



## activity update

### Up to the challenge

As field studies were launched in October 2011, many preparatory activities have recently been undertaken. Both the environmental and health work packages (WPs) prepared protocols and materials; and lists of equipment, checklists and booklets were developed for the environmental measurements. Health questionnaires were compiled for parents, children and teachers; checklists were made regarding the construction and indoor use of the schools and classrooms; and a concentration test was devised for children. All materials were presented by the WPs at the E&H training in May 2011.

Work was begun by WP5 on the creation of a global database structure for data analysis and assessment.

Communication and dissemination tasks related to the project have been carried out by WP8:

- A promotional brochure was prepared and disseminated in November 2010, outlining the structure of the project and the goals of the research.
- The project website was launched in spring 2011, featuring progress updates, details of the WPs, events and results.
- Information brochures were developed for children, parents and school staff, explaining the importance of indoor air quality in connection with the survey.



## A healthy school environment keeps children healthy

On average, we spend 90 percent of our time in indoor environments, thus indoor air quality has an enormous influence on quality of life and health. Children are far more vulnerable than adults to the effects of air pollution: they are breathing a greater volume of air relative to their body weight, and their immune systems are not sufficiently mature to respond to environmental attack. Indoor air pollution in schools may affect children's health, growth, opportunities and educational performance. More than one in three children in Europe suffer from bronchial asthma or allergies, and the incidence of respiratory illness is increasing year by year. In this context, the monitoring of indoor air pollution in schools is crucial.

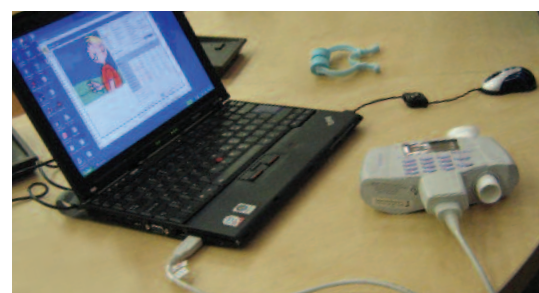
The project "Schools Indoor Pollution and Health: Observatory Network in Europe" (SINPHONIE) was launched in October 2010 with the aim of reducing and preventing respiratory diseases among children due to outdoor and indoor air pollution. Funded by the European Commission (EC) Directorate General for Health and Consumer Protection (DG Sanco), SINPHONIE is a complex research project covering the fields of health, environment, transport and climate change. Within the project framework, new data will be gathered on indoor air quality in schools and its effect on children's health, enabling the creation of a common European database and the definition of policy recommendations for remedial measures in the school environment. A unique feature of this research project is the common methodology that provides a basis for future evaluations on the health impacts of indoor air. Thirty-eight environment and health institutions from 25 countries are participating in the SINPHONIE research project, highlighting the fact that the right to breathe clean air in schools is fundamental to the right to health.

[www.sinphonie.eu](http://www.sinphonie.eu)

# Practical preparations

A training on environmental monitoring and health assessment was held from May 2 to 6, 2011 at the EC Joint Research Centre (JRC) in Ispra, Italy, aimed at providing experts from the 38 project partners with information about the SINPHONIE field studies, including equipment, measurement methodologies and schedule.

The training was organised by a team from the Chemical Assessment and Testing Unit of the Institute for Health and Consumer Protection of the JRC, coordinated by Dimitrios Kotzias, head of the unit, and comprising Josefa Barrero-Moreno, Stelios Kephelopoulos, Elisabetta Cenere, Salvatore Tirendi, Paolo Leva, Otmar Geiss and Carmen Del Chaco. *Sinphonie news* asked three of the people involved to share their impressions.



**Expert input:** (top) Members of the JRC organising team: Stelios Kephelopoulos, Salvatore Tirendi, Josefa Barrero-Moreno, Dimitrios Kotzias, Carmen Del Chaco, Otmar Geiss and Paolo Leva; (bottom) A laptop is linked to a spirometer, used in health monitoring.

## Dr Anne Hyvarinen

*is a senior researcher at the National Institute for Health and Welfare (THL), Finland, and is co-leader of WP3.3.*

**sinphonie news:** How efficient was the training week?

**Anne Hyvarinen:** During the environment session, THL was in charge of the training on biological measurements, in cooperation with the National Institute of Environmental Health (NIEH), Hungary. Participants welcomed the training opportunity, which was generally regarded as successful.

**sinphonie news:** Were the environment and health aspects successfully combined?

**Anne Hyvarinen:** Apart from some email correspondence regarding the questionnaires and the checklist, there has not been any extensive communication between work packages (WPs) 3 and 4 to date. However, I am optimistic that this situation will improve. A telephone conference between the two WPs would provide an ideal opportunity for useful discussion. There is extremely good cooperation among the chemical, physical and

microbiological elements, with lots of discussion among those involved. I consider this two-day training to be extremely valuable.



## Piersante Sestini

*is an associate professor of respiratory diseases at the University of Siena, Italy, and is co-leader of WP4.1.*

**sinphonie news:** How efficient was the training week?

**Piersante Sestini:** The opportunity for communication provided significant added value to the training week. Since the partners are involved in a multi-centre European study, it is vital that individual participants have a chance to get to know one another and the experts working in the field. During the health sessions, many useful questions were raised. This was a valuable opportunity to see things from a different perspective and helped to improve participants' knowledge. After the training the schedule will be very tight if we are to carry out the survey next winter. We need to speed up the preparations for the ethical committee, organisation with the schools, and coordination with WP3 and WP4.

**sinphonie news:** Were the environment and health aspects successfully combined?

**Piersante Sestini:** This has not been a very important issue so far, since the environment and health tasks have been separate. Now, however, cooperation at local level is crucial: the fieldwork in schools must be coordinated during the same week in order to make things less complicated for the schools.



## Paolo Leva

*works for the Chemical Assessment and Testing Unit of the Institute of Health and Consumer Protection at the JRC, and was a member of the training week organising team.*

**sinphonie news:** What are your impressions of the training week?

**Paolo Leva:** During the training we noticed that participants were taking notes, a clear indication that they found the sessions useful and interesting. We were not overwhelmed by questions, probably because the messages were clear and the sessions were well prepared in terms of materials, printouts and equipment. We were able to provide a good



**Monitoring tools:** A breathalyser measures exhaled nitric oxide in a test for asthma and other conditions involving inflammation of the air passages.

overview of the various passive samplers available on the market, especially for ozone and nitrogen dioxide, and to discuss which have been validated in inter-comparison trials, which are appropriate for project purposes etc., helping participants to select which ones to use in their own surveys.

**sinphonie news: What was your personal experience of the week?**

**Paolo Leva:** This was the first time I had given such a presentation and training, and I found it quite demanding to convey so much information in such a short time and leave room for questions. However, participants told me that they had found the information very useful, which was really satisfying.

**sinphonie news: Do you think it was a good idea to have the environment and health training together in one week?**

**Paolo Leva:** Leaving aside the logistic difficulties, the two trainings were quite different in terms of content and practical aspects. I regard this as added value, as participants were able to exchange personal experiences by attending both training sessions.

## Project launch

November 10–12, 2010

The opening meeting of the SINPHONIE project was held at the Regional Environmental Center for Central and Eastern Europe (REC) in Szentendre, Hungary, attracting more than 60 participants from 25 countries. The three-day event included meetings of the four project management committees and gave partners a chance to discuss project implementation. On behalf of Giulio Gallo (EC DG Sanco), Stelios Kephelopoulos (EC, JRC) welcomed the launch of SINPHONIE and expressed DG Sanco's expectations regarding the results of the project.

### Project management structure

- The **Coordination Committee** is in charge of the overall coordination of the project and comprises representatives of four institutes: the Regional Environmental Center for Central and Eastern Europe (Eva Csobod); the Institute of Mechanical Engineering, Faculty of Engineering, University of Porto (Eduardo de Oliveira Fernandes); the National Institute of Environmental Health,



**Formal opening:** (left to right) Eduardo de Oliveira Fernandes (IDMEC-FEUP), Eva Csobod (REC), Marta Szigeti Bonifert (REC) and Stelios Kephelopoulos (JRC) address the kick-off meeting.

Hungary (Peter Rudnai); and the Joint Research Centre, Institute for Health and Consumer Protection (Stelios Kephelopoulos).

- The **Technical Committee** is responsible for project implementation coordination and comprises members of the Coordination Committee and work package (WP) leaders and co-leaders.
- The **Steering Committee** is responsible for national project implementation and comprises one representative from each partner institution.
- The **Advisory Committee** comprises invited external experts.



## General Assembly

May 4, 2011

The meeting of the General Assembly took place during the training week held in Ispra. Over 70 participants from the 38 project partners attended the meeting. The aim was to outline the status of the different work packages and the activities undertaken during the first project period. The meeting was opened by Dimitrios Kotzias, head of the Chemical Assessment and Testing Unit of the Institute for Health and Consumer Protection of the JRC, who highlighted that the SINPHONIE project makes an important contribution to the harmonisation of methodologies for indoor air monitoring (the DG Sanco and WHO initiatives). The Coordination Committee stressed that WP3 and WP4 leaders and co-leaders will have a key role in the preparation and implementation of the field studies, and should be in direct contact with local teams in the individual countries.



**Status report:** The General Assembly gave project partners the chance to review achievements to date and to set the stage for the forthcoming field studies.

# Parma outcomes



*Symphonie news* talks to Dr Michal Krzyzanowski, head of the Bonn Office of the World Health Organization (WHO)

**symphonie news: What key message emerged from the Environment and Health Ministerial Conference in relation to children's health?**

**Michal Krzyzanowski:** Children's health and the environment was one of the priority topics in Parma, where member states confirmed their concrete commitments, along with targets and deadlines, to the four Regional Priority Goals (RPGs) agreed in Budapest in 2004. RPG3 refers to the prevention of respiratory diseases by improving air quality. The Parma commitments related to RPG3 focus on achieving healthy indoor air in schools by 2015.

**symphonie news: How can WHO Europe benefit from SINPHONIE?**

**Michal Krzyzanowski:** The project will raise awareness of the relevance of

indoor air quality in schools to children's health. The new methodology developed by the project will enhance specialists' capacity and expertise, building skills for a broader range of activities in Europe. In terms of the Parma commitments, WHO Europe will contribute to harmonising the methodology for monitoring indoor air quality in schools. Pilot studies in schools in several WHO Europe member states will take place in winter 2011. These will be on a broader scale than those planned for SINPHONIE, but only four or five of the SINPHONIE indicators will be used and health effects will not be measured.

<http://www.euro.who.int/envhealth>

● **October 2011 – February 2012**

Field studies in schools

● **March 2012 – June 2012**

Analysis of data and health risk assessment

● **April 2012 – September 2012**

Risk management and development of guidelines

● **April 2012**

Meeting of the Technical Committee, Porto, Portugal

● **September 2012**

Final meeting, Szentendre, Hungary



## symphonienews

is the newsletter of the **SINPHONIE project, Schools Indoor Pollution and Health: Observatory Network in Europe**. One of the project goals is to evaluate existing information on indoor air pollution and its health impacts and to expand its availability. Field studies will be carried out to investigate children's exposure to indoor air pollutants and health risks in schools, and the data obtained will be compiled to create a common European database and to develop guidelines for improving air quality in schools.

These tasks will be accomplished by the SINPHONIE project's eight work packages:

**WP1 — Management and coordination**

**REC:** Eva Csobod, Peter Szuppinger, Reka Prokai, Eszter Reka Mogyrosi  
**IDMEC-FEUP:** Eduardo de Oliveira Fernandes, Joana Madureira  
**NIEH:** Peter Rudnai, Anna Paldy  
**JRC:** Stelios Kephelopoulou, Dimitrios Kotzias, Josefa Barrero-Moreno

**WP2 — Background**  
**UPMCParis06:** Isabella Annesi-Maesano  
**NIEH:** Peter Rudnai

**WP3 — Assessment of outdoor and indoor school environment**  
**JRC:** Dimitrios Kotzias, Josefa Barrero-Moreno  
**NIEH:** Peter Rudnai, Eva Vaskovi

**WP3.1 — Characterisation of the school building**  
**IDMEC-FEUP:** Gabriela Ventura  
**NIEH:** Peter Rudnai

**WP3.2 — Physical and chemical measurements**  
**VITO:** Marianne Stranger  
**NIEH:** Eva Vaskovi

**WP3.3 — Measurements of biological contaminants**  
**THL:** Martin Taubel  
**NIEH:** Donat Magyar

**WP3.4 — Environment context and modelling**  
**NKUA:** Mattheos Santamouris  
**NIEH:** Anna Paldy

**WP4 — Assessment of health outcomes**  
**CNRPalermo:** Giovanni Viegi  
**NIEH:** Peter Rudnai

**WP4.1 — Clinical field survey**  
**USiena:** Piersante Sestini  
**NIEH:** Peter Rudnai

**WP4.2 — Clinical tests and non-invasive bio-markers**  
**UU:** Dan Norback  
**IEH:** Hans Moshhammer

**WP5 — Data management, cross analysis and database**  
**TNO:** Phylomena Bluysen  
**UPMCParis06:** Isabella Annesi-Maesano  
**NIEH:** Peter Rudnai  
**NILU:** Alena Bartonova

**WP6 — Health risk assessment**  
**UMIL:** Paolo Carrer  
**NIEH:** Gyula Dura

**WP7 — Risk management and development of guidelines and recommendations**  
**JRC:** Stelios Kephelopoulou  
**REC:** Eva Csobod, Reka Prokai

**WP8 — Communication and dissemination**

**REC:** Eva Csobod, Reka Prokai; and Petur Farkas (ICONICA)  
**IDMEC-FEUP:** Eduardo de Oliveira Fernandes, Joana Madureira  
This newsletter is one component of WP8.



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