



Erasmus+



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**Multi-purpose center for adult
education in clean environment**

ECO-Center



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ADULT EDUCATION - FROM TRADITION TOWARDS FUTURE

Adult learning opportunities are essential to ensure economic and social progress as well as personal fulfilment of individuals. The EU Strategic Framework for Cooperation in Education & Training highlights the crucial contribution of adult education and training to competitiveness, employability and social inclusion. In this context the Strategic partnership project **"Multi-purpose center for adult education in clean environment – ECO-Center"** (Erasmus+ program) proposes approach for combating adult unemployment in Europe having currently threatening dimensions. Recent development of ecology sector created employment opportunities and increasing needs of education as well. The vast expansion of economic activity is the main reason for the environmental decline and imposes negative effect on the global ecological situation. In this perspective the objectives pursued by the project ECO-Center are to:

- incorporate principles of adult education in the planning and development of programs/courses that meet organizational and adult learners' needs;
- design and deliver adult learning experiences that address learners' needs through the integration of adult learning philosophy and principles into practice;
- promote education, monitor and evaluate program effectiveness and use the data for program improvement, technical assistance for organization of mobility process, capacity building and accountability;
- apply EQF and ECVET validation instruments to facilitate recognition of skills and competences adopted at national level via adult education;
- facilitate public understanding, information exchange, demonstration of professionalism and promotion the philosophy, goals and objectives of adult education.

These measures include also experimental and pilot activities to help target beneficiaries in their cognitive process and learning associated with distance education, computer and information management, and bibliographic information. These activities encourage end-users to develop and strengthen skills in the areas of technology, research, new curricula, and team-working. Pilot training sessions will be undertaken to obtain enough information to launch any fully-fledged regional or European efforts.

ECO -CENTER - AN EUROPEAN PROJECT FOR ADULTS TRAINING IN CLEAN ENVIRONMENT

ECO-CENTER project aims at creating a new type of strategic partnership for realization of EU policy through research in education, introduction of new training concepts and development of new flexible training program in the field of clean environment. The main audience of this program are teachers/trainers and other training facilitators. The program offers them appropriate skills and competences for creation of new job opportunities through analysis of their needs in different regions.

The project also targets creation of new links between science/technological centres and SMEs working on traditional basis to enhance the quality of environment and improve the safety of the production processes.

It offers new type of concept in adult education and training in the context of project's aims, which will increase the competitiveness in environmental sector on European and global market. Upgrading the qualification of people working in the field of eco-technologies gives them an opportunity for better promotion and integration in the new processes in this sector. This improves also the labor market mobility and the educational system of the partners' countries.



Environmental damage

Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable. Environmental impact or degradation is caused by the combination of an already very large and increasing human population, continually increasing economic growth, and the application of resource depleting and polluting technology.

Problem solving

The growing problems in environmental management needs more adequate human capacity that can be improved by training of environmental managers, decision makers and operators of ecosystems that may learn from each other's experience.

The successful approach involves development of sound institutions and strong cooperation to apply the best solutions that are to be shared among the international community of practitioners and agencies that provide capacity in the area.

The environment protection sector needs

- ◆ Best trained professionals and managers;
- ◆ Individuals with flexible qualifications and appropriate skills and competences;
- ◆ Mutual recognition of qualifications acquired abroad and at international level;
- ◆ Transparency among the various national qualifications systems and Vocational & Adult Education and Training programs.

The challenges and prospects

Challenges are to be addressed by increasing the chances of professionals to meet internationally agreed qualification standards in environment protection by supporting knowledge gathering, assessing best practices and formulating steps for qualifications upgrade and understanding.

New policies in qualifications recognition are still to be applied at national level, but they must be preceded by analysis of state-of-the-art and economic conditions. Moreover, institutions and national and private educational and labor organizations need tools to facilitate the process of qualifications recognition.

PROJECT PARTNERSHIP

Sofia University St. "Kliment Ohridski", Bulgaria (SU) is the first institution of higher education in Bulgaria. For more than a century Sofia University has been the national foremost centre for university education and research in fundamental, theoretical and applied areas. Today it is the largest university in the country with 102 degree programs offered by 16 faculties. The teaching staff includes a significant part of the best specialists in Bulgaria in all major areas of sciences and humanities. Research is an integral part of the teaching process. It is a prerequisite for keeping pace with the most recent developments in the respective areas for both the lecturers and university structures – laboratories, faculties, etc. International relations have a special place in the University's global strategy as they considerably stimulate research, and support and improve the quality of teaching. Sofia University has contracts with more than 80 universities of different countries, thus facilitating a wide variety of joint international projects and multilateral professional contacts with colleagues from all over the world. The University has held a leading position among universities in the country, with the highest rate of student and staff mobilities and the most significant contribution to the maintenance of European standards in higher education.

Research and Development Center "Biotech" Ltd., Bulgaria (R&D "Biotech") is founded in accordance with European strategic goal to increase the role of R&D in introducing new knowledge into education and technological innovations. It promotes research and development in the area of consumer and environmental friendly technologies, information and communication technologies by bringing together experts in that field from Bulgarian and European Universities, research organizations, industry and decision policy making institutions. R&D "Biotech" possesses expertise in the field of production, application and economic planning in the field of Green Biotechnology and especially Green Energy and Bioeconomics. The team of R&D "Biotech" involves experienced educators and trainers. The participants are members from all levels of education. They are experienced educators in textbook writing, quality assurance issues, curriculum development, new training techniques as well as provision of trainings in VET with adults and youth. Training is one of the main lines of the Center, aimed at both active adults and unemployed, in order to allow them to adapt to a constantly changing work environment within a society and a market increasingly competitive. R&D "Biotech" is targeting in adaptation of adults and young people to the transformations of educational, technological and physical environment through improvement of their communicational and social skills, exchange of experience and knowhow of good practices at national and international level. It also offers own staff expertise and competence in governing as contractor/coordinator/expert of multinational projects under different EU initiatives – TEMPUS, INCO-Copernicus, 5FP, NATO, Socrates/Erasmus, LdV I and LdV II programmes, LLP, ERASMUS+.

GREENFORCE Ltd., Cyprus represents a small and medium sized trading company, which field of activity encompasses green technologies/services market at national and international level. The company main mission is to support the development of positive business activities providing its customers with the very best in cutting-edge solutions, the most innovative technologies, expertise and information, with first rate coordination skills and global-support systems, while creating sustainable value. GREENFORCE Ltd. has built strong relationships with customers by providing cost-effective technically superior environmental-friendly goods and services, including management solutions. Its convinced commitment is to provide a safe environment for its employees, contractors and the general public in the communities where the company operates.



Regional development benefits from:

- ◆ Standardized user-centered VET learning paths;
- ◆ Qualifications descriptions in the field of ECO-Center to be introduced into the educational and industrial sectors in Bulgaria, Germany Turkey and Cyprus;
- ◆ Globally accessible ECO-Center e-portal;
- ◆ Tests and certificates offered to trainees from Bulgaria, Germany, Turkey and Cyprus.
- ◆ ECO-Center national workshops for presentation of project outcomes;
- ◆ International workshops with participation of broader audience;
- ◆ Cluster activity with similar initiative for further application of the ECO-Center model;
- ◆ Introduction of other EU initiatives, such as South-East Europe, Horizon 2020 Program, and others.

ECO CENTER IMPACT

Economic Sector: Environment protection

EU policy

EU development policy promotes an integrated framework for clean environment resources management, applying a range of widely tested approaches for environment protection services. The EU clean environment management policy has three priorities:

- ◆ Comprehensive access to environmental friendly & sustainable production;
- ◆ Establishing and strengthening organizations and infrastructure for the sustainable and equitable management of environmental resources;
- ◆ Coordinating fair, sustainable and appropriate use of environmental resources.

Financial loss

The importance of environmental sustainability is being recognized by mainstream business practices in many sectors. Challenges relating to resource depletion and the production of greenhouse gases are attracting increasing attention owing not least to regulatory, supply chain, reputational and consumer pressure. While there is evidence of some awareness and good environmental practice among small and medium-sized enterprises (SMEs), this segment of the business community remains notoriously difficult to influence.

The SOKO Institute GmbH., Germany is based in Bielefeld, Germany and founded in 1991 as a medium-sized Social Research Institute mostly for empirical primary research on behalf of government departments, universities and other institutions. It operates at a high scientific level and performs quantitative and qualitative investigations by all the rules of social research and evaluates the data collected. Priorities are the labor market and social policy, education policy and the sector of renewable energies. Often the project work of the SOKO Institute involves evaluation studies of measures, e.g. on behalf of the Institute for Ecological Economy Research, the Federal Ministry for the Environment and Nuclear Safety and the Federal Centre for Health Education. The development and testing of curricula for teachers and trainers are also in the focus of the SOKO Institute.

Pamukkale University, Turkey (PAU) was founded in 1992 as a national university. Currently it has a leading position among universities in the country, with one of the highest rate of student and staff mobilities. PAU ranked in the top three in Turkey and ranked in the top hundred in Europe for Erasmus Staff Mobilities. It was awarded both ECTS and DS (Diploma Supplement) Labels by European Commission. PAU has 24 R&D Centers. The University participates in many local, national and international projects. The Strategic Plan of 2014-18 states the objective of advancing social development and the sensitivity on environment which is directly related to ECO-Center project. Researchers and academicians from Department of Biology, Faculty of Engineering, Faculty of Education, and Plant Genetics and Agricultural Research and Application Center (PAU BIYOM) are involved in ECO-Center project. The Biology department has been very active in many international, national and local projects. Engineering Faculty is one of the leading faculties at Pamukkale University especially in research activities. The Civil and Environmental Engineering Departments have a strong interest in environmental issues and technologies. The mission of the Faculty of Education is to develop highly qualified teachers who will contribute to the future of the humanity by making use of knowledge in the field of science, technology and arts in the light of universal values. PAU BIYOM main mission is to develop green biotech tools and it takes part in collaborative research and development projects with national and international universities. It also provides training opportunities to students and scientists in various areas of plant biotechnology and molecular biology.



ECO CENTER - QUALITY MEETS NEEDS

The ECO-Center quality management

A set of quality indicators is applied to measure the progress in different phases. The quality management tools monitor the integrity, flexibility and efficiency of the project components, using procedures for control and assessment of the ECO-Center outcomes.

Allocation of ECVET credit points depends on the national requirements.

Formal learning contexts in different countries and situations are compared to determine learning time for competence acquisition in non-formal/informal manner.

Process quality indicators should observe:

- ◆ Relevance between content and objectives;
- ◆ Criteria for assessment and self-assessment of the work;
- ◆ Appraising the adequacy of the project communication and plans for operational phases;
- ◆ Evaluation of the project outcomes against the EU requirements.

The benefits from ECO-Center measures

Target groups benefit from:

- ◆ Intensive support for their motivation for learning;
- ◆ Implementation of national good practices for qualification assessment;
- ◆ ECVET based system for sectoral qualifications description and multilingual e-portal;
- ◆ e-scheme for ECO-Center Knowledge & skills passport and instructions on practicalities;
- ◆ ECO-Center training program based on online and offline learning methods;
- ◆ Set of Learning Outcomes with training units assembled in Training Paths;

Target sectors benefit from:

- ◆ Sectoral network and organization of 5 workshops;
- ◆ Validation of ECO-Center products and organization of 5 testing events at sectoral level.
- ◆ Embedding of project results in related sectors;
- ◆ Multilingual dissemination materials: booklets, leaflets; posters; website information, and others.

STRATEGIC MULTIPURPOSE CENTER

ECO-Center is created within the framework of the ERASMUS+ Programme; Key Action 2: Cooperation for Innovation and Exchange of Good Practices; Strategic Partnerships in the Field of Education, Training and Youth, Project № 2014-1-BG01-KA204-001645.

ECO-Center is a PILOT EDUCATIONAL CENTER for creation and development of strategies and actions designed to improve competitiveness of the target groups.

ECO-Center unifies Universities, research centers, enterprises, social partners building a bridge between formal and non-formal educational systems.

ECO-Center aims at bringing expelled staff and employees back to work in a future oriented industrial sector focusing on SMEs as a driving force in national economy.

ECO-Center functions as a think-tank for adult education that performs research and training on topics such as clean environment, eco-technologies and culture.

ECO-Center operates through creation of innovative program for training in the field of Clean Environment.

Since adult training professionals are recognized as an important source of knowledge, the several basic requirements for changing the role of trainers are included in the Erasmus+ program: improvement of subject competence; establishment of links between theory and practice; and use of learner-centered approach. The ECO-Center target beneficiaries: teachers, trainers, learning facilitators, guidance professionals, school/institution managers and political decision makers are the selected subjects of fit these requirements.

STRUCTURE OF ECO CENTER

ECO-center is structured in four departments, each responsible for the achievement of project's specific objectives.



EUROPASS

EUROPASS is an EU initiative that aims at increasing transparency of qualifications and mobility of citizens across Europe. It is a lifelong learning portfolio of documents describing all learning results, qualifications, work achievements, skills and competencies, acquired over time, along with appropriate certificates.

The portfolio consists of the following five documents that make skills and qualifications easily understood:

- ◆ **Curriculum Vitae** is freely accessible CV format that helps the EU citizens to present their skills and qualifications in the best possible way.
- ◆ **European skills passport** gives a comprehensive picture of skills and qualifications
 - ⇒ **Language Passport** is a self-assessment tool for language skills and qualifications.
 - ⇒ **EUROPASS Mobility certificate** records the knowledge and skills acquired in European countries.
 - ⇒ **Certificate Supplement** describes the knowledge and skills acquired by holders of vocational education and training certificates.
 - ⇒ **Diploma Supplement** describes the knowledge and skills acquired by holders of higher education degrees.

ECO-Center steps for qualifications recognition

- ◆ The ECO-Center team establishes the management structure, distributes activities among partners and supporting organizations, and creates thematic and grade units and course subjects.
- ◆ The ECVET based system for sectoral qualification description is elaborated through creation of a training program in clean environment sector, comprising 12 courses which knowledge part is organized in Training Pathways (TPs) designed to match EQF levels 5, 6 and 7, and weighed through ECVET.
- ◆ The project participants implement pilot procedures for assessment and transfer of the learning outcomes in formal and non-formal education.
- ◆ ECO-Center Knowledge & skills passport will be provided for gathering of documents certifying completed training and acquired competence/qualification in Environment protection sector.

MANAGEMENT DEPARTMENT (MD)

Goals and activities

The Management Department (MD) governs the overall project activities. It arranges project timetable/operational phases, distributes the specific tasks among the partners, performs surveys and defines the program entrants. Its main activities are also focused on making review of the existing results relevant to the project objectives, introducing the new concepts for adult training in clean environment, preparing the interim and final project reports, as well as it is responsible for the creation of project canvassing network.

The MD establishes Local Enforcement Units (LEUs), which are placed at each partner's organization and whose tasks are in the range of: processing of ECO-Center, arrangement of project testing phase, appointment of partner's dissemination groups and stakeholders, preparation of copyright agreement.

Deliverables

The MD is responsible for the development of the deliverable **“ECO-CENTER NEEDS ANALYSIS”**

This deliverable foresees performance of desk research in each partner country conducted to gather up-to-date information and provide detailed analysis of the state of art in respect to the:

- ◆ Current status in clean environment sector with emphasis on shortcomings / risks;
- ◆ The potential of this sector in implementation of national policies for educating teachers (adults), trainers, other learning providers; employees job seekers; workers at risk of losing their jobs; individuals affected by unemployment, restructuring and career transitions.
- ◆ Principles of adult education in the planning and development of programs/courses
- ◆ Education in ecology: structure, operation and contribution to career development;
- ◆ Needs for up- and re-skilling of adults in ecology;
- ◆ Bridge building between EQF and ECVET validation instruments and recognition of skills and competences adopted via adult education.

The conducted analysis will provide an overview on partners' national ecology policies, the employment prospects and programs, the relevant training methods and curricula, and the compliance of national requirements with EU education standards.

For the successful accomplishment of the deliverable MD will provide:

Tool:

- ◆ Questionnaire for gathering information and feedback at partner level about the current status in the clean environment sector and assessment the learners' needs.
- ◆ Result:
- ◆ Analysis-based report regarding partners' national peculiarities in respect to ecology policies and training opportunities.

Implementation



ECO-CENTER QUALIFICATIONS DESCRIPTION

European and National Qualifications Frameworks

European Qualifications Framework (EQF) provides a reference framework, which assists in comparison between national qualifications systems, frameworks and their levels.

The EQF framework translates qualifications by making them more understandable across different countries and systems in Europe. EQF promotes lifelong and life-wide learning and the mobility of European citizens whether for studying or working abroad.

The EQF encourages countries to relate their national qualifications systems to the EQF so that all new qualifications issued from 2012 on carry a reference to an appropriate EQF level.

European Credit System for Vocational Education and Training (ECVET)

The European Credit System for Vocational Education and Training (ECVET) aims to give people control over their individual learning experience and makes it more attractive to move between different countries and jobs. It facilitates the validation, recognition and accumulation of work-related skills and knowledge acquired during a stay in another country and experience in different situations. ECVET works for better compatibility between different VET systems across Europe and the qualifications they offer.

ECVET creates a technical framework to describe qualifications in terms of units of learning outcomes that are subjected to assessment, transfer, accumulation and recognition procedures. Each unit is associated with a certain number of ECVET points developed on common standards: 60 ECVET points are allocated to the learning outcomes for a year of full-time VET.

Individual's learning outcomes are assessed and validated in order to transfer credits from one qualifications system to another. The system allows development of common references for VET qualifications and is fully compatible with the European Credit Transfer System (ECTS).

TRAINING DEPARTMENT (TD)

Goals and activities

The Training Department (TD) is responsible for the achievement of the specific project aims in order to supply the learning/training program of ECO-Center project. It creates an innovative program for adult training providers in clean environment and offers learning outcomes in respect to the project objectives and end-users' needs. This structure is responsible for the issue of program modules in on/offline version based on the preliminary survey and definition of program entrants.

TD introduces teaching/training material to target groups and obtains public's responses. It realizes investigation and analysis of training needs. It determines the trainees' profile and training course objectives.

TD is also responsible for the preparation and issue of project's training materials: subject- and qualification-oriented, arranged in accordance with the EQF/NQF and ECVET requirements.

Outcomes

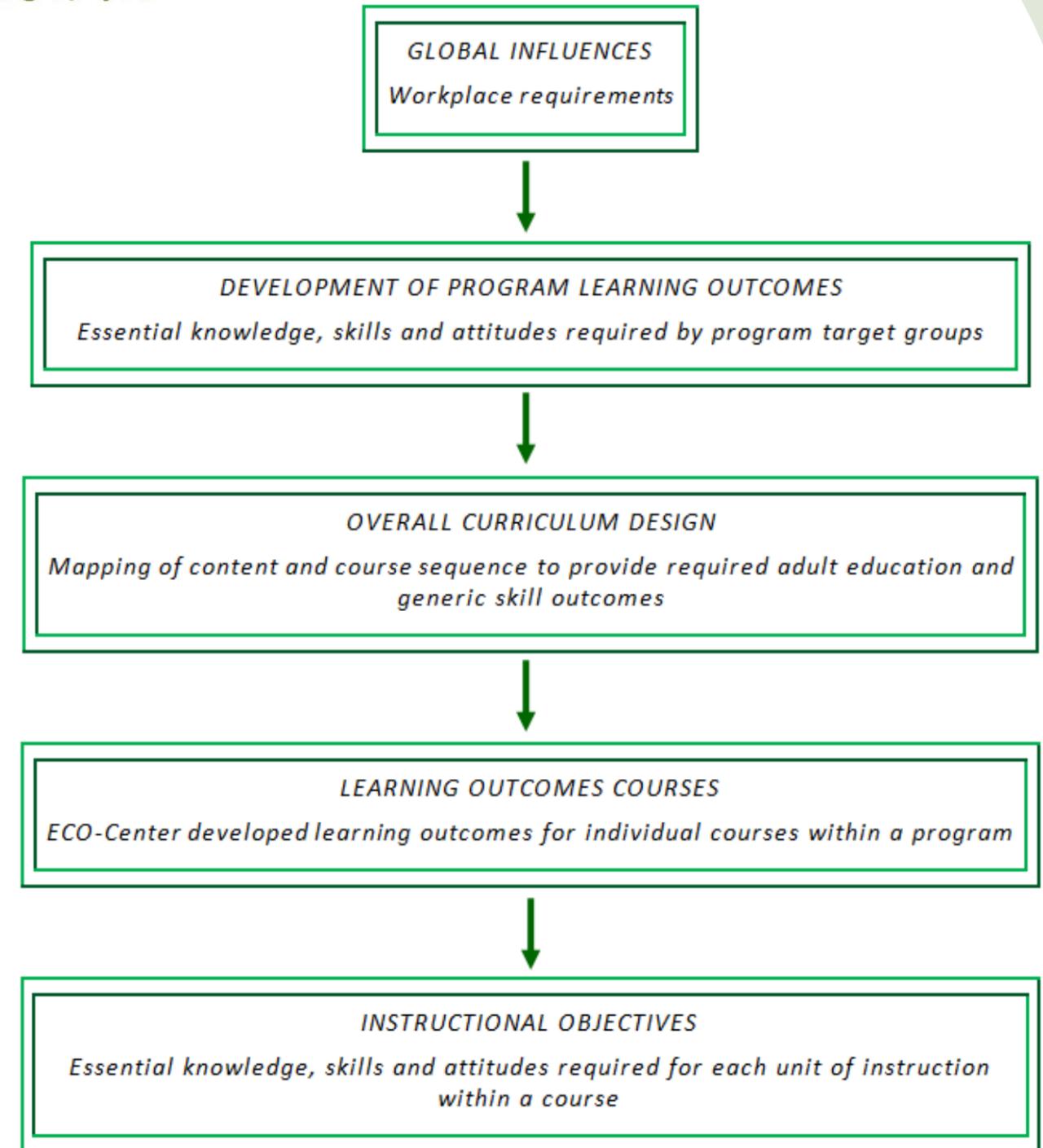
The TD is responsible for the development of the deliverable **"ECO-Center web site"**.

This deliverable comprises design, creation and operation of e-based platform for project implementation. The web site will operate as dual-purpose device with the following main functions:

- ◆ General information resource;
- ◆ Flexible e-medium offering training for up- and re-skilling of adult learning providers in clean environment;
- ◆ Knowledge data base, providing relevant information in the project subject area;
- ◆ Experience exchange platform inside/outside project consortium along the project and after its final;
- ◆ Dissemination instrument.

The TD is responsible as well for the development of the deliverable **"ECO-Center scheme for improving the accessibility of learning opportunities for adults"**.

This deliverable foresees establishment and functioning of a scheme for organization and operation of education process in clean environment based on improved accessibility. The clean environment topic is chosen as specific domain for education activities since during the last decade vast environmental decline is observed and corresponding negative effect on the global ecological situation is imposed. The maintenance of clean environment is a prerequisite for sustainable economic development and human beings welfare, thus the education in this field, especially for those engaged themselves with education is of primary importance.



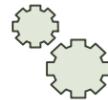
Overview of Learning Outcomes structure of ECO-Center model

The proposed scheme includes 3-dimensional structure with key elements as follows:



1. *Training panel comprising:*

- ◆ establishment of learning outcomes based training courses in clean environment with specific content;
- ◆ selection of appropriate learning tools: on/offline based learning material including (self)assessment elements, and structural arrangement of optimal learning options on demand to meet adult learning providers' needs;
- ◆ introduction of learning outcomes for qualification evaluation and assessment implementing instruments such as EUROPASS, EQF and EVCET;
- ◆ structuring of learning outcomes key elements: knowledge, skills and competence;
- ◆ assembly of training paths designed to fit the variety of education requirements of the project target groups;
- ◆ building of information data base on project main topics.



2. *Carrier paths panel including:*

Competence catalogues in clean environment: the catalogues will comprise set of competences description for adult training providers in the project field. The competences will be described in accordance with EQF reference levels and main descriptors (knowledge, skills and competence). They will outline the general as well specific cognitive and technical abilities adult trainees can re-build and re-skilled through the various types of courses offered in the training panel. The description profiles will match the national/EU professional/occupational requirements stipulated in ISCO.

Knowledge & skills passport constituting set of exemplary documents to form trainee personal professional portfolio. The documents include EUROPASS package and other relevant internationally recognized documents such as records of professional activities, of self-directed learning activities, of learning activities outside work and in house, certificates/evidence of special training, records of publications. Here, instruction documents equipped with templates and video examples, suitable for job application and carrier promotion will be also included.

References of successful environmental projects. This sub-panel will include examples of successfully granted or already implemented research / educational / business projects focused on environmental issues. Brief summary, key participants, lessons learned and good practices implemented will be the key points tackled in the information presented.



THE ECO-CENTER ADULT EDUCATION TARGETS

Target groups

The ECO-Center qualification recognition model concerns teachers, trainers, learning facilitators, guidance professionals, school/institution managers and political decision makers are the selected subjects of fit the requirements.

Economic sectors

Chemical and eco-engineering, environmental protection, biotechnology, healthcare, food industry need professionals with relevant and updated qualifications approved following the Eco Center qualification pathways.

Institutional cooperation

The Eco Center partnership between various institutions and national authorities contributes to the process of regulation, transparency and recognition of qualifications at national and European level.



3. Clean environment data base.

This is a meta-base of web-sources in the project field structured in categories to fit:

- ◆ the main topics tackled in the developed training courses: environmental awareness; clean water & energy; bioremediation; environmental management; environmental ethics, environmental legislation, sustainable growth, etc.;
- ◆ up-to-date instructions, guidance and legal framework information about e-education & training of adults in clean environment.

For the successful accomplishment of the deliverable TD will provide:

Tools:

- ◆ Inquiry form regarding e-platform design, organization and functioning;
- ◆ Assignment for the web-site development;
- ◆ Technical instructions for training content preparation;
- ◆ Multilingual evaluation materials and tools designed for measuring trainees' progress in curriculum (knowledge content) learning process: multiple choice questions; true/false questions; matching situations, etc.

Results:

- ◆ Project e-platform with dual functionality: i) publishing information about the project, assigned to the widest possible audience and ii) assuring the flexible scheme for education that provides learning opportunities for up- and re-skilling of project target groups;
- ◆ Multilingual training content in the clean environmental sector organized in LOs and assessed by ECVET;
- ◆ Records describing the professional qualification of specialist, working in the project area, based on KSC concept and directed for EQF 5/6/7;
- ◆ ECO-Center Knowledge & skills passport proving acquisition of certain knowledge, skills, and attitudes of the individual.



The ECO-Center project philosophy is in compliance with the European policies for **investment in education** and innovation management for successful **transition to knowledge-based economy** and society.

The investment in education is a national priority for all European governments that commit to ensure conditions for VET system operation where the European reference levels and quality practices in training have priority.

The didactic approach

Learning outcomes are organized in units according to the qualifications needed in a particular area of activity.

Materials need to be rearranged to accommodate the changing role of educators from *teachers* to *facilitators of learning*. Thus, the structure of the learning material needs new models of units' identification.

The ECO-Center methodology is based on the definition of the content of a *formal* unit defined as a subject in the study curriculum. In the Learning Outcomes scheme, the unit represents a number of competences required at completion of a study course.

In the context of an output-centered course description, a newly introduced unit has to cover knowledge and skills that are part of the *daily work-life*. These practical competences are incorporated into the Learning Outcome scheme.

The training process

The training process is based on the need of up-to-date education in environment protection sector and covers innovative content. It is organized in units functioning through an e-platform. The process follows special training and qualifications description model published in 5 languages. The training supports the development of national and sectoral qualifications systems, using tools such as EUROPASS, ECVET and EQF.

The testing and feedback

The testing relies on cooperation work with representatives of target groups. It organizes approbation of the training model. The testing monitors the performance of training events and creates a set of documents regarding the certification procedure. It reviews feedback for project products applicability and relevance and carries out final tuning of the outcomes.

New green job opportunities

New green job opportunities emerge due to the EU recognition of qualifications acquired by the trainees in environmental protection, especially in relation to operation, management and economics. They are opened to nationals who embark on reintegration into the national economies after studying and working abroad. These job opportunities appear as a result of the cross-border mobility of trainers and employers. Due to the application of ECO-Center model offering scheme for transparency and better understanding of trainees' qualifications they can be realized in the partner countries.

Implementation

- ◆ Delivery of information about the current state of art in clean environment sector in each project partner country;
- ◆ Setting up the technical prerequisite for establishment and operation of ECO-Center training scheme for improving the accessibility of learning opportunities for adults;
- ◆ Provision of on-line data about project outputs applicability and acceptance;
- ◆ On-line assurance of project outputs dissemination and use;
- ◆ Promoting the innovative education based on the EQF/NQF principles for adult learning providers in clean environment and rising opportunities of green jobs employment for adults;
- ◆ Assuring ECO-Center project sustainability and longstanding impact.



For the successful accomplishment of the deliverables DD will provide:

Tools:

- ◆ Information pieces that promote awareness and attract interest in ECO-Center project: publications in specialized magazines, technical journals, and scientific bulletins; dedicated radio broadcasts, printed promotion materials (e.g. posters, leaflets, brochures, fliers, placards, etc.);
- ◆ Questionnaires, inquiries, reply cards;
- ◆ Project face book page;
- ◆ e-Messages;
- ◆ On-site meetings;
- ◆ Quantitative study tools: individual inquiries, surveys, observations;
- ◆ Qualitative study tools: definition of standards and indicators based on project goal and objectives;
- ◆ Documentary checks: project files, reports, other relevant documentation reflecting project progress.

Results:

- ◆ ECO-Center dissemination strategy presenting a detailed and comprehensive plan, describing targets, tools and outcomes to be influenced by project dissemination;
- ◆ Synthesis evaluation report of ECO-Center project sustainability and impact.

Implementation

Performance of ECO-Center dissemination workshops dedicated to the widespread of project mid-term and final achievements to target groups and wide audience, thus raising the awareness of political decision makers and education responsible authorities on the major problems of education in clean environment tackled by the project. The following workshops performance is envisaged during the project lifetime:

- ◆ The Universities (Sofia University and Pamukkale University) will focused their announcement campaign mainly on academic level and to national authorities engaged with adult education;
- ◆ The R&D Center "Biotech" Ltd. and the Research Institute SOKO GmbH. will give emphasis on participants from research centers and scientific institutes, on individuals affected by unemployment, restructuring and career transitions;
- ◆ The SME GREENFORCE Ltd. will invite participants from the business, managerial staff as well as potential job seekers and workers at risk of losing their jobs.

Organization and performance of ECO-Center Webinar to promote all project outputs and achievements. The program and the list of presentation topics will be selected and approved by project MD and announced in advance on the webinar virtual location site (applicant organization). The official language of the event is English and it is foreseen for the last trimester of project duration and thematically will be devoted to project objectives realization and intellectual outputs creation.

Creation of a framework for further developments and research in the area of environmental education for adults that can be used by the European institutions and by national establishments for their future activities.

QUALITY MANAGEMENT DEPARTMENT (QMD)

Goals and activities

Quality Management Department of ECO-Center establishes the system of procedures and standards for project development. It lays down set of actions for quality control, monitoring and evaluation and defines the rules and responsibilities that ensure their operation. The QMD is responsible for the arrangement of quality and compliance checking during project outputs development and evaluation. It organizes the project evaluation, elaborates criteria and tools for transparency of the project work, including the creation of internal and external assessment units. The QMD plans, performs and controls the testing process at the partners' consortium and supporting organizations.

Outcomes

The QMD is responsible for the development of the deliverable **“ECO-Center concept for testing and sharing feedback results”**.

This deliverable outlines the concept for organization and carrying out the evaluation, appraisal, and verification of project results and their sharing among events participants. It presents the procedure for conducting the events in terms of technical preparation; elaboration of products' evaluation tools for assessment of the training panels mode of operation and capacity; conducting evaluation and sharing events of various formats: on-line (web mediated); off-line (CD-ROM with user manual and/or tutor assisted); traditional - printed version, etc. The principles of organization of the testing process valid for the entire partnership, encompassing all project target groups, and operating on voluntary principle, are also presented. The concept specifies as well the personal paths in respect to learning outcomes, used to test the content and training methodology, and to appraise the scheme applicability. Special emphasis is given to the process of gathering, analyzing and sharing the test-trainees feedback, and the working out of testing outcome statements (country specific).

For the successful accomplishment of the deliverable QMD will provide:

Tools:

- ◆ Issue of specific templates for organization and performance of internal assessment of project activities and outputs: instructions for organization and performance of testing and sharing events.
- ◆ Issue of specific templates for organization and performance of external evaluation of project activities and outputs.

Result:

- ◆ ECO-Center analysis report giving independent view on target users/stakeholders evaluation and understanding about the project achievements and perception.



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The didactic approach

Learning outcomes are organized in units according to the qualifications needed in a particular area of activity.

Materials need to be rearranged to accommodate the changing role of educators from *teachers* to *facilitators of learning*. Thus, the structure of the learning material needs new models of units' identification.

The ECO-Center methodology is based on the definition of the content of a *formal* unit defined as a subject in the study curriculum. In the Learning Outcomes scheme, the unit represents a number of competences required at completion of a study course.

In the context of an output-centered course description, a newly introduced unit has to cover knowledge and skills that are part of the *daily work-life*. These practical competences are incorporated into the Learning Outcome scheme.

The training process

The training process is based on the need of up-to-date education in environment protection sector and covers innovative content. It is organized in units functioning through an e-platform. The process follows special training and qualifications description model published in 5 languages. The training supports the development of national and sectoral qualifications systems, using tools such as EUROPASS, ECVET and EQF.

The testing and feedback

The testing relies on cooperation work with representatives of target groups. It organizes approbation of the training model. The testing monitors the performance of training events and creates a set of documents regarding the certification procedure. It reviews feedback for project products applicability and relevance and carries out final tuning of the outcomes.

New green job opportunities

New green job opportunities emerge due to the EU recognition of qualifications acquired by the trainees in environmental protection, especially in relation to operation, management and economics. They are opened to nationals who embark on reintegration into the national economies after studying and working abroad. These job opportunities appear as a result of the cross-border mobility of trainers and employers. Due to the application of ECO-Center model offering scheme for transparency and better understanding of trainees' qualifications they can be realized in the partner countries.

Implementation

Performance of ECO-Center evaluation and sharing events for:

- ◆ evaluation/validation of the training courses knowledge content;
- ◆ approbation the operation capacity of the ECO-education process scheme offered by the project.

The events will take place at each partner institution with preselected participants and will be conducted with specific program. The Local Enforcement Units will implement into practice the ECO-Center concept for testing, appraisal, and verification. The following events are envisaged:

- ◆ In Bulgaria Sofia University and R&D Center “Biointech” will organize the evaluation of the academic type of courses;
- ◆ In Cyprus GREENFORCE Ltd. will contribute to the assessment and evaluation of the applicability of work-oriented training courses;
- ◆ In Germany SOKO Institute GmbH. will take care for the enrichment courses evaluation;
- ◆ In Turkey Pamukkale University will organize evaluation of the academic types of courses.

DISSEMINATION DEPARTMENT (DD)

Goals and activities

Dissemination Department (DD) arranges dissemination measures during project and post-project life. It is responsible for the establishment of operational relationships among different stakeholders, for the issue of Dissemination & Use strategic plan and for the organization and performance of Dissemination & Use actions. Its main activities are focused on arising public understanding and promoting the ecology practical use. The department is responsible for the issue of the project dissemination materials and their upgrading during the project life. It is also involved in active diffusion of ECO-Center project objectives and results among different institutions.



Outcomes

The DD is responsible for the development of the deliverable **“ECO-Center dissemination and use strategy: prospects for sustainability”**.

This deliverable comprises working out of project dissemination and use strategy, its objectives and measures planned for their achievement. It points out the consortium philosophy to consider dissemination as an important prerequisite for successful project realization; specifies the core concept for operation of dissemination at all project stages: from application to post-project life, and describes the:

- ◆ Targets (main stakeholders) by types & categories to be addressed by dissemination;
- ◆ Tools and means for reaching out the stakeholders: information flow in terms of directions and occasions, and range of topics to be covered;
- ◆ Time frames: organization of dissemination process - distribution of dissemination activities throughout the project duration and upon its expiration;
- ◆ Outcomes planned for its realization: types and quantity of the dissemination materials to be elaborated and distributed; dissemination events to be organized, their formats and procedures for conducting.

The principles of organization of the dissemination process applicable for all partners, encompassing all project target groups, and functioning on voluntary principle, are also described. Special emphasis is given to the process of gathering, analyzing and summarizing the feedback information and the working out of dissemination outcome statements (country specific).

The DD is responsible as well for the development of the deliverable **Booklet "ECO-Center achievements and prospects: towards sustainability"**.

This deliverable comprises assessment of project achievements, review of its ups and downs compared to the work plan stipulated; and summary of the lessons learned. Precisely, the following issues are concerned:

- ◆ Assessment of the ecology policies, employment prospects and programs with relevant training methods and curricula, compliance to EU education standards;
- ◆ Performance of documents search and analysis and their recurrent report in respect to project activities and legal framework for strengthening adult education in the project area;
- ◆ Specification the level and scope of participation of the different project target stakeholders and wide public;
- ◆ Establishment of interconnections between project intellectual outputs, outcomes and effectiveness;
- ◆ Development of recommendations for further activities based on the evaluated results and drawn conclusions to ensure project achievements sustainability.