



localised environmental and health information services

direct newsletter

March 2009

[Lenvis in short](#)

The environmental and health information for all.

[Word from the project coordinator](#)

Lenvis' momentum after 6 months.

[Lenvis partners](#)

The research interests and roles of partners in the Lenvis project.

[Lenvis Kick-off workshop](#)

Lenvis started in Delft with the partners presenting and discussing their research plans

[IST-Maretec organises professional end-users workshop](#)

Visit to Lisbon to discuss end-user and data interoperability activities.

[Italian professional users requirements for air quality](#)

Requirements of professional users through interviews on air quality monitoring and management. What Italian professionals consider important in Lenvis.

[Requirements of health professionals and data privacy issues](#)

University of Milan-Bicocca carried investigated user requirements in the medical area and went deeply into data privacy issues.

[What do youngsters expect?](#)

More than 250 children and youngsters in different European countries were interviewed to find out what this specific target group would like to see in lenvis.

[First lenvis results](#)

What are the first results of the lenvis project? Which deliverables are produced and what activities have taken place?

[Upcoming events](#)

See what events are on the calendar for the coming months.

Lenvis in short

by Arnold Lobbrecht (HydroLogic BV)

Lenvis is about the use of modern ICT to communicate on environment and health. Lenvis presents information on the actual state of the environment at specific user locations and possible associated health threats to all people. Information on environment is gathered in one place, where users can respond to what is presented. They can interact in a way they know from social networks and other interactive forums on internet. Lenvis focuses on the combined needs of government organisations and user groups. A specific user group considered is the upcoming Generation Y. This group is using another set of communication methods and devices and interacts in a 24x7 virtual environment, using chat, SMS, internet video, on computers and mobile phones.

Lenvis also takes into consideration recent developments in ICT such as use of GPS for localisation and internet on mobile devices.

Internet has brought a wealth of information on any topic one could think of. However, it is the user who has to compile useful information from all sources available.

Lenvis makes a difference in that it aims to present location-based information on basically all environmental data in one portal. This web portal can be customised and parts of the website can be included in other applications.

The lenvis information is based on monitoring of water, air and health data as well as online model outcomes in these three domains. Prototypes are built and practical tests are performed in case studies in the Netherlands, Portugal and Italy. Particular topics which are addressed in these case studies are: water pollution at recreational beaches and the associated health threats; smog alarms in urbanised areas and associated asthma warnings; water quality information and flooding threats in urban and rural areas and dedicated environmental and weather information for recreational users.

The lenvis project is funded by the EC FP7 programme. The project is performed by 10 EU organisations, started in September 2008 and will run for 3 years. During these years a team of professionals of universities, industries and governments cooperates closely. First results of the project will be presented on a mid-term seminar in Delft around March 2010.

Word from the project coordinator

by Arnold Lobbrecht (HydroLogic BV)

The lenvis project is currently 6 months on its way and in full progress. The project is at its required momentum to perform very interesting research and development. Lenvis brings together knowledge from water, air and health, which is a rather unusual combination. Several team meetings, of which you will read more in this newsletter, created good ideas to be implemented, as well as a good team spirit. The close connection to important sources of information we all are using on a daily basis, makes this ICT extra interesting for the team members.

As daily users of Google, Google Maps, iGoogle, YouTube, MSN, LinkedIn, MySpace and others, we have extra personal interest and opinions about the lenvis concept.

About the objective of the project, being to bring environmental information to the location of the user, we very much agree: it must be possible to present the state of the environment in an attractive manner, where all user groups, either professional or general public, find their required information in a customised way.

The current phase of the project is the overall design and development of first prototypes. As has become a good habit in the project consortium: our people work closely together in face to face meetings as well as in online meetings. This month (February 2009) all programmers met in Katowice (Poland); next month this group will be working together in Amersfoort (Netherlands), to enjoy study, development and application of new ICT.

Lenvis partners

by Schalk Jan van AnDEL (UNESCO- IHE)

The lenvis project is performed by a European consortium of industrial, research and governmental partners.

HydroLogic (NL) performs two roles in the project: coordination and research. HydroLogic is active in the area of urban and rural water management and performs

water quality relationships through data driven techniques. The university is also concerned with the data privacy issues. Website: www.unimib.it
ARIA Technologies (F) is a company entirely focussed to the atmospheric environment, through numerical simulation of the dispersion of pollutants in the

research, consultancy and software development projects. Particular research interests of the company are in hydroinformatics and knowledge management. Website: www.hydrologic.com

UNESCO-IHE (NL) is a post-graduate educational and research institute in the water related fields. UNESCO-IHE is responsible for scientific quality of the project. The Hydroinformatics and Knowledge Management department contributes to the Dutch case study and to the dissemination to the wider international scientific community. Website: www.unesco-ihe.org

Instituto Superior Técnico (PT) is the Technical University of Lisbon, Portugal. The Maretec research centre works on numerical modelling applied to aquatic environmental problems, monitoring and data management. IST / Maretec leads the water modelling services development of lenvis and is involved in the Portuguese case study to coastal bathing water quality. Website: www.maretec.mohid.com

Project Automation S.p.A (I) is an Italian industrial company active in areas of environmental and traffic monitoring, water and gas distribution, and public transport, with a current focus on developing web applications and Information Systems for the advanced management of environmental and traffic data. Project Automation is in charge of the software design of the lenvis system and focuses on data and services interoperability. Website: www.p-a.it

The **Università degli Studi di Milano-Bicocca** (I), university of Milan, is involved through the department of environmental sciences. The university is mainly involved in developing health - air quality, and health -

atmosphere. ARIA Technologies provides atmospheric and air quality modelling services for the case studies in Italy and the Netherlands. Website: www.aria.fr

ESAProjekt Sp. z.z.o. (PL) is a software house and system integrator that provides ICT services for public and private clients in, amongst others, the healthcare and environmental protection. ESAProjekt focuses on ICT systems and data base development, and data interoperability for lenvis. Website: www.esaprojekt.pl

Hidromod (PT) is a company that applies and develops numeric models adapted to the aquatic environment in consultancy and hydroinformatics research projects. Hidromod contributes to data interoperability and water quality modelling for the Lisbon coasts case study. The consortium is completed with two governmental institutions that represent professional end-users. Website: www.mohid.com

The **Province of Noord Brabant** (NL), acts both as an end-user of the lenvis platform and data service provider. The province is involved in the definition of user requirements and the implementation and evaluation of the Dutch case study. It also wants to play an active role in the dissemination of the results, since one of its main objectives is to increase the involvement to all its activities of its citizens. Website: www.brabant.nl

Bari (I) is the capital city of the province of Bari and of the Apulia region, on the Adriatic Sea in Italy. The municipality is the main stakeholder in the Italian case study for air quality and health, and provides air quality monitoring network and perform tests of the lenvis system. Website: www.comune.bari.it

Lenvis Kick-off workshop

By *Schalk Jan van Andel* (UNESCO-IHE)

During the project start meetings (kick-off workshop) in September 2008, all partners were represented. The meeting was hosted by UNESCO-IHE in Delft, the Netherlands. The project coordinator presented the main ideas of the project, the workplan and deliverables, and the project management set-up and supporting tools. All starting activities (work packages) were presented, and planning were discussed. Content oriented presentations on water quantity and quality modelling, atmospheric and air quality modelling, and health modelling were given and ICT issues discussed. The kick-off meeting of the end-user requirements activities was immediately used for a first brainstorm to identify potential users. One day during the starting meetings was devoted to visiting HydroLogic in Amersfoort and the Dutch professional end user partner; the Province of Noord Brabant. Matthijs ten Harkel and his colleagues welcomed the project team with presentations of the Province and its tasks in general and the available environmental monitoring networks in particular. A field visit included



General Public informative ground water level measurements in De Kwebben

one of the fresh water bathing facilities and a running youth (Gen-Y) nature development project "De Kwebben". The later could serve as a successful example to lenvis on how to involve Gen-Y.

IST organises professional end-users workshop

By Schalk Jan van Anandel - UNESCO-IHE

At the end of January Schalk Jan van Anandel of UNESCO-IHE visited IST-Maretec and Hidromod to discuss end-user requirements and data interoperability activities. This visit coincided with the Coordinator visit, by Arnold Lobbrecht and Sander Loos of HydroLogic, to allow all three to be present at the end-user workshop for the Lisbon case study.

The workshop was directed towards the professional end-users and was hosted by Sanest (see picture), and organised by Constança Belchior and Ramiro Neves of IST-Maretec. The turnout was great with about 20 people representing all the water management organisations involved, municipalities and the National health organisation.



Professional end-user workshop in traditional wine-cellar of Sanest

The ideas of the lenvis project were presented and at some points lively debated. The overall impression was that the project is welcomed by the professional end-users and that the project will receive the necessary support from the water management organisations. Last but not least, Ramiro Neves kindly took the Dutch visitors for a fieldtrip along the beaches that form the case study along the Estoril coast. The fieldtrip provided a very good impression of the water quality issues by showing sewer canals, pumping stations, and warning signs at the beach (see picture).



Sander Loos (left), and on the right Ramiro Neves explaining the bathing water quality information sign

Italian professional users requirements for air quality

By Emanuela Seregini / Susanna Zucchi – Project Automation

Among the lenvis intended end-users a specific target group is represented by the so-called *professional* users. These are the users working in bodies in charge for environmental assessment and management, for which environmental data and information is the basis of professional activities.

The approach followed in Italy to collect requirements and suggestions from the professional users was based on direct (semi-structured) interviews.

All organisations which were involved in the survey are air quality monitoring data producers themselves (through air quality monitoring networks and sampling

Getting data and information about other environmental (water) and environment-related themes (health) is not considered as essential, although it is regarded as useful for performing global environmental assessment.

There is no interest in using P2P techniques for data exchange and data publication, as this technology is perceived as not secure and in contrast with internal security policies.

The main services professional users would like to be included in lenvis regard flexibility in elaborating data: combining different data sources, creating new combinations of indices/indicators according to various

campaigns), and use both raw and validated data to perform statistical elaboration, indexes and indicators. Such elaborated data are used for internal objectives (including support to decision makers) and for external diffusion. The data and reports are made available with very high frequencies mainly on web sites and newspaper/teletext bulletins. It is very important to keep control over the distribution of data: organisations want to maintain knowledge of how, when and why their data have been given.

space-time aggregation criteria, investigate data according to not predefined and personalised analytical paths. These tools would allow them to better understand the air quality processes over their territory and would enable them to develop more effective data representations to be used also for decision support.

Requirements of health professionals and data privacy issues

By Daniele Toscani - University of Milan-Bicocca - Environment and Territory



This is where most of the lenvis work of the university of Milan-Bicocca is done

The activity of the University of Milan-Bicocca has been focused on establishing contacts with potential users in the medical area, through direct interviews, interaction through questionnaires, exchange of documents and guidelines: the type of data that they manipulate and the elaboration that they perform have been analysed under the privacy point of view. Privacy-related risks and guidelines that emerged have been described in the deliverable, which describes issues related to privacy protection with particular focus on medical data, in different contexts: electronic data storing, publications, data exchange and manipulation. EU and national laws that rule data privacy protection of medical data have been reviewed. The university has also studied the health data and air quality data for the case study of Lombardy region, collecting health data about the hospitalisation and air quality in the Lombardy area, which will be used to validate the tools developed in lenvis. The other field in which the university operated is the study and description of the validation of data in databases, in particular techniques to ensure data quality and accuracy of health and air quality data in databases.

What do youngsters expect?

By Yvonne Goselink - HydroLogic

Within the lenvis project, services are designed and developed bearing in mind the end users and their requirements; citizens and professionals in Europe and in particular youngsters: Generation Y. All potential users, and in particular, Generation Y have been involved in an early stage of the project. In the Netherlands, Italy and Portugal the young generation has been interviewed on their interests, wishes and future expectations with respect to water, air and health information. More than 250 youngsters completed the questionnaire which was developed for their age group. Some interesting outcomes are:

- 13-16 year olds are the most media minded and spend most time on internet (on average 13 hours a week); they send the most text messages (38 a

The children (divided in three age groups, 8-12, 13-16 and 17-25 year olds) were also asked to draw what they think the lenvis user interface should look like. They all drew web customisable portals looking like social networking environments.

More details are included in the report on end user requirements, which will be available on the lenvis website soon (www.lenvis.eu).

- week) and use internet on their mobile phones the most (30% in this group for 5 hours a week).
- Youngsters want to personalise their own presence on internet.
 - Generation Y love graphics, tests and the competition in games.



First lenvis results

By Efrath Silver (HydroLogic) and Schalk Jan van AnDEL (UNESCO-IHE)

lenvis Website

The public lenvis website has been launched soon after the start of the project, providing online information about the project. It describes activities, achievements, partners, news and events. In addition, all the lenvis Direct Newsletters will be available on the website. Please visit: www.lenvis.eu.

End user requirements workshop

The findings of the End user questionnaires and interviews of the three case study countries were presented at the End user requirements workshop in Delft, the Netherlands. The results were discussed by two parallel discussion groups. Web developers and public users from different sports and recreational organisations were invited to provide their input to the user requirements. In general the experience of the different partners in Italy, Portugal and the Netherlands is that the ideas of lenvis

are welcomed by both professional and public end users. There is a need for more up-to-date, more localised, and more customised environmental and health data that is easy to be found. All the results of the end-user requirements can be found in Deliverable 1.2.

First reports

At month six of the project, several reports have been delivered and will soon be available on the public lenvis website (www.lenvis.eu):

- Work Package 1: a user requirements report with a description of current and required information and services by the potential end users. (Deliverable 1.2)
- Work Package 1: a state-of-the-art overview of data sources and data providers. (Deliverable 1.3)
- Work Package 3: a report on required and achievable data quality and monitoring quality indicators. (Deliverable 3.2)



Filename: Lenvis-Newsletter-Months06-March2009.doc
Directory: D:\data\Projects\2008_LENVIS\WP9\Newsletter
Template: C:\Documents and Settings\ipo\Application
Data\Microsoft\Templates\Normal.dot
Title: LENVIS Newsletter
Subject:
Author: silver
Keywords:
Comments:
Creation Date: 3/16/2009 10:34:00 AM
Change Number: 3
Last Saved On: 3/16/2009 10:50:00 AM
Last Saved By: UNESCO-IHE
Total Editing Time: 17 Minutes
Last Printed On: 3/16/2009 12:15:00 PM
As of Last Complete Printing
Number of Pages: 6
Number of Words: 2,890 (approx.)
Number of Characters: 16,475 (approx.)