



The Language of Safety and Health Signs and Signals in Wood Industry

Final Report

Public Part

Project information

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Executive Summary

The project addresses the needs of vocational college students, university students, professionals in SMEs both in public and private sectors, specialists at universities, managers, manufacturers and decision makers in the field of Wood Industry for specific training for the system of safety and health signs and signals.

The project is aimed at providing training methodology and materials for lifelong learning for vocational college students, university students, and professionals in Wood Industry and SMEs in relation to the language of safety and health signs and signals. The goal is to further train existing and future professionals in the field of Wood Industry.

The project is in accordance with the five-year strategy for Safety and Health launched by the European Commission, covering the period of 2007 – 2012 and aiming to reduce by 25% the total incidence rate of accidents at work per 100 000 workers in the EU.

The partnership of the project has been selected with regard to the nature of activities of each organization focusing on Occupational Safety and Health issues. The consortium of partners has been established on the basis of their experience, including European countries with different level of development in safety and health working environment and aiming to achieve **European coverage** of the project.

The main goal of the project is to develop lifelong learning training methodology for the system of safety/health signs and signals in Wood Industry for the three different target groups. In the first phase of this process it was necessary to gain information on the current level of knowledge of each target group. Thus a Needs Survey in all partner countries has been conducted which showed the lack of sufficient knowledge on occupational safety and health issues of all targeted groups.

The training methodology and materials have been developed in order to correspond to the determined specific training needs of the targeted groups. The most important innovation of the training methodology is the transition to learner-centred and differentiated approach to training of the targeted groups and the use of modern training techniques.

The project aims have been achieved through the development of:

1. Interactive multimedia product for e-learning in English, Bulgarian, Greek, Swedish and Slovak languages including five theoretical training modules, covering key topics in Occupational Safety and Health in Wood Industry, Case Studies and electronic tests.
2. Printed handbooks in all partner languages tending to provide professionals with summarized information for use in everyday work.
3. Training of targeted groups with differentiated approach.

The LANSAWOOD project aims to improve the European qualification system and the renewal of initiatives for vocational training in safety and health signs and signals in Wood Industry. The developed e-learning training methodology can serve as an example for developing vocational training programmes for other fields of study and other target groups. The project results will be of great interest to European organizations connected with Occupational Safety and assuring safe working environment which can make use of the developed training tools.

The developed training materials (easy of access, lifelong oriented) will be of great aid to the existing and future professionals in their European work mobility.

More information of the project is available at the project website www.lansawood.eu

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1. Project Objectives

The project is aimed at developing contemporary training methodology and tools including innovative life long learning content, based on differentiated approach to training of targeted groups. This training is aimed at:

- Helping the Wood Industry in streamlining recruitment and employment;
- Improving the labour market situation for workers in the wood sector;
- Strengthening the social dialogue within the European Wood Industry;
- Creating a stronger position for professionals in Wood Industry in the labour market which will facilitate their mobility.

The project objectives are as follows:

- To train human resource for high-quality and efficient use and application of the system of safety and health signs and signals in Wood Industry through developing training tools;
- To improve the specific qualification of the professionals in Wood industry through developing an interactive multimedia product for e-learning based on case studies and differentiated approach to training of the targeted groups;
- To collaborate at working out unified acceptable training methodology;
- To provide specific training for the targeted groups;
- To draw the attention and convince manufacturers, specialists, employees, students about the great importance of the system of safety and health signs and signals and their proper application

The short-term and long-term beneficiaries of the project have been calculated on the basis of previous successfully completed projects in the field of Education, Forestry and Wood Industry, the number of vocational college schools, the number of university students and the number of enterprises, especially SMEs (both in public and private sector) in the field of Wood Industry, the determined lack of specific training for the safety and health signs and signals and confirmation by the managers from enterprises and SMEs in the respective industry about the current needs for this particular training.

Vocational college students and university students have acquired higher level of knowledge in the system of safety and health signs and signals; a proposal for the renewal of their curricula has been made, including state of the art training methods for efficient content transfer and assimilation by target groups, using the developed training tools for effective training and active e-learning.

Professionals in wood industry and SMEs within public and private sectors will get long-lasting improvement of working environment, adopt health/safety-focused approaches and promote sustainable training on safety and health signs and signal in wood industry.

Specialists at universities, managers, manufacturers and decision makers will promote the development and implementation of EU strategies, support SMEs in the implementation of the legislation, and promote health and safety culture at national and international level.

2. Project Approach

The project aims have been achieved through the development of contemporary training methodology based on learner-centred approach, modern training tools and differentiated approach to training. Most important, perhaps, is shifting the educational model from a teacher-centered approach to student-centered one. In these methods, students have to abandon the role of a passive listener sitting in a classroom or a lab, and they must actively participate in the learning process. The main goal of the project is to create training tools which can improve and ensure safety and health working environment. The project addresses this priority making it an achievable goal through establishing partnership between vocational colleges and universities on the one hand, and professionals and decision makers, on the other hand to share their expertise and plan their future work activities accordingly.

The needs for the specific training of targeted groups have been determined on the basis of Needs Survey, held in each partner country. For that reason, two different types of questionnaires were developed, with differentiated approach according to the target group: a more simple and common questionnaire with Yes and No answers was prepared for both vocational college students and university students, and a second more complicated one, with multiple-choice questions, was developed for the professionals. Questionnaires were prepared having in mind that the person surveyed should spend as less time as possible on filling them in. The questions were structured in such a way as to receive an honest answer for accurate results. The questionnaires were discussed and approved by the project partners as well as by representatives from vocational schools, universities and professionals.

Each partner presented data concerning the actual state in his country. On the basis of the received data, the team from the University of Forestry and the Scientific Technical Union of Forestry has summarized and concluded the obtained data.

The Quality Plan has been the key document in the management of total quality of the project. It seeks to establish the procedures and standards to be employed in the project and assigns responsibilities to ensure that these procedures and standards are fulfilled. The Quality Plan is effective throughout the overall duration of the project.

On the basis of the Quality Plan, internal and external evaluation of all project outcomes and results has been carried out.

Internal evaluation: each outcome/result was evaluated by the partners with regard to its quality. This was achieved through communication between the partners and at working meetings where discussions were held.

External evaluation: it was held at different national and international events, workshops, discussion forums where the project products were formally and informally evaluated by outside persons. The training materials were evaluated by the targeted group participants in the training workshops through feedback. **Steering Committees** were assigned in all partner countries to ensure efficient completion of all project activities.

To ensure efficient coordination of the dissemination activities of the partners, Valorisation Officers were assigned at the kick-off meeting by each partner who

regularly reported on the implementation of the dissemination activities. All dissemination activities and strategy adopted by the partnership and described in WP 6 – Dissemination and exploitation have been properly fulfilled and will continue after the completion of the project the purpose of which is to inform the wide audience about the project results and outcomes.

Lansawood project dissemination and exploitation strategy comprises three different ways of dissemination:

- **Dissemination for Awareness** – addressed to the target audience that does not require details of the project but the outcomes and products will be helpful for them to be aware of project activities and results.
- **Dissemination for Understanding** – the project target groups who will be directly targeted with the dissemination and benefit from the project, i.e. vocational college students, university students and professionals in Wood Industry;
- **Dissemination for action** – related to the adoption of project products by the end users/beneficiaries who are in a position to implement the project results. These are the managers from SMEs, decision makers, university lecturers, teachers from vocational education institutions and professionals from the respective field in each partner country.

Some of the most important dissemination activities held by the partner network are:

- project website: www.lansawood.eu with continually updated online information;
- Power point presentation of the project - available in each partner language;
- Contacting the local media and informing them about the project progress – establishing initial contacts with media, publications in specialized newspapers, magazines, journals, etc. in the field of Wood Industry;
- List of ministries, agencies and national associations in the field of Wood Industry aiming at establishing wide dissemination network;
- Presentation brochure available in each partner language;
- Presentation of the project results to Steering Committee members in each partner country. Three meetings were held in each country at different stages of the project development;
- Project presentation at different national and international seminars, conferences, workshops, held by each partner;
- Information about the project available at the Project and Product Portal for Leonardo da Vinci **ADAM**;
- Training workshops for the three different targeted groups held in each partner country. Testing of the developed project products was carried out and feedback from the workshop participants was obtained, serving as a basis for the preparation of the final version of the interactive multimedia DVD;
- Final Conference on the project held in Bulgaria where not only did vocational college students, university students, professionals from SMEs took part but also representatives from different institutions, Ministries, national agencies, decision makers, managers from SMEs in Wood Industry

3. Project Outcomes & Results

The project objectives have been successfully fulfilled through the development of modern training methodology and training tools including relevant and innovative **lifelong learning content**, the use of which will guarantee safer and healthier working environment.

The existing level of knowledge of the targeted groups was determined on the basis of **Needs Survey**, carried out in each partner country.

The produced training material is characterized by the following specifications:

- Cutting edge educational material with continuous updates and customization according to the respective targeted group;
- Clearly defined objectives with measurable results for individual self-monitoring and progress assessment;
- Teacher-student interaction is welcomed and encouraged, although students should be able to proceed at their own pace in a self-study environment;
- Dissemination of training material to widely dispersed and not easily accessible target groups within project-partner countries;
- Consistent training between countries and teachers, and across trainees of different age, educational background and culture;
- Permanent association and constant reminders of the hazards and accident prevention methods/means.

The project products have been developed in accordance with the accepted training methodology. The core product is an **interactive multimedia DVD for e-learning** in English, Bulgarian, Greek, Swedish and Slovak languages, including five theoretical training modules, covering key topics in Occupational Safety and Health in Wood Industry:

- European and National Legislation on Safety/Health Signs and Signals;
- Hazardous and Harmful Factors,
- Safety/Health Signs and Signboards,
- Safety/Health Signals,
- Personal Protective Equipment.

The multimedia also contains Case Studies on the developed theoretical training modules which are an essential part of the contemporary vocational training, serving as a basis for stimulating discussions, expressing of opinion and resolving real problems in everyday situations at workplace.

Electronic tests have been developed to aid learners revise their knowledge on the specific topics concerning occupational safety and health topics in Wood Industry. They have been prepared using modern software techniques in the form of interactive multiple-choice, short-answer, matching/ordering and gap-fill exercises on the material, included in the theoretical training modules.

The developed training material has been enriched with carefully selected safety and health videos, animations and pictures, providing learners with additional learning support.

All the materials of the project are also available in all partner languages as **printed handbooks**, tending to provide professionals with summarized information for use in everyday work.

The last stage of the project development was to provide learners with **training workshops** for the different target groups with differentiated approach to training: training for professionals aiming at expanding their knowledge in safety and health system of signs and signals, training for university students aiming at acquiring new skills and competences and initiating a change in their curriculum, training for vocational college students aiming at acquiring new skills and initiating a change in their curriculum. These training seminars, held in each partner country, were very useful for obtaining feedback from the participants, belonging to different target groups, on the developed training materials. Participants particularly appreciated the informal exchange of ideas and group discussions with the trainers and other attendants at the workshops. The discussions also generated interest in other current problems connected with Occupational Safety. The training workshops provided the attendants with an excellent opportunity to meet and exchange opinion and discuss different health and safety issues.

On the basis of the summarized feedback the final version of the interactive multimedia product was produced.

The developed training products are available to a wide range of professionals and students for transnational e-learning.

The professionals who have successfully completed the training would quickly and easily put into practice the knowledge and skills obtained during the training course.

The college and university students would benefit from the opportunity to acquire higher level of knowledge, develop new skills and apply them in their future jobs, being more competitive at the labour market.

Information about the project results and outcomes can be found on the project website www.lansawood.eu, ADAM database: <http://www.adam-europe.eu/adam/project/view.htm?prj=3746>, as well as on the respective institutional websites of the project partners:

- University of Forestry – www.ltu.bg;
- Scientific Technical Union of Forestry – www.nts1.org;
- Oikotechnics Institute – www.oikotechnics.org;
- Stora Segerstad och Varnamo Naturbruksgymnasium – www.lj.se/segerstadvarnamonaturbruk;
- National Forest Centre – www.nlcsk.org

4. Partnerships

The partnership includes the following partners: University of Forestry (Bulgaria), Scientific Technical Union of Forestry (Bulgaria), Oiko Technics Institute (Greece), Stora Segerstad och Värnamo Naturbruksgymnasium (Sweden), National Forest Centre (Slovakia).

The partnership of the project has been selected with regard to the nature of activities of each organization focusing on occupational safety and health issues. Each partner had established a contact network with vocational colleges, universities, professionals in wood industry and SMEs, managers and decision makers (Ministries of Education, Ministries of Labour and Social Policy, Ministries of Agriculture and Forestry, etc.) in its country as a result of many years of experience and participation in various national and international projects in the field of Education, Forestry and Wood Industry.

The project activities were divided and distributed among the partners depending on the types of organization in the consortium and each partner's expertise in previous international projects.

All partners have considerable professional experience in various types of projects in the field of Education, Forestry and Wood Industry, including number of projects. The partners' roles and tasks were divided and distributed among the network. Each partner planned the necessary human and financial resources to secure the successful completion of the project. The project structure was planned very carefully to ensure correspondence of the partner main responsibilities with the partner competencies. The assigned Quality manager was responsible for monitoring and efficient coordination of all project activities in order to assure optimum quality of the project results and outcomes. The project contractor had a special supervising function.

The University of Forestry (Bulgaria) established connections with the partners on the basis of previous professional collaboration on various international projects. The aim of the partners' network was to establish consortium of partners on the basis of their experience, which are located in European countries with different level of development in the system of safety and health working environment. The partnership ambition is to achieve **European coverage** of the project and at the same time transfer knowledge about the language of safety and health signs and signals from more developed to less developed European countries.

5. Plans for the Future

The project provides impetus to developing a shared European Domain of vocational training, in general, and will guarantee a sufficient knowledge in the field of Occupational Safety and Health, and training for the system of safety and health signs and signals in wood Industry, in particular.

The LANSAWOOD project aims to improve the European qualification system and the renewal of initiatives for vocational training in safety and health signs and signals in Wood Industry.

After accomplishing the planned e-learning training of targeted groups a proposal to the Ministry of Education along with the Ministry of Labour and Social Policy and Ministry of Agriculture and Forestry in each partner country has been made. The proposal is aimed at introducing the interactive training product based on case studies in the formal vocational schools and university education.

After the completion of the project, the project partners will upload information about the project results and outcomes on their respective institutional web sites for a long period of time. The information will be available to those interested in training for the language of safety and health signs and signals in Wood Industry worldwide.

The project results and outcomes are expected to be used in the vocational education. The developed e-learning training methodology can serve as an example for developing vocational training programmes for other fields of study and other target groups.

The project results will be of great interest to European organizations connected with Industrial Safety and assuring safe working environment which can make use of the developed training modules based on case studies and differentiated approach to training of targeted groups.

The developed training materials (easy of access, based on European and national standards, lifelong oriented) will be of great aid to the existing and future professionals in their European work mobility. The project results may also be of interest in inter-disciplinary projects involving managers in different enterprises, decision makers, professionals in the field of safety regulations.

The sustainability of the project is connected with:

- mainstreaming and integration of health and safety at work in European Vocational and Higher Education;
- developing awareness-raising campaign targeted particularly at SMEs;
- promoting the management of health and safety at work in enterprises from Wood Industry through the exchange of experience and good practices;
- developing a positive safe and healthy culture, where safe and healthy working should become a second nature to everyone.

6. Contribution to EU policies

The project is in accordance with the five-year strategy for Safety and Health launched by the European Commission, covering the period of 2007 – 2012 and aiming to reduce by 25% the total incidence rate of accidents at work per 100 000 workers in the EU. The European Community strategy aims at promoting health and safety at work in the European Union from 2007 to 2012. Health and safety at work is now one of the most important and most highly developed aspects of EU policy on employment and social affairs.

Thanks to the adoption and application in recent decades of a large body of Community laws, it has been possible to improve working conditions in the EU Member States and make considerable progress in reducing the incidence of work-related accidents and illnesses.

In order to achieve the Safety and Health Strategy goals, the following main instruments have been conducted within the frame of the project:

- guarantee the proper implementation of EU and national legislation;
- support SMEs in the implementation of the legislation in force and initiating training for the system of safety and health signs and signals;
- adapt the legal framework to changes in the workplace and simplify it, particularly in view of SMEs;
- promote the development and implementation of positive and safety culture among the employers and employees;
- encourage changes in the behaviour of workers and encourage their employers to adopt health-focused approaches;
- provide sufficient knowledge for the hazardous and harmful factors in Wood Industry as well as the evaluation of new potential risks;
- improve the tracking of progress;
- promote health and safety at national and international level.

The project corresponds to the Lisbon Education and Training Progress Indicator – creation of Open Learning Environment. The project outcomes and results enrich and open up the learning environment in vocational education institutions through involving active e-learning training methodology with learner-centred and differentiated approach to the targeted groups and participation, collaboration, autonomous and critical thinking of learners.

The potential of the workplace as a learning environment is manifold: as a component of alternating courses in formal learning; as an alternative for young people who choose to make an early transition to work; as an opportunity for all those in employment, and some who are unemployed, to develop their competences, career and further training in Occupational Safety and Health. The gains for employers and enterprises are also considerable, including enhanced productivity and innovation from developing positive safety culture, increased return on investment in training for both individuals and enterprises.

Professionals in Wood Industry and SMEs within public and private sectors will get long-lasting improvement of working environment, adopt health/safety-focused approaches and promote sustainable training to those overexposed to occupational risks (young workers, migrant workers, older workers, etc.) on safety and health signs and signal in Wood Industry.

Work plays a significant part in the lives of most Europeans. Understanding the conditions under which Europeans are working across the different EU countries is therefore central to achieving improved quality of work, greater productivity and ultimately increased employment. The good level of knowledge on safety and health signs and signals will secure the health, safety and welfare of people at work, protect them against workplace health and safety risks, develop and promote community awareness of occupational health and safety issues in Wood Industry.

