- Duration
- Structure
- Description

6. PHOTOS


The air pollution exposome
Dimosthenis A. Sarigiannis
EUROPEAN INTEGRATION FOR THE BENEFIT OF THE PEOPLE


Air pollution and greenhouse effect
Athanasios Kungolos
Professor
Civil Engineering Dept.
Aristotle University of Thessaloniki


TRAP
TRANSBOUNDARY AIR POLLUTION HEALTH INDEX DEVELOPMENT AND IMPLEMENTATION
TRAP Project results until now
Antonis Bourdalas
Environmentalist / P.M.
17.10.2019/ Stakeholders Meeting – Round Table
"Air Pollution Effects on Health"
Thessaloniki


The air pollution and the human health


The air pollution
and the human health
ERFC


Climate-KIC
GEO PROMOTION