LIFEINDEXAIR

NEWSLETTER 02

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TÉCNICO LISBOA · universidade de aveiro · Technical University of crete · DEMOKRITOS NATIONAL CENTRE FOR SCIENTIFIC RESEARCH · NATIONAL INSTITUTE FOR HEALTH AND WELFARE

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LIFE INDEX AIR WHY?

We invite you to follow us through our website and facebook!

www.lifeindexair.net
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If you have any questions or comments about our work or our future plans, don't hesitate to get in touch.

Measuring of the outdoor air levels and trends of pollutants at fixed ambient air quality monitoring sites has been the traditional way of evaluating urban air quality and assessing the needs of air pollution abatement programs.

These fixed monitoring stations are supposed to assess the exposure of the population to air pollutants. However, this approach fails to account for all components of exposure:

1st There is a huge heterogeneity in the concentrations of pollutants within the city
2nd People spend more than 90% of the time indoors
3rd There is a huge heterogeneity in time activity patterns of the population

This brings the considerable importance of assessing the personal integrated exposure to air pollutants, considering all the visited microenvironments during the day, as this is the key determinant of the dose received by an individual and thus directly influences the health impacts.

Since October 2016 LIFE Index-Air team is working in the assessment of the integrated exposure of the population to Air Particulate Matter compounds and in the identification of measures to reduce the burden of disease associated with this exposure.

WHERE CHILDREN SPEND THEIR TIME?

Children are becoming an increasingly important focus for exposure and risk assessment because they are more sensitive than adults to air pollutants. A necessary step in measuring the extent of children's exposure is to assess where children spend their time.

In the first semester of 2017, LIFE Index-Air developed a questionnaire about time activity patterns, targeting children between 5 and 10 years, which was distributed to 6096 parents from 24 schools from Lisbon.

The most important finding of the survey was that children spend more than 87% of their time indoors indicating that risk assessment should focus on indoor microenvironments. During the week children spend 89% of their time indoors - 55% in home, 27% in classrooms, 3.5% in vehicles and 2.7% practicing indoor physical activities. During the weekends the time spent indoors slightly reduce to 87% - 76% in home, 5.4% in leisure indoor activities, 3.4% in transports, and 1.4% practicing indoor physical activities. The time spent outdoor is 10% during the week and 9.4% during the weekend.

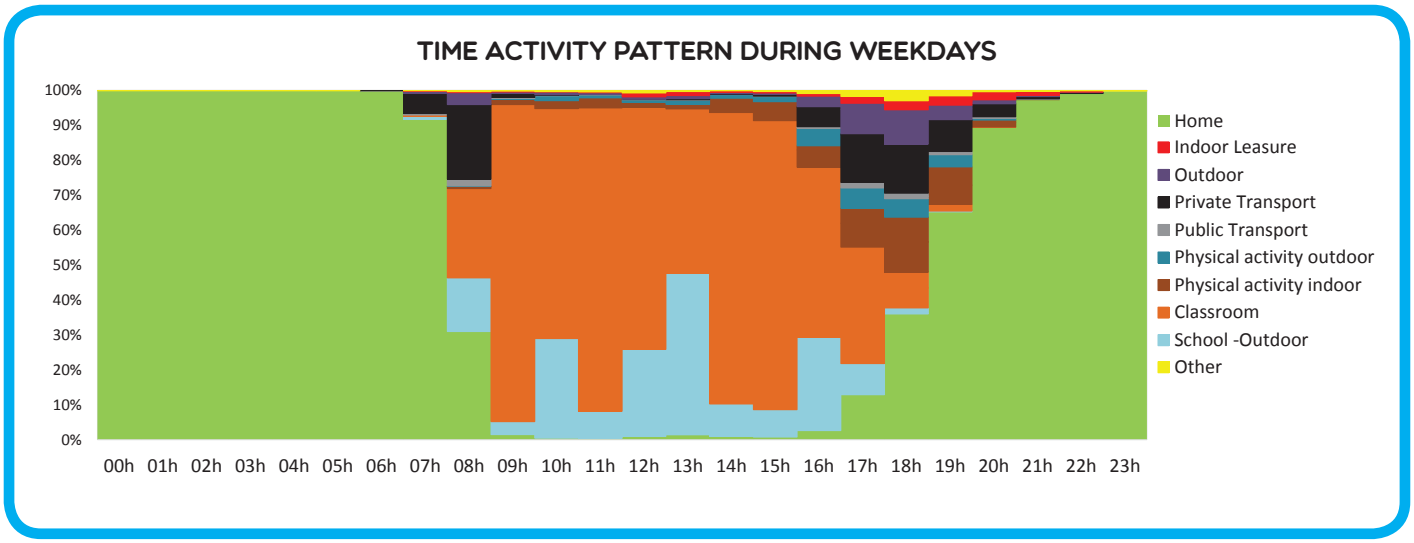
Time-activity pattern survey in numbers

TOTAL NUMBER OF SCHOOLS 24

TOTAL NUMBER OF TEACHERS 200

TOTAL NUMBER OF ANSWERS 1251

TOTAL NUMBER OF QUESTIONNAIRES DELIVERED TO THE PARENTS 6096



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STAKEHOLDERS CONSULTATION

The LIFE Index-Air project aims to obtain feedback from the end-users and interested stakeholders throughout the whole project implementation to optimize the project developments, so as to directly address critical needs of end-users and relevant stakeholders involved in the operation of the project optimization framework.

To achieve this degree of collaboration, LIFE Index-Air established a complete awareness and communication framework with all end-users and stakeholders, either involved in or affected by the project. To this end, the Living Lab methodology employed in LIFE Index-Air involves end-users from the very beginning of a new idea, creating the motivation to share and discuss their experiences and requirements. This collaborative environment where all the stakeholders, relevant to the project, co-create the solutions leads to a natural acceptance by the users who will be empowered not only to test, evaluate and report their own experience with the LIFE Index-Air framework, but mainly to live with it and smoothly accept and incorporate the project framework in their everyday lives.

PORTUGAL

- Portuguese Environment Agency (APA)
- Lisbon and Tagus Valley Regional Coordination and Development Commission (CCDR-LVT)
- North Coordination and Development Commission (CCDR-N)
- Schools from Lisbon Municipality
- Lisbon Parish of Parque das Nações (JF-PN)
- Lisbon Parish of Olivais (JF-Olivais)

FINLAND

- City of Kuopio

GREECE

- Ministry of Health
- Ministry of Environment and Energy
- Association for the Sustainability Development of Cities (SVAP)
- Coalition of 21 Local Authorities of North and East Athens
- Region of Attica
- Resilient Athens, Athens Municipality
- Hellenic Society for the Protection of Environment and the Cultural Heritage
- mSensis S.A.
- LIFE National Contact Points of Greece, Bulgaria and Hungary

MEET THE TEAM

Each newsletter features profiles of collaborators from our five partner organizations.

OTTO HÄNNINEN

Coordinator of B5 LIFE Index-Air Action
Docent at the University of Eastern Finland and Senior Researcher at the National Institute for Health and Welfare
Kuopio, Finland

Hänninen is an expert in population exposure and public health risk assessment with specific emphasis on aerosol processes. His research includes indoor and outdoor air pollution and policy evaluation and besides European and academic research and teaching he has acted as secretary for the World Health Organization working group developing WHO Guidelines for Indoor Air Quality and was seconded to WHO European Center for Environment and Health. Currently Hänninen chairs the Inhalation, exposures and health – working group of European Aerosol Assembly. Hänninen is a leading national expert in environmental burden assessments, started in the EBoDE work and followed up in HealthVent, ISTE, BATMAN and Nordic WelfAir project.

"Air pollution is harmful. This is true even in Finland, where we do have cleaner air than almost anywhere. For me, this is the first time that the risks are communicated to the children within the framework of the LIFE Index-Air project. They are the future decision makers and citizens that will solve the problems. I am really thrilled for the opportunity to be part of this. The climate change related revolution of energy production, based on wider use of renewables, sun, wind, means also cleaner air. Even in the traffic systems there is a great promise of computerized electric vehicles and we just cannot yet see all the possibilities. The children will make the change. At the end of this century the world will be very different, cleaner and safer."

ANA MIRANDA

Coordinator of B3 LIFE Index-Air Action
Researcher at the Department of Environment and Planning at the University of Aveiro
Aveiro, Portugal

Ana Miranda is full professor at the University of Aveiro, Portugal. She has been developing research in air quality aspects since 30 years ago, with a particular focus on air quality modelling. Assessing population exposure to air pollution and studying cost-effective air quality improvement measures are part of her nowadays activities.

"Research activities have moved from air quality levels in the ambient air to human exposure levels, aiming to go further protecting human health against the effects of air pollution. This implies knowing time activity profiles of the population and also indoor air pollution levels in the different microenvironments. LIFE Index-Air is about understanding how air quality improvement measures could contribute to the reduction of children exposure to air pollution. I'm quite sure about the effective contribution."

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