



## Welcome to the 4th newsletter of INSPIRE

This 4th newsletter reflects the two years project INSPIRE and presents all results especially in the three partner countries Germany, Latvia and Poland. Read more about the project below.

### Final Project Meeting in Leverkusen, Germany

On 27 October, the project partners met at NaturGut Ophoven in Leverkusen for the final meeting in order to recapitulate/ review the project work that had been done over the past two years and to learn more about the work of out-of-school places in Germany.

For this purpose, Hans-Martin Kochanek, the head/manager of NaturGut, guided the group across the grounds of NaturGut, a special place and one of only a few of its kind in Germany, he explained. Everything is to be found on one single site (ponds, creek, forest, meadow, ...). In target-group specific programmes the visitors, especially children, are »re-introduced« to nature. Beside nature, history also plays a role. A historical moated castle on the grounds is the place for getting familiar with life in late medieval times.

In the afternoon Susanne Ben Hicham, a teacher who gives pedagogical lessons on NaturGut, guided the project partners through »EnergyTown«, NaturGut Ophoven's museum for children and youths. Mrs Ben Hicham showed that the museum provides interactive exhibitions and programmes on two floors, where visitors explore how much fun it can be to save energy. She didn't need much persuasion to animate the international participants of the meeting to try out the manifold interactive exhibitions, e.g. to climb through a socket, experiment in a solar laboratory or to phone with trees, create an animal voice karaoke, cuddle with an ant, or fly like a bird. The participants were excited.

Herbert Reul visited the final INSPIRE meeting as a guest speaker. He is responsible for energy issues in the European Parliament. He underlined the important role of teachers and the need to accept their responsibility and to live out the values they teach. And in this process, non-formal learning is very important and encourages the participation of young people with relevance to the labour

market. »The best investment is in people«, he pointed out.»INSPIRE is a great way to do so«, and »I support this project very much«. In the project review, Veronika Schulte recapitulated the management and results of the work packages, and the participants described the project from their individual country perspective.



Dear Reader,

this is the final newsletter of the project INSPIRE. We thank all partners for their inputs and the successful cooperation. Also we would like to express our gratitude for the support provided to the EU, the Lifelong Learning Programme CO-MENIUS.

Yours faithfully,  
Prof. Dr. Walter Leal



### The INSPIRE Project Handbook is ready!

The INSPIRE handbook is ready and summarises all the main results of the Comenius project INSPIRE. The three countries that took part in INSPIRE (Germany, Latvia and Poland) present examples as to how they teach the issue of energy at extracurricular venues in their countries, with an approach that will also be useful to other countries that were not involved in the project.

First, the project partners identified the present situation in each of the three countries. The following questions were answered: Do teachers at school and in extracurricular venues deal with the topic of energy? How often do teachers visit extracurricular venues with their classes and which topics do they prefer? In PART 2, readers are given some basic information on the INSPIRE project and the partnership. PART 3 presents a summary of the »Review and analysis of non-formal learning«. An overview of the 15 designed lesson units is shown in PART 4 and the manual for teacher training is presented in PART 5 of this handbook. A summary of the handbook and what the INSPIRE team has learned about all these activities during the project is finalised in PART 6.



## INSPIRE for Latvia: main achievements and effects

As to the effects of INSPIRE in terms of educational and social significance, first of all, the teachers, teacher trainers and out-of-school place staff involved in the WP2 should be mentioned. They provided information on the integration of formal/non-formal education regarding the topic of renewable energy and climate changes that allowed for the creation of 5 innovative lesson units (grades 6-12) that are fully embedded in the existing educational situation of Latvia.

Furthermore, these lesson units were put in the centre of 4 teacher training courses organised at the Daugavpils University; 66 natural science teachers from the Latgale region were involved in the courses. The teachers' feedback on survey questions on training courses and course materials showed the highly positive evaluation and helped to improve the teacher training. After the teacher training, 45 teachers approbated 6 lesson units with 629 pupils and filled in the survey dealing with challenges/success/suggestions for improvement that serves as a resource in order to improve the lesson units.

To reach the academic community and wider society, Latvia's team has published 3 peer-reviewed articles in international publications and also has prepared 9 presentations at different international conferences, meetings of environmental educators and science festivals organised in Latvia. The project materials (books and CDs with learning units, teacher training, handbook, brochures, etc.) in Latvian are disseminated both electronically and in printed form among the teacher trainers, education experts, school teachers, etc. and will also reach many school libraries, out-of-school places and NGOs.



Lessons from the project in the future will be applied to:

- Improvement of local team work (cross-faculty, interpersonal);
- international partnership: structure of work, timing, leadership and management issues, relevance of work to the expertise level of workers, etc.;
- the specificity of creative activities and approbation of their results;
- the motivation and commitment of natural science teachers;
- the EU projects and their significance locally and globally both in scientific and applied domains.

## 3rd European Fair on Education for Sustainable Development, Hamburg

About 270 participants from 18 countries gathered in Hamburg Germany from 28 – 30 October 2009 to take part in the 3rd European Fair on Education for Sustainable Development with the focus on »Renewable Energy and Climate Change: Thematic Challenges to European Schools and Universities«.

The fair had been organized by the Research and Transfer Centre »Applications of Life Sciences« of the Hamburg University of Applied Sciences (HAW Hamburg) and the Centre for Sustainable Construction (ZzB), Hamburg. The proximity and neighbourhood to the global COP 15 conference on climate change in Copenhagen (December 2009) and the focus on renewable energy showed that there is an urgent need for an energy and mental change in order to cope with these challenges. The introductory presentations were focussed on renewable energies as a strategy which contributes significantly to climate change mitigation as well as being an essential component in economic and social development processes to meet the basic energy needs of all citizens (Osman Benchikh, UNESCO Head Energy Programme). Renewable sources would therefore offer a valuable component of global efforts aiming to alleviate poverty as well as to face the challenges caused by climate change. But this won't be achieved without education – the role and importance of education would help the international com-

munity by building up the capacity to do so. The whole set of presentations offered an intensive exchange of information and raised awareness, it dealt with issues of strategic value in reviewing the state of art of education for sustainability today – with an emphasis on technology and/or education, especially referring to projects and curricula in schools and universities. Thus the presentation of the project INSPIRE – School education by Non-formal Learning at the exhibition and during the session raised awareness especially of the teachers from other countries.





## The project from a country perspective

INSPIRE is one of several EU projects that are relevant to HAW Hamburg – for NaturGut, it is the first major EU project. It offered the possibility to get acquainted with other institutions which work in a similar field in other EU countries and to learn from each other.

The benefit for Germany is immense. We can provide tested and improved in-service training for teachers and staff of out-of-school places on the topic of »How to teach an exciting lesson about saving energy and climate change«. 78 teachers have already been inspired to teach efficient energy use and climate change at school. 656 pupils have been educated in this issue. NaturGut Ophoven in particular benefited from the developed teacher training. Especially the



presentation of renewable energy and the station work will be integrated in other training modules of NaturGut. We spread out 15 lesson units about the energy issue. And we have got new impulses from the lesson units from partner institutions for our own work and a huge variety of didactical methods which we can use in our programmes. The project gave us the possibility to introduce the work of out-of-school places to teachers and to foster the cooperation between formal and non-formal learning places. We planned to develop lesson units with low preparation effort and material which can be bought easily. However, we realised that the lesson units still require much effort. Mostly, teachers do not have sufficient time to prepare such lesson units. We therefore recommend using modified versions of them, parts of them or using them during a project week or to visit an out-of-school place. Compared with the other two project countries, Germany has a well developed net of environmental centres which offer special programmes for classes. It is our task to motivate as many non-formal places as possible to implement these or similar programmes.



## INSPIRE from Poland's perspective

The implementation of the international project INSPIRE School Education by Non-formal Learning enabled an identification of the use of non-formal education in the realisation of the formal curriculum.

We can no doubt consider as a success the fact that we managed to collect huge amounts of material (provided by 104 teachers!) regarding the analysis of integration of formal and non-formal education. That information turned out to be very useful and showed why the use of out-of-school places in formal education is so rare.

Also, very interesting innovative lesson units on renewable energy have been elaborated. The lessons have been developed for students aged 7-10. 300 copies of educational materials have been printed and a CD has been released with each copy. The materials aroused the interest of teachers who participated in training courses and have been distributed among schools and out-of-school learning places. These lesson units attracted the interest of teachers.

The following points are especially worth mentioning:

- Interesting topic
- Excellent fun which really involved the pupils
- Interesting accessories were an additional attraction
- Activating the students to cooperate



Another advantage which has been created by the INSPIRE project were teacher training courses (the pilot course and 3 improved courses). Altogether, 70 teachers from 39 schools participated in these courses. These trainings got teachers interested in the topic of energy education and inspired them to more widely integrate topics concerning renewable energy and climate change into programmes of formal education. Teachers were also encouraged to use activating methods and games at work which enabled the wide distribution of the educational materials and information on the project.

Working on the INSPIRE project has been really inspiring!

