



DELIVERABLE

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Summary

The aim of this document is to draw together data from work package 4 activities as follows:

- Information gathered about the two phases of implementation activities (on experimentation of Good Practices)
- Information about other events organized during the implementation
- The results from the activities organized during the validation phase.

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Introduction

1.1 Scope

This deliverable presents a detailed summary of all activities organized during the Implementation WP.

In general, the main objectives that characterize the implementation scheme of the GreenNET project are the following:

1. ***To implement a large number of enquiry-based training activities that will introduce the use of enquiry methods in environmental education classes and professional development schemes.*** During the implementation process (2 series of implementation activities) the participating teachers and educators were given access to a large number of free and open educational activities connected with the environmental education of the participating countries' curricula, with proven educational efficiency that are overcoming the limitations of the classroom.
2. ***To further support the adoption of enquiry-based methods in environmental education, by demonstrating ways to reduce the various constraints and hesitation.*** The GreenNET project (through a series of validation activities and events) deployed a series of methods of effectively involving teachers in the enquiry instruction with the use of technology.

1.2 Audience

This report is addressed to all interested stakeholders.

1.3 Structure

Chapter 2: provides an overview of the two phases of implementation/experimentation.

Chapter 3: provides a short description of the different types of other activities organized in parallel with the experimentation.

Chapter 4: focuses on the validation activities.

Chapter 5: provides conclusions.

2 Overview of the two phases of implementation

In Section 2 we present the implementation activities organized per country by giving information on:

- Partner involved
- Number of participants
- Type of participants
- Best case related
- Short description of activity
- Other useful information

The aim of these events was to implement a large number of enquiry-based training activities that will introduce the use of enquiry methods in environmental education classes and professional development schemes.

2.1 Greece

	Partner involved	Number of participants	Type of participants	Best case related	Short description	Lessons learnt
1	AUA, EA	36	Teachers of primary and secondary education	<p>“A small exemplary hydroponic school garden”</p> <p>and</p> <p>“My school garden”</p>	<p>Practical training activity. The participants had the opportunity to take part in interactive activities and learn in practice how to sow to transplant and to take care of their school garden in collaboration with their students.</p>	<p>Importance of connection of theoretical activities with practical ones.</p> <p>Added value from the collaboration with associated partner “Organization Earth”</p>
2	AUA, EA	35	Teachers in second chance schools	<p>“A small exemplary hydroponic school garden”</p> <p>and</p> <p>“My school garden”</p> <p>and</p> <p>Experimental educational lessons on the testing of the germination rate of a range of vegetable seeds</p>	<p>The participants were trained theoretically, but also practically regarding green topics that can be easily adapted to their school’s curriculum. Initially, the participants learned how to improve the soil fertility in their school’s gardens including good agricultural practices, as well as understand basic concepts regarding the soil. Another green topic that the participants were trained was how to create their own compost (from theory to action).</p>	<p>Collaboration with an Associated Partner “North Environmental Education Department”.</p> <p>Importance of connection of theory with practice</p>



3	AUA	15	Teachers of secondary education	Enhancement of biodiversity in school grounds	Main objective was to guide teachers of Secondary Education of Ioannina to the ecosystem of Lake Pamvotis through visit to the Information Center of Lake Pamvotis and informing them about the environmental activities implemented at all levels of education.	<p>Collaboration with an Associated Partner (MAPLI).</p> <p>Connection with community's' traditional activities</p> <p>Support and motivate for volunteer work</p>
4	AUA, EA	30	Teachers of primary and secondary education, University students	"My school garden"	Training the participants in the use of the GreeNET 'school garden' best practice as a means to support a number of school modules. The first part regarded the practical issues of creating a school garden: the participants learned how to prepare the soil for their vegetables, to choose the most suitable plants and vegetables for each season, and to care for their cultivation and other tips. Also, the participants discussed the applicability of this program in different educational levels and the connection with different modules, such as history, math, science, biology and project-related modules. In the second part, the participants were guided to retrieve information, tested teaching ideas and ready-to-use educational scenarios on the school gardens from the specially-made digital repository.	<p>Importance of connection with specific school lessons</p> <p>Importance of customization of a best case based on school specific situation and needs</p>
5.	AUA	10	Teachers of primary education, University	"The importance of a school garden"	Event with collaboration with the Faculty Primary Education of University of Ioannina	Importance of connection and interaction with the



			students, Researchers			research sector
6.	AUA	15	Teachers, University teachers, Researchers	“The importance of a school garden”	Event with collaboration with the technological University of Arta	Importance of connection and interaction with the research sector

2.2 Austria

	Partner involved	Number of participants	Type of participants	Best case related	Short description	Lessons learnt
1	BMBF	39	Teachers, Educational consultants, Ministry, Academia, ICT sector	RI092+, Energy tutors, Plastic bugs -no thanks!, ConsuManiac, Walking works!	Within this workshop that focused on Austrian GreenNET best practices in environmental education and the use of ICT tools, the first session introduced the aims and the milestones of the GreenNET project and invited teachers in a hands-on session to go through the Austrian best practice examples on the GreenNET inventory and in the second session to discuss the activities of 3 selected best practices in small groups of five people.	The idea and the general aims of the GreenNET project were well taken up and considered to be quite useful for teachers. It is useful to combine experiences for the application of several relevant cases
2	BMBF	27	Teachers, Educational associations, Artists, Educational	RI092+, Energy tutors, Plastic bugs -no thanks!, ConsuManiac, Walking works!	The 27 participants of this workshop were invited to discuss on the presented topics and materials. The idea and the general aims of then GreenNET project were well taken up and considered to be very useful for teachers. Some of	Teachers need support and motivation to use social networking tools (like ODS communities) Collaboration with an Associated



			consultants, Academia		the participants know the educational material provided by the <i>Associated Partner FORUM UMWELTBILDUNG</i> and they seemed to be very inspired by them. The idea of integrating BEST PRACTICES to an international educational metaportal (ODS) was supported	Partner.
3	BMBF	17	Teachers, Educational consultants, Environmental education experts	RIO92+, Energy tutors, Plastic bugs -no thanks!, ConsuManiac, Walking works!	The 17 participants of this workshop were invited to discuss on the best practice examples of environmental education and the relative material. The idea and the general aims of the GreenNET project were well taken up and considered to be very useful for teachers. Some of the examined best practice examples were seriously discussed with regard to the practical relevance of such activities as well as the benefits and the burdens of project-based learning activities.	Need for practical reference with school activities
4	BMBF	8	Teachers, Educational consultants, Teachers trainers	RIO92+, Energy tutors, Plastic bugs -no thanks!, ConsuManiac, Walking works!	The 8 participants of this working group were invited to discuss on the presented topics and materials. The idea and the general aims of then GreenNET project were well taken up and considered to be very useful for teachers. Especially some eduactional material proided by the Austrian Associated Partners <i>Forum Umweltbildung</i> and <i>die umweltberatung</i> were very well received by the participants of this implemenation activity. The workshop ended up with an engaged discussion on benefits and handicaps of the usage of a metaprotal (ODS).	Teachers need support and motivation to use social networking tools (like ODS communities) Collaboration with an Associated Partner.
5	STVG	16	Teachers	RIO92+	The participants were invited to reflect the approach of the project and the process of Rio	It is important to design further steps on how to implement the most



					92+, to give feedback from the background of their personal experience in teaching similar topics and to discuss further possibilities to use the best practices developed and experienced within GreeNET.	interesting examples for environmental education, that are connected with the contents and curricula of the subject geography and economics into future processes, projects and teaching activities in academic upper secondary schools
6	STVG	13	Teachers	RIO92+	Teachers from different school types were included in a common information and reflecting process, mainly based on entrepreneurial education topics, closely connected with issues on environment, new labour market option, green jobs This initiative give the floor to present GreeNET activities in general, and special programmes like Rio 92+, and to reflect and discuss possible applications in other pedagogical and teaching frameworks	Effects and experiences of such activities can provide (at national level) feedback for further common discussion concerning green and environmental job developments, also with concern to entrepreneurial and self-employed perspectives.
7	STVG	8	Teachers, Academia, agricultural SMEs	RIO92+, Energy tutors, Plastic bugs -no thanks!, ConsuManiac, Walking works!	JUNIOR Styria is part of JUNIOR Achievement Austria as a member of the European and worldwide organization JUNIR Achievement with the aim and objective to attract students in the age of 16-17years to run a company as a school project, to experience entrepreneurship spirit, to learn and improve skills and competences necessary for self-employment but also for intrapreneurship. The main aim of the event was to present the possibility of JUNIOR Companies as an project approach that offers the opportunity to combine subject contents in various areas with entrepreneurial and environmental topics. Best practices of former JUNIOR companies were presented, from national and European level, and examples of GreeNET were discusses as possible	All teachers articulated their interest to cooperate with STVG in the field of entrepreneurship end environmental education in a continuous way after the event Teachers must learn to motivate their students, organize the school framework for the project and find a commitment with other teachers on school.



					base for entrepreneurial and environmental activities.	
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2.3 Germany

	Partner involved	Number of participants	Type of participants	Best case related	Short description	Lessons learnt
1	UBT	5	Teachers	HOBOS - To Bee or not to Bee	<p>This was a training activity for pre-service teachers, which was divided into two phases. The first phase focused on how the use of ICT-Tools and Enquiry-based Science Education can be implemented in the biology class in general.</p> <p>In the second phase the Best Practice “To Bee or not to Bee” was demonstrated. The teachers were requested to test the Best Practice, especially the website of HOBOS and evaluate some criteria related to the quality and the use of the website/Best Practice.</p>	<p>Practical activity: learn how to create environmental education lessons with ICT-Tools using the enquiry approach</p>
2	UBT	7	Teachers	Energy - Today and Tomorrow	<p>This was a training activity for pre-service teachers. It was part of the seminar “Experiments for students in biology class”, which focuses on student-centred methods using the enquiry approach. The established implementation activity based on the learning stations of the Best Practice “Energy - Today and Tomorrow”. The teachers were requested to perform the learning station by their selves in the role of the students.</p>	<p>Connection with relevant activities and specific lessons (e.g. Biology).</p> <p>Collection of proposals for improvement in the best case</p>

3	UBT	10	Teachers	Energy - Today and Tomorrow	The aim of the workshop was how to integrate the topic of renewable energy in daily teaching	Importance of Integrate renewable energy issues in daily teaching
4	UBT	16	Teachers	Rainforest and Climate Change (focus on botanical garden)	The aim of the workshop was to work on the topics enquiry-based learning, informal learning and eLearning in context of Climate Change in Rainforests.	Practical ways to include activities for botanical gardens in schools Connection with teachers' professional development
5	UBT	10	Teachers, Environmental educators	HOBOS - To Bee or not to Bee	The aim of the workshop was how to integrate the topic "Honeybees" in the daily teaching via eLearning.	Connection with teachers' professional development Connection with school's daily activities and specific lessons
6	UBT	9	Teachers	Rainforest and Climate Change (focus on botanical garden)	The aim of the workshop was to work on the topics enquiry-based learning, informal learning and eLearning in context of Climate Change in Rainforests.	Practical ways to include activities for botanical gardens in schools Connection with teachers' professional development
7	UBT	21	Teachers	HOBOS - To Bee or not to Bee	The overall lecture gives the pre-service teachers an overview on experiments, which can take place in the biology class.	Get feedback from pre-service teachers
8	UBT	19	Teachers	HOBOS - To Bee or not to Bee	The overall lecture "Multimediale Fähigkeiten und Fertigkeiten für den naturwissenschaftlichen Unterricht" (<i>Multimedia skills and capabilities for science education</i>) tries to enhance pre-service teachers' multimedia skills for science education. In this framework, the Best Practice "To Bee or not to Bee" was presented to show an example for linking hands-on experiments with eLearning-components.	Get feedback from pre-service teachers
9	UBT	12	Teachers	HOBOS - To Bee or not to Bee	The first phase focused on how the use of ICT-Tools and Enquiry-based Science Education can be implemented	Connection with specific lessons



					<p>in the biology class in general and which online inventory for science teacher exists (e.g. GreeNET, Natural Europe, ...)</p> <p>In the second phase the Best Practice “To Bee or not to Bee” was demonstrated. The teachers were requested to test the Best Practice, especially the website of HOBOS and evaluate some criteria related to the quality and the use of the website/Best Practice.</p>	Practical examples / create own lessons
10	UBT	18	Teachers	Energy - Today and Tomorrow	<p>The overall lecture “Multimediale Fähigkeiten und Fertigkeiten für den naturwissenschaftlichen Unterricht” (<i>Multimedia skills and capabilities for science education</i>) tries to enhance pre-service teacher’s multimedia skills for science education</p>	<p>Test and evaluate the good practice</p> <p>Get feedback from pre-service teachers</p>
11	UBT	10	Teachers	Rainforest and Climate Change	<p>The first phase focused on how the use of ICT-Tools and Inquiry-based Science Education can be implemented in the biology class in general and which online inventory for science teacher exists (e.g. GreeNET, ODS, ...)</p> <p>In the second phase the Best Practice “Rainforest and Climate Change” was demonstrated. The teachers were requested to test the Best Practice, especially the website with the Rainforest Data and evaluate some criteria related to the quality and the use of the website/Best Practice.</p>	Learn how to create their own environmental education lessons with ICT-Tools using the enquiry approach
12	UBT	11	Teachers	Waste	<p>Seminar called “Lernen und Lehren im außerschulischen Lernort Schullandheim“ (Learning and teaching at an extracurricular place“. After some days with other specific practices with content all around inquiry-based learning and environmental education, the pre-service teachers visited the waste incineration plant in Schwandorf.</p>	Usefulness of demo visits when applicable

2.4 Spain

	Partner involved	Number of particip	Type of participants	Best case related	Short description	Lessons learnt
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1	ECOI	6	Teachers for professional training	All	Focus on teacher’s opinions on the criteria to select a best practice	In general, teachers totally agree with the criteria. Some comments were made for criterion2 (BP interdisciplinary yes but sometimes it’s better to focus more on only one theme), criterion 4 (sometimes BPs are experiences of the rural world) and criterion 7 (improving the use of ICT tools is not the purpose of a Best Practice).
2	ECOI	10	Teachers	All	Training activity with general information and presentation of BP criteria	Importance of linking environmental education and the labour market of the green economy.
3	ECOI	16	16 Teachers, Students of professional training	Barcelona School Agenda 21	The aim of the session was explain what is "Corporate Social Responsibility" from theoretical concept to some practical applications in the world of entrepreneurship.	Need to give students more examples and real anecdotes in order to get their enthusiasm.
4	ECOI	11	Teachers of professional training, Student	All	Training activity on selected best practices of GreeNET and evaluation of selection criteria	Focus on evaluation of criteria and application of best practices in professional training at schools
5	ECOI	12	Teachers of professional training	All	Training activity on selected best practices of GreeNET and evaluation of selection criteria	Importance of the teacher’s role
6	ECOI	11	Teachers (childhood, primary and secondary schools)	Barcelona School Agenda 21	Training and support activity to develop participatory waste prevention plans in schools	The main value of the workshop was the identification of examples of prevention actions in schools and the importance to quantify results in environmental education activities.
7	ECOI	26	Teachers (childhood, primary and secondary schools)	Barcelona School Agenda 21	Training and support activity to develop participatory waste prevention plans in schools	Evaluation of study visits in schools, interchange on experiences and inputs of 8 schools to new participants, elaboration of individual waste prevention plans and common guidelines.
8	ECOI	26	Teachers (childhood, primary and	Barcelona School Agenda 21	Training and support activity to develop participatory waste prevention plans in schools	Second round of interchange and study visits, identify future – follow up and communication actions



			secondary schools)			
9	ECOI	10	Teachers (childhood, primary and secondary schools)	Barcelona School Agenda 21	Training and support activity to develop participatory waste prevention plans in schools	Group actions and visits as an educational tool for such activities, definition of a common methodology for implementation and writing of Plans
10	ECOI	6	Teachers (childhood, primary and secondary schools)	Barcelona School Agenda 21	Training and support activity to develop participatory waste prevention plans in schools	identification of examples of prevention actions in schools and the importance to quantify results in environmental education activities with new schools
11	ECOI	10	Teachers (childhood, primary and secondary schools)	Barcelona School Agenda 21	Training and support activity to develop participatory waste prevention plans in schools	Interchange and sharing of experiences, methodologies and individual actions.

2.5 Belgium

	Partner involved	Number of participants	Type of participants	Best case related	Short description	Lessons learnt
1	EUMMEN A	2	Managers responsible for all schools environmental activities in Belgium	All	Inform about the best practices in order to act as multipliers for schools	Compatibility with other initiatives for increasing energy efficiency and use of renewable energy sources.



2.6 UK

	Partner involved	Number of participants	Type of participants	Best case related	Short description	Lessons learnt
1	EA	14	Teachers	All BPs which are related with renewable energy	Course and practical activities	Connection with career opportunities in renewable energy promotion
2	EA	15	Teachers	All BPs which are related with renewable energy	Course and practical activities	Encourage visioning activities for the future

2.7 TRANSNATIONAL WORKSHOPS

	Partner involved	Number of participants	Type of participants	Best case related	Short description	Lessons learnt
1	Bmbf, EA	17	Teachers, Educational consultants	All	A training course organized under the framework of another EU project related with innovations in education	Importance of the practical relevance of such activities as well as the benefits and the burdens of project-based learning activities.
2	All (coordinated by UBT)	27	Teachers, Partners, Associated partners	Green Ideas	Following the Green Ideas methodology, the workshop developed in four different stages. Through the course of these stages the participants were called to create ideas/ solutions for specific challenges under the guidance of two experienced facilitators. The participants (23 excluding the 4 experts and facilitators) varied from	As a conclusion, the bigger picture of the workshop is positive and encourages to continue promoting design thinking workshops.



					<p>environmental educators, primary and secondary school teachers to entrepreneurship educators, students and policy makers. Two groups were formed in order to increase engagement. The composition of each group’s members was such, as to achieve the best input and optimum result for each challenge. More teachers and policy makers were recruited in the first group, as main stakeholders of providing curricula with new and innovative ways of thinking, which was the main concern of the first challenge. The second group involved the students and less of policy makers as its main goal was to find ways for increasing students’ interest in environmental education.</p>	<p>Focusing on details, on future events smaller groups should be formed in order for all participants to have the opportunity to bring their ideas on the table and achieve stronger results of common work.</p>
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3 Validation Activities

In the framework of the GreeNET project a final period starting from November 2014 acted as the framework for the validation events. These events were supplementary to the implementation ones and they had as their main focus to provide the consortium with valid information about the possible exploitation of the project's good practices to different settings and in other countries Pan-Europeanly.

The validation activities implemented by the network of partners and associated partners were as follows (based on the detailed validation plan produced collaboratively):

a. Consultation with stakeholders

The aim of this validation option was to discuss the project findings and outcomes with the representatives of different stakeholders. Two sub-types of events/activities were implemented for this type:

- Meetings with stakeholders
- Collection of specific questionnaires from representatives from the enterprises sector

b. Activities with schools, teachers and students

These activities were executed during the validation period to provide additional feedback and added value on the previous implemented implementation activities. They were classified into the following major types:

- Contests for teachers
- Thematic events
- ODS communities
- Facebook contest

c. Special days

This is a special category of national, European or International days that touch upon the thematology of GreeNET.

All organized activities per category are presented in detail in the following sub-sections.

3.1 Meetings with stakeholders

- 1) Meeting between EllinoGermaniki Agogi and Computer Technology Institute and Press “Diophantus” (Directorate of Telematics and Applications for Regional Development) (CTI)

Date: 17/4/2015

Participants: 2 persons from CTI and a representative from EA

Description:

The Computer Technology Institute and Press Diophantus (CTI – www.cti.gr) is one of the major R&D institutes in Greece specializing in ICTs. In the last 10 years, CTI has successfully participated in more than 100 R&D projects, exhibiting basic and applied research activity in areas such as algorithms, complexity and optimization, wireless and sensor networks, complex information systems design and development, embedded systems, innovative technologies for education and lifelong learning among other. Particular emphasis is placed on education, by developing and deploying conventional and digital media in education and lifelong learning; publishing printed and electronic educational materials; administrating and managing the Greek School Network; and supporting the organization and operation of the electronic infrastructure of the Greek Ministry of Education and Religious Affairs and all educational units.

The Directorate of Telematics and Applications for Regional development of CTI "Diophantus" (www.westgate.gr) which is acting as an associated partner for the GREENET project, was established with the basic objective to enhance regional development through the effective use of new ICT for the regions covered from the institute.

The main interest from CTI concerning project best cases presented had to do with two pillars:

- Application of best cases in school based activities.
- Provision of motivation opportunities in relation with Green careers for students.

2) Meeting between EllinoGermaniki Agogi and Computer Engineering and Informatics Department of University of Patras

Date: 17/6/2015

Participants: 1 persons from the University and a representative from EA

Description:

The Greenet cases have been presented by EA with emphasis on the ones identified from the Greek partners. Specific emphasis has been given on the Green Garden case and the relevant teachers' contest.

It was discussed how such initiatives can be supported by innovative ICTs (e.g. mobile games, social networking) to enhance students interest and provide them with additional skills relevant to the current trends on Information and Communication Technologies research.

3) Meeting between GRNET and AGROKNOW Company

Date: 4/5/2015

Participants: 1 person from the Company and a representative from EA

Description:

Agro-Know is an active contributor to European and international standardization initiatives in relation to the agricultural data representation, storage and interoperability, with involvement in fora such as the Agricultural Information Management Standards (AIMS) of the Food and Agricultural Organization of United Nations (FAO) and the Coherence in Information for Agricultural Research for Development (CIARD).

The main positive issues, relevant to the project outcomes, which have been identified are:

- Relevance to the educational system
- Relevance to company's activities and scope
- Important to create social networking communities to exchange experiences in the field

4) Meeting between GRNET and the Institute of Agricultural Science

Date: 5/6/2015

Participants: 1 person from the Institute and a representative from EA

Description:

The institute of agricultural sciences is a small organization consisting of three colleagues with background in agronomy and consultation services. It offers

consultation services to farmers related to farm subsidies and legal issues. It also provides focused training to farmers.

The main positive issues, relevant to the project outcomes, which have been identified are:

- Relevance to the educational system
- Important to create social networking communities to exchange experiences in the field

The institute's representative was not confident on how the project outcomes are relevant to the needs of the private market concerning Greek skills.

5) Meeting between AUA and the "MAICH"

Date: 7/4/2015-8/4/2015

Participants: 1 person from AUA and 3 representatives from the Company

Description:

A one to one meeting was organized by Agricultural University of Athens (AUA) with the Mediterranean Agronomic Institute of Chania (MAICH) in Chania (Crete) at their facilities. MAICH is an international educational and research center, which activates in research and development in the Mediterranean, demonstrating very strong links with first-class Universities, the global academic community and many renowned research institutes. The aim of this meeting was to present the GreeNet project, our actions in this project, as well as its results. Moreover, AUA had approached MAICH as associated partner and this meeting was a perfect chance to establish this cooperation and include MAICH in GreeNet's network. MAICH was really interested in the environmental scenarios of GreeNet, since except the education of students in Master and PhD level, has also introduced educational visits for schools with environmental interest. More specific MAICH has a number of different educational programs for primary and secondary education like "distillation of essential oils and manufacture of natural soap", "protection of rare plants and habitats of Crete", "Sustainable crop management in the field and in the greenhouse". In our visit we had the chance to inform them about GreeNet environmental scenarios that are implemented through Europe, as well as to be informed for the relevant environmental approaches in Crete. From their daily experience with school students focused in the necessity of appropriate educational material in order to engage students in the environmental scenarios. Moreover, they pointed out the importance of hands on scenarios as more attractive for students. It has to be mentioned that students were always very excited and interested with best practices that involve research activities and lab work, such as soilless cultivations

6) Meeting between AUA and the Managing Authority of the Lake Pamvotis

Date: 7/7/2015

Participants: 1 person from AUA and 6 representatives from the Managing Authority of the Lake PaMvotis

Description:

A one to one meeting was organized by the Agricultural University of Athens (AUA) with the Management Authority of Lake Pamvotis -MALPI at their facilities in Ioannina. The MALPI being one of GreeNET associated partners had the opportunity to participate in various implementation events during the project. However, at this meeting our aim was to gather specialists and environmental program developers and get their feedback for GreeNet's results through their daily experience in their organization. From the discussion with the representatives of MALPI the following conclusions derived:

- More and more schools are interested in environmental education.
- Students are paying attention to practical activities and show less interest in theoretical projects.
- Main concern of MALPI representatives for environmental education is to connect green activities with daily life of students in order for students to become engaged.

Environmental scenarios that were presented via GreeNet project could be easily applied to their area (at least those that do not use special software and do not use expensive consumables).

7) Meeting between AUA and the Department of Primary School Education (University of Ioannina)

Date: 6/7/2015

Participants: 1 person from AUA and 7 representatives from the Department

Description:

A one to one meeting was organized by the Agricultural University of Athens (AUA) with the Department of Primary School Education (University of Ioannina) at their facilities. The Department of Primary School Education mission's is to promote scientific research and knowledge in the field of Educational Sciences, and the academic and vocational training of future primary school teachers. Apart from undergraduate studies, the Department has also organized and runs Postgraduate Study Programs to expertise future and/or active school teachers.

The aim of this meeting was to present the activities of GreeNet project, as well as to examine the applicability of its outcomes in our educational system by a group of researchers and school teachers of Department of Primary School Education (DPSE). DPSE is directly interested in GreeNet based environmental scenarios and the various activities that are developed in different European countries. Moreover, they were very concerned about the impact of our implementation activities that we have set up during GreeNet project in educators. They remark that the importance of activities related with

science will help students to develop critical thinking and connect them with green labor market. Furthermore, all the participants support the hands on scenarios as more efficient and attractive for students regardless of their age.

8) Interviews with 6 relevant stakeholders concerning Spanish Best Practices

Date:

between 21/05/2015 and 4/06/2015

Participants: stakeholders from public authorities and educational experts

Main outcomes:

The most positive outcomes are considered to be

- The contribution on students preparation for the green labour market
- The provision of useful skill for students (again in relation with needed skills for the green labour market)

Issues which have been evaluated as less important were:

- Not sure if the competences addressed by the project outcomes meet the actual needs and demands of the green labour market

9) Meeting between UBT and the some educational stakeholders

Date: 20/07/2015 and 24/9/2015

Participants: 1 person from UBT and

- Project manager of the PATHWAY project
- Teacher Trainer of University of Bayreuth / University of Freiburg
- Scientific consultant of “Initiative Junge Forscherinnen und Forscher e.V.”

Description:

A meeting was organized by the University of Bayreuth (UBT) with some educational stakeholders with different background in Bayreuth on 24/09/2015. The aim of this meeting was to present the GreenNET project’s activities and its results. At the same time, we aim to get feedback related to the competencies needed to work in the green labour market, connecting environmental education with the green labour market.

We conducted two interviews at the University of Bayreuth. The first interview was conducted with the project manager of the PATHWAY project, which is an associated partner project of GreenNET. The second interview was conducted with two educational

stakeholders who have positions particularly in the training areas of teachers and pre-service teachers.

In both meetings the stakeholders had the possibility to introduce themselves before UBT started to present the project and its outcomes.

After the presentation a discussion took place concerning different aspects:

- Expected competencies in the (green) labour market
- Threats and weaknesses of the competencies
- Requirements for environmental education (regarding the labour market)
- Can GreenNET meet the discussed demands?

3.2 Collection of feedback from the enterprises sector

1) Collection of 2 questionnaires concerning the PLASTIC BUGS base case

Main outcomes:

The most positive outcomes are considered to be

- Relevance to the daily life of students
- High level of importance in general concerning green labour related skills

Issues which have been evaluated as less important were:

N/A

2) Collection of 2 questionnaire concerning the Natural Europe base case

Main outcomes:

The most positive outcomes are considered to be

- Relevance to the daily life of students
- High level of importance in general concerning green labour related skills

Issues which have been evaluated as less important were:

N/A

3) Collection of 5 questionnaires concerning the My School Garden base case

Main outcomes:

The most positive outcomes are considered to be

- Relevance to the daily life of students
- High level of importance in general concerning green labour related skills

Issues which have been evaluated as less important were:

N/A

4) Collection of 12 questionnaires concerning the ECOI best cases

Main outcomes:

The most positive outcomes are considered to be

- Relevance between a Green topic and the curriculum
- Relevance to the daily life of students
- Support on the development of social skills

Issues which have been evaluated as less important were:

- Direct connection with the professions of the Green labour market

5) Collection of 7 questionnaires concerning the UBT best cases

Main outcomes:

The most positive outcomes are considered to be

- Companies appreciate self-directed recognition and appraisalment
- Provision of practical competences to students
- Provision of social skills

Issues which have been evaluated as less important were:

- Direct connection with the professions of the Green labour market and relevant professional skills

- 6) Collection of 6 questionnaires concerning the best cases: WALKING WORKS, MYS SCHOOL GARDEN, LET'S SAVE ENERGY TOGETHER, NATURAL EUROPE, PLASTIC BUGS, RAINFOREST AND CLIMATE CHANGE.

Main outcomes:

The most positive outcomes are considered to be

- The effort to make the best cases as interdisciplinary as possible

Issues which have been evaluated as less important were:

- Direct connection with ICT skills is not needed in any case

- 7) Collection of 3 questionnaires concerning the AUA best cases

Main outcomes:

The most positive outcomes are considered to be

- Companies appreciate the interdisciplinary nature of a best case
- Provision of practical competences to students

Issues which have been evaluated as less important were:

- ICT skills are not always a key issue

- 8) Meeting and collection of questionnaires from representatives of the YOUR-JOB Program

Participants: 7 trainers from the industrial sector

Main outcomes:

The aim of this meeting was to present the GreenNET's projects activities, results and to take part at the cross-check. YOUR-JOB is a program, initiated by the federation of Austrian industries that assists all partner-companies in their application process to find technic-interested and motivated young employees. The conception and execution of the actions are carried out by the Styrian Association for Education and Economics.

All partner-companies are global players and market leaders or at least market dominating in their specific sectors. These sectors reach from car manufacturing, over plants equipment, building & construction measuring and analysis instruments, welded mesh and reinforcing steel to solutions in the range of storage logic and automation.

To stay state of the art and to keep their position in the global market all companies have an above-average focus on enhancements that make the production on the one hand more effective and on the other hand saves the environment. All companies

apprentice trainers pointed out how necessary it is, to sensitize their young employees for environmental issues and the green labor market.

9) Meeting and collection of questionnaires from 3 representatives from Green companies

Main outcomes:

Aim of this meeting was to present the GreenNET's projects activities, results and to take part at the cross-check.

All partner-companies are global players and market leaders or at least market dominating in their specific sectors. These sectors reach from car manufacturing, over plants equipment, building & construction measuring and analysis instruments, welded mesh and reinforcing steel to solutions in the range of storage logic and automation.

To stay state of the art and to keep their position in the global market all companies have an above-average focus on enhancements that make the production on the one hand more effective and on the other hand saves the environment.

All companies apprentice trainers pointed out how necessary it is, to sensitize their young employees for environmental issues and the green labor market.

10) Meeting between AUA and the "Concerning Plant" company

Date: 13/7/2015

Participants: 1 person from AUA and 2 representatives from the Company

Description:

A one to one meeting was organized by the Agricultural University of Athens (AUA) with the private company "Concerning Plants" (Περί Φυτών) in Athens on 13/07/2015 at our premises. The aim of this meeting was to present the GreeNet project's activities and its results. At the same time, we aim to get the feedback of private company's representatives related to the competencies needed to work in the green labor market, connecting the GreeNet's activities with the green labor market.

"Concerning Plants" company functions as a consulting company in agro food sector, as well as a supplier of agrochemicals for plant production. The company representative pointed out how important is for students to be connected and get familiar with green labor market already from their primary and secondary education. Moreover, they indicate that environmental awareness should start raising through education preparing and providing students with the skills needed for a sustainable world.

In addition, they claim that environmental education is an ideal solution to engage students in science. Last, the company representatives recognize the hands on practice in relevant issues, as well as interdisciplinary skills are essential and critical in order to work in green labor market.

11) Meeting between AUA and the “Lafarge Beton” company

Date: 27/4/2015

Participants: 1 person from AUA and 3 representatives from the Company

Description:

A one to one meeting was organized by Agricultural University of Athens (AUA) with the multinational company Lafarge in Athens at their premises. The aim of this meeting was to present initially the GreeNet project, its aims, as well as its outcomes. Secondly, to get the feedback of private company’s representatives related to the competencies needed to work in the green labor market. Our target was to connect the GreeNet’s activities with the green labor market.

During the discussion we obtained a clear idea of what criteria in the environmental education are considered crucial to connect students with green jobs. All company’s representatives agreed that it is very important for the students to get familiar with different aspects of our business and through this connection to be able to provide valuable solutions in the framework of green labors contributions. Moreover, the representatives pointed out that in cases of heavy industry such the one of Lafarge the importance of green labor become bigger because of the size of the operations.

The company representatives stressed on the importance of engaging students of local communities in which they operate. The operations of the companies’ plants are directly linked with the daily life of local communities and generally local stakeholders. Last the company representatives identify as the most important criteria needed to work in green job: i) ability to adjust and be expertise on relevant green topic, ii) hands on practice in relevant issues in these or other similar industries.

12) Meeting between AUA and the “LAVA Mining & Quarrying SA (LAVA)”

Date: 18/5/2015

Participants: 1 person from AUA and 3 representatives from the Company

Description:

A one to one meeting was organized by Agricultural University of Athens (AUA) with the company LAVA Mining & Quarrying SA (LAVA) in Athens on 18/05/2015 at their premises. LAVA extracts, processes and trades industrial minerals not also in Greece but also in international markets.

Initially the GreeNet project was presented as well as its targets and its expected results. Secondly, our intention was to get the input of the company’s representatives related to the competencies needed to work in the green labor market. Our primary target was to connect the GreeNet’s activities with the green labor market. During the discussion we

obtained a clear idea of what criteria in the environmental education are considered crucial to connect students with green jobs.

LAVA representatives confirmed that it is very important for the students to get close to all various aspects of their business and through this connection to be able to provide valuable solutions under the umbrella of green labor aspect.

The operations of LAVA (extraction, mining, shipping, etc) call for a very interaction between green labor and the sustainability of this kind of business. The company's representatives pointed out that there must be a very well prepared engagement of students coming from local communities that could lead in fruitful outcome for both ends (the company and the students). This outcome entails a clear and thorough assessment of LAVA operations and a clear commitment to include green labor in the company's ambition and mid-long term plan.

Last the company representatives assessed the following points as the most important criteria needed from job applicants: i) the connection to professions in the green labor market, ii) the accurate and factual professional expertise and iii) interdisciplinary skills and the competence to drive results and take full ownership of appointed tasks.

3.3 Contests for teachers

Date: January – July 2015

Participants: 20 teachers

Organizer: EA

Description:

The teachers contest organized by EA was based on the GREENET best case related with school gardens. Participating teachers had to prepare an educational scenario with the following core subject: "School gardens and raised beds: production and distribution of agricultural products".

The teachers with the selected educational scenarios presented their work under the framework of the Summer School organized by EA, from the 21st until the 25th of June 2015, in Rethymnon / Crete.

The selected scenarios utilized the best case of school gardens, providing important ideas for its further enhancement and development:

- Project development within a cross curricular subject area, interweaving science, language, mathematics, ICT, geography, arts & design etc., in primary as well as in secondary education
- Inquiry based science activities and experimentation from early ages to high school (Lyceum).

- Connections with a historical perspective of agriculture and school gardening, throughout the past century, linked with nowadays practices
- Provision and cultivation of ideas relevant to sustainability and sustainable development
- Sensitization of young pupils in early primary education and kindergarten
- Inclusion and application of contemporary gardening techniques, such as hydroponics and composting, conducted within a school teaching and learning environment

3.4 Thematic events

1) Validation of the best practice “School of Eating” in a Public School in Vienna

Date: 8-10/4/2015

Participants: 33 teachers and 165 students of a secondary school

Organizer: BMBF in collaboration with the FIBL Austria (Research Institute for Organic Agriculture)

Description:

All teachers of the school participated in the project/ best practice “Schule des Essens” (School of Eating). They were obligated to participate as the majority of the teachers voted for the conduction and implementation of this pilot project in the whole school (in summer semester 2015) during a teacher’s conference. The teacher training covered important topics as food production, organic agriculture, waste/recycling/upcycling, healthy food, “BIO-labels”- organic or not organic? etc. and was conducted by FIBL experts. BMBF contributed with the presentation of relevant (national, german language) BEST PRACTICES of environmental education provided by Austrian Associated Partners of the GreeNET project that are available on the ODS Portal (<http://www.opendiscoveryspace.eu/search-resources-in-community/388487>).

The aim of the teacher training was to train teachers and to make them familiar with the respective “green topics”. The training was organized in work stations. Teachers were instructed to design concepts for workshops and prepare learning activities for their students. The 3 project days were run in the week after Easter (08/04 – 10/04/2015). After the teacher training workshop in March all teachers were very motivated and prepared ambitious learning activities and workshops for the project days in April. Their preparatory work was supported by a FIBL expert (e.g. worksheets, instructions via emails, links to relevant websites) and material provided by the head of the school (e.g. print outs of BEST PRACTICES of Austrian GreeNET Associated Partners).

The three project days were very successful, teachers organized ambitious learning activities and students seemed to enjoy learning about plants, cooking and saving the environment. An important aspect was that all classes had to create proposals for **follow- up activities and tasks** for their colleagues (students of the other classes). So each class has to care for baby-plants, to create useful upcycling products for the school, to try out the recipes of “sustainable cooking” and to learn

by playing “environmental games” within the next weeks. This is important for the sustainability of learning about environmental issues and green topics.

2) Summer School in Rethymno / Crete

Date: 21-25/6/2015

Participants: 12 teachers

Organizer: EA, GREENET

Description:

During the current school year 2014-2015 a National Educational Scenario contest has been conducted under the Institute of Educational Policy (IEΠ) with the title “School gardens and raised beds: production and disposal of agricultural products”, with the support of GreeNet. In the beginning of June 2015, eight (8) school scenarios have been selected, amongst others submitted, applying the evaluation criteria described in the contest announcement document. The schools range from kindergarten to primary and secondary, as well as one lyceum (see relevant attached list). Ten (10) teachers from these schools were selected to attend the summer school conducted at the Primary Science Laboratory in Rethymno Crete (<http://efepereth.wikidot.com>), during the period of 21st-25th of June 2015 (see relevant program of summer school).

At the beginning of the summer school the teachers were introduced to the history and development of school gardening in Greece and in other contexts, based on evidence from available resources (cf. <http://efepereth.wikidot.com/garden-resources>).

During the second and third day of the summer school the teachers got involved in several hands-on projects, activities and constructions. We started from the idea of “hot boxes” as it had been developed in the 18th century, as a basic principle for passive solar constructions, such as greenhouses, solar dehydrators and solar cookers and then we got down to the construction of several such devices (cf. <http://efepereth.wikidot.com/solar-cookers> and <http://efepereth.wikidot.com/solar-dehydrators> for example). We also had an introduction to composting and then we simple created decomposition columns out of plastic bottles, whereas we also studied the compost chambers out in the school garden (cf. <http://efepereth.wikidot.com/garden-compost>). The teachers also got involved in microscope studies linked to the seminal work of Robert Hooke’s *Micrographia* (1665), with self made microscopes, where they examined specimens from the school garden, such as seeds (thyme, petunia), plants (leaves, flowers, roots etc.), insects (ants, bees, isopods etc.), with commitment, interest and high enthusiasm (cf. <http://efepereth.wikidot.com/hipst>). Furthermore, the teachers have been introduced to basic principles of biological pest control, as the beneficial action of predators, parasites, pathogens, and competitors in controlling pests and their damage in the garden plants.

During the fourth day of the summer school the teachers were involved in creating educational scenarios with ODS and ISE authoring tools, implementing metadata on their scenarios and practiced uploading them to platforms and repositories. They worked with their laptops and managed to acquire basic skills in these processes, also creating their school repository to use in the coming school year. The teachers were also introduced to “communities of practice” such as the “My school garden” community

(<http://portal.opendiscoveryspace.eu/community/my-school-garden-o-sholikos-moy-kipos-70514>), or groups of special interest, created in social media (e.g. <https://www.facebook.com/groups/1587449181539164/>). In addition to this, the participants were trained on how to use the GreenNET Web 2.0 Portal and how to create their own school portals using the School Portal Generator.

During the final day of the summer school the teachers presented their work described in the educational scenarios they have implemented in their schools, which are to be uploaded in the community page (<http://portal.opendiscoveryspace.eu/community/my-school-garden-o-sholikos-moy-kipos-70514>) and in the wiki of the Primary Science Laboratory (cf. <http://efepereth.wikidot.com/summer-school-greenet-2015>).

Overall, the teachers enjoyed the content, processes and hospitality of the summer school, making it a successful endeavor, as it is documented in the evaluation questionnaires they have filled in and in their concluding remarks.

3) Meeting for a project related with Waster Prevention Plans for Schools

Date: 2/7/2015

Participants: 9 teachers

Organizer: ECOI

Description:

It was the final meeting addressed to the teachers of eleven centres which are participating in a project for developing Waste Prevention Plans in schools, inside the Best Practice: “The Barcelona School Agenda 21 Programme”.

The aim was to share the evaluations and actions done in the each Waste Prevention Plan of each school and also the actions planned in their future.

Teachers agreed that the main value of the project is the exchange of experiences among schools and the support given to develop the action plans and the evaluations.

4) “Breakfast in Green” week

Date: 8/6 – 12/6/2015

Participants: 55 teachers and 750 students

Organizer: ECOI

Description:

The event was related to “The Barcelona School Agenda 21 Programme” and it was a waste prevention and environmental dissemination activity addressed to all school community (teachers, students and parents).

The aim of the activity was to promote the reducing of packaging used for breakfast while analyzing the healthy breakfast habits. The whole activity has been implemented through the “Greek gang” idea where a team of students goes to each classroom, makes inspection and provides suggestions. Such type of activities have been evaluated from the participants as an efficient driving force for any environmental related school projects.

5) Thematic event in UBT

Date: 9/4/2015

Participants: 5 teachers

Organizer: UBT

Description:

The aim of the thematic event was to reflect the implementation of the Best Practices and to evaluate the Best Practices based on different methods. It was an event for teachers/educators who implemented Best Practices according to an internally developed event guide.

The thematic event was divided in different parts. First there was an Introduction which focused on the GreeNET Project with its objectives as well as on the aims and scope of the meeting.

The big part of the event was the exchange of experience of the participants. The exchange was divided into three topics.

First of all the members made a SWOT analysis on their own Best Practice and presented the collected strengths, weaknesses, opportunities and threats. The whole group discussed these results and evaluated the BPs together on the basis of GreeNET's criteria. This one dealt with a spiders' web. The ten essential GreeNET criteria represented the edges of the spiders' web. Every Best Practices got an own color to sign up in the spiders' web. There was a scale from one (=bad) in the middle of the web to four (=good) on the edge of the web.

In the last part of the exchange of experience there was a handicraft work to visualize results of the scientific monitoring of the programmes. Each member got a “GreeNET-Box” with different handicraft material. With this material they should demonstrate and visualize the results of the implementation of the Best Practices. After the creative part all participants presented the handicraft work and the detected results.

6) “GREEN IDEAS 2014”

Date: 14/7/2014

Participants: 26 (environmental educators, practitioners, primary and secondary school teachers, school leaders, entrepreneurs and policy makers)

Organizer: GRNET, EA

Description:

The thematic event Green Ideas 2014 was organised and facilitated by GRNET on Monday, July 14th, 2014 at the Golden Coast Hotel in Marathon, Attica within the context of the Environmental Protection & the World of Work Summer School. The Summer School was organised by EA as part of the educational activities of GreenNET. Its main scope was to connect two completely different worlds: education and the real world of work. More specifically, it aimed at connecting environmental education with the development of entrepreneurship skills and creativity.

The aim of this event was to familiarize the participants with design thinking as part of the Best Practices collected by GreenNET. The goal was to guide the participants through the Experimentation of Best Practices, help them understand the process of Green Ideas and in the end actively relate to the principles of enquiry based learning. The Green Ideas workshop developed in four different stages. Through the course of these stages the participants were called to create ideas/ solutions for specific challenges under the guidance of two experienced facilitators. Two groups were formed in order to increase engagement and create coherence according to the particular interests of the different teams. The groups developed two separate projects and the presentations were documented and can be reviewed in the following links:

[Green Way "Step by Step you go ahead..."](#)

[Bazaarathon](#)

7) "GREEN IDEAS 2015"

Date: 19/9/2015

Participants: 26 (teachers, researchers from all countries of the project)

Organizer: EA, GRNET

Description:

This thematic event was organized under the framework of the final project conference.

Green Ideas 2015 aimed at bringing together people from different backgrounds and for combining them to work collectively towards finding ways to facilitate active communities formed around green education. By mixing educators, learners, researchers and representatives of global initiatives focused on green education, their

collective creativity is used as a generator of ideas and tangible action plans. The planned outcome of the workshop was a tangible plan to use innovative technological solutions offered by organisations like GRNET and Agro-Know (www.agroknow.gr) and initiatives like LLP KA3 GLN (www.greenlearningnetwork.eu) and LLP Comenius GreeNET (<http://greenet.ea.gr/>) to support existing active communities like the school community of ODS consisting of 3374 schools and 8575 teachers.

The participants discussed around the presented solutions and identified a number of incentives and barriers to their adoption. Examples of such barriers can be found below:

- limited budget for equipment
- strict curriculum and limited time
- limited incentives to collaborate, even within the same schools

The support by parents, especially in the form of cooperation with the teachers for these additional activities, together with the use of the usual means used by teachers to communicate, such as social media (eg. facebook, twitter etc), would help them overcome such barriers.

8) DEMONSTRATION AND WORKING GROUP IN THE FRAMEWORK OF THE SCIENTIX SYMPOSIUM

Date: 8/10/2015

Participants: 33

Organizer: BMBF

Description:

The validation WS/ working group in the GreeNET project took place in the framework of the 2days “elearning Conference Eisenstadt 2015”

http://homepage.bildungsserver.com/scms/content/index.php?kat_id=310&id=1012&bname=Programm+&schul_id=1033 and the “scientix symposium - *Scientix – future and present situation of science education*” (<http://scientix.at/>).

The working group was called “GreenNet und Green Learning Net: Lernressourcen für die Umweltbildung und Kompetenzprofile für die Berufswahl” (GreeNET and GLN: educational resources of environmental education and competence profiles for career choice”) and was held on 08.10.2014, 13:30 – 14:30.

The aims of this validation WS were:

1. To present the outcomes and services of the GreeNET project
 - a. GreeNET website <http://greenet.ea.gr/>
 - b. Best Practices Repository: <http://www.greenet-education.eu/greenet/>

- c. GreenNET Inventory: <http://greenet.ea.gr/content/greenet-inventory-collecting-green-best-practices>
2. To introduce the Austrian GreenNET community on the ODS portal to conference participants, to present the resources and especially the Austrian Best Practices of the GreeNET project as well as the community building tools of the meta-portal ODS <http://www.opendiscoveryspace.eu/community/greenet-umweltbildung-osterreich-388487>. Further the resources of “related communities” as the resources of the Green Learning Network project (EU-project), selected german resources of GreeNET partner UBT and the community “School of Eating” were introduced to participants.
3. To present the GreeNET “Success Story” *School of Eating* to conference participants.
4. To discuss the importance of the availability of educational resources in the field of environmental education on educational portals.

The participants of this working group were invited to discuss on the presented resources and the applicability in the own classes. Most participants agreed that the awareness on the importance of environmental education is raising and practice examples of environmental projects and learning activities are very useful. Therefore the availability of respective educational material and learning resources is appreciated although most teachers noted that in practice they do not use these material one-to-one but take up the concepts and ideas and adapt them for the particular school environment.

3.5 ODS and other WEB2.0 communities

Aim of this activity is to enhance the GreeNET validation activities with the building of communities which will facilitate discussion/validation over the good/best practices of GreeNET using the project platform and the WEB 2.0 tools (mainly of the Open Discovery Space PaneEuropean teachers’ portal).

Steps:

- Each partner setup an ODS sub-community at <http://portal.opendiscoveryspace.eu/community/greenet-sharing-environmental-educational-resources-822229> or in some cases a facebook community (e.g. <https://www.facebook.com/groups/1587449181539164/>)
- Aim of each partner’s community was to focus on its own practice(s)
- The teachers participating were encouraged to provide their ideas for further enhancement of the cases and to create educational scenarios based on them (utilizing the Greenet tools).

All GreeNet communities established can be found at http://www.opendiscoveryspace.eu/ise_communities

Below we present a Summary table from all ODS based communities.

TITLE of Community	MODERATOR/country
GREENET: Sharing Environmental Educational Resources (the official community of the project)	Sotiriou, Riviou- Greece
GreenNET - Environmental Education in the UK	Christopher Leigh- UK
my school garden for Ellinogermaniki Agogi - Junior High School	Vassiliki Markaki - Greece
MY SCHOOL GARDEN FOR E.E.E.E.K. ΘΕΣΠΡΩΤΙΑΣ - SECONDARY SPECIAL NEEDS SCHOOL	Paulos Peroulis- Greece
My School Garden, Ο Σχολικός μου Κήπος	Sotiriou, Helioti, Cherouvis, Tsagliotis, Riviou - Greece
My school garden for EA - Primary School	Vassiliki Markaki - Greece
my school garden for Ellinogermaniki Agogi - Kindergarten	Sotiriou, Riviou, Kolovou - Greece
Pla de Prevenció de Residus (PPR) als centres escolars	Gemma Salvador, Bettina Schaefer- Spain
Projekt Schule des Essens (FIBL - Forschungsinstitut für biologischen Landbau)	Marion Obermüller- Austria
GreenNET Best Practice: The Barcelona School Agenda 21 Programme	Gemma Salvador, Bettina Schaefer- Spain
GreenNET Deutschland	Michaela Marth- Germany
GreenNET - Umweltbildung in Österreich	Marion Obermüller- Austria
Exploring the magnificent world of N-fixing bacteria	Kontopoulou Charitini- Greece
GreenNET -Καλές περιβαλλοντικές πρακτικές στην Ελλάδα	Kontopoulou Charitini - Greece
Δημιουργικά Παιχνίδια με Υλικά της Ανακύκλωσης	Faye Chanis- Greece
GreenNET Facebook Contest	Birgit Mülleder-- Austria

Total number of ODS-based communities: 16

Total members (teachers and moderators) in all communities using either ODS or Facebook: 2414

All members of the community have also been given access and to all GreenNET tools. Therefore it is important to present her also some analytics data from the GreenNET portal:

- >4.000 users in the web site,
- >10.500 page views in the web site,
- 4 e-tools attached to the web site,
- connection with almost 4.000 green-based educational resources,
- The GreenNET moodle tool (and though this to the inventory of best practices) has gained > 9000 hits among them almost 50% came from registered users.

3.6 Facebook contest

Date: January – July 2015

Participants: 8 teachers

Organizer: BMBF

Description:

The intention of the contest to encourage the GreenNET facebook fans to worry about the topic green careers as well as the issues connected to this topic and therefore to present us their ideas or scenarios on how they would link environmental education to green career contexts. So we set a special motto for this contest which was *“the future belongs to the young people who create it”*.

By running this contest the GreenNET consortium was able to gather ideas concerning green career contexts which go beyond the already collected information on this.

The task for participating in this contest was relatively easy. All participants had to write a short text (no more than 500 words) about the following question:

“How to shape environmental education for young people, so that their interest in the environment sector of the economy rises?”

The winning contribution was as follows:

“It is a fact that plastic causes an enormous damage to our beautiful world, especially to turtles or birds who can die due to the plastic material in their alimentary system. Nevertheless, there are many approaches to improve this situation, as for example signing petitions, writing a letter of complaint to politicians or to take the streets to protest. But to be honest, these actions are often as effective as eating a big chocolate cake to lose weight. The most productive way to improve this alarming situation is to reduce one’s own utilization of plastic and to practice recycling carefully. How about a cool DIY recycling project that is made out of plastic bottles, as for instance a plastic bottle planter? Therefore, you only need an old plastic bottle, potting soil and herb seedlings. Mark a

12cm's line from the bottle's base and cut all the way around the bottle at this mark. Then you can invert the bottle's top portion and insert it into the base. After filling it partway with soil, you can transplant a seedling and add soil again. Afterwards, you have to add water to the planter's base and place it in a sunny spot. That's just one of so many ideas to recycle a plastic bottle in a creative way. It is also an interesting project for pupils at school. What can be more motivating than seeing your own green plant growing up in a self-made planter?

„It is the greatest of all mistakes to do nothing because you can only do little. DO WHAT YOU CAN“ - Sydney Smith “

3.7 Special days

1) «Special event under the framework of the 40th anniversary of the University of Bayreuth (UBT)

Date: 18/7/2015

Participants: 300

Organizer: UBT

Description:

The special event took place in the course of the 40th anniversary of the University of Bayreuth. The aim was to inform people about the GreenNET network, its partners and the project's Best Practices.

For this, a booth was set up where posters with information on GreenNET and its Best Practices were on display. In addition to that, computers were used to allow visitors to explore the GreenNET webpage and its inventory, as well as to use and experience e-learning elements first hand. These included, among others, HOBOS and Energy – Today and Tomorrow.

Personal talks with visitors gave both, the chance to provide further information on GreenNET and its Best Practices for those interested in them, as well as the opportunity to gain additional feedback useful for the validation of the Best Practices.

2) «Special event under the framework of the OKOLOG Summer Academy

Date: 25/8/2015

Participants: 24

Organizer: BMBF

Description:

The special event was called “Schule des Essens” (school of eating) and was held on 25.08.2015.

The aims of this special day were:

1. To present the aims and milestones of the GreenNET project

a. <http://virtuelleschule.bmukk.gv.at/projekte-international/euprojekte/greenet/>

b. <http://greenet.ea.gr/>

c. and to introduce the GreenNET community on the ODS portal

<http://ods-portal-dev.intrasoft-intl.com/beta/community/greenetumweltbildung-oesterreich-388487>

2. To demonstrate the activities carried through so far in Austria and the establishment of an Associated Partners Network in the frame of this project

<http://greenet.ea.gr/content/associated-partners>

3. To present idea and content of the “School of Eating” and *especially to discuss how to use this scenario at other schools.*

The participants were invited to discuss the presented topics and ideas. The idea and the general aims of the GreenNET project and especially of the “School of Eating” were well taken up and considered to be very useful for teachers. Especially some educational material provided by the Austrian Associated Partner FiBL, who has “invented” this form of teaching, were very well received by the participants.

3) “Spring Festival”

Date: 14/5/2015

Participants: 11 teachers, 225 students

Organizer: ECOI

Description:

The event was related to “The Barcelona School Agenda 21 Programme” and it was an environmental dissemination activity. The activity was based on taking care and watering plants of all the school. This was a fun way to work on different assignments and topics in a transversal way (maths, biology, environmental education, energy etc).

4) “Week for waste reduction”

Date: 24/11/2015 – 28/11/2015

Participants: 316 students and their teachers

Organizer: ECOI

Description:

The aim of this event was to promote the implementation of awareness raising activities about sustainable resource and waste management. The whole approach was based on the implementation of actual ideas derived from the collaboration between teachers, parents and students (e.g. creation of games based on recycled material, breakfast without packaging, a wall with messages about the protection of the environment, dress code based on the colours of the environment).

5) Special Day of AUA –GreeNET Best Practice “Hydroponic School Garden: Educational scenario of discovering the magnificent world of nitrogen fixing bacteria.

AUA has organized one special day as a validation event (activity type 3) under the framework of the 27th National Conference of Greek Society of Horticulture Science. The event took place in the city of Volos (Central Greece) on 28-30/09/2015 in the conference’s facilities. The participants of the event were academics, researchers, educators, educational program developers, students, representatives of green companies and representatives of the Greek Ministry of Rural Development and Food.

In this special day AUA had the opportunity to present GreeNET project and its aim, as well as describe the various activities that took place in the context of this project in different European countries. At the same time, it was a great chance to disseminate GreeNET’s Best Practices, GreeNET resources and web tools (GreeNET inventory, GreeNET moodle and ODS communities).

The GreeNET project was presented to the audience of 27th national conference of Greek Horticultural Society. The participants of this conference reached the high number of 200 persons. It has to be mentioned, that the participants of this special day were researchers, academics, educators, educational program developers, green companies and ministries. Thus, the results of GreeNET project were disseminated simultaneously at many different target groups gaining important feedback from them.

The aims of this validation activity were:

- To present GreeNET project to a wide audience
- To present GreeNET resources as GreeNET website, Best Practices Inventory
- To present GreeNET Best Practice of AUA “a hydroponic school garden” and how can be used with a specific educational scenario combining science and environmental education (exploring the magnificent world of N₂ fixing bacteria)
- To introduce ODS communities of AUA (Hydroponic school garden- Exploring the magnificent world of N₂ fixing bacteria)



- To connect actively environmental education with science
- To get feedback from representatives of green market

The GreenNET presentation was included in the proceedings of the 27th National Conference of Greek Society of Horticulture Science.

4 Overview on the Implementation and Validation activities

In this Chapter we present a summary with quantitative and qualitative outcomes from the GreenNET implementation and validation events.

A. Summary of Quantitative data

- The project network (partners and associated partners) organised **96 events** (including e-events like ODS groups operation)
- The total number of audience reached was **5.387 persons** (among them: 3.693 teachers and 1.694 from other categories which were: students, researchers, practitioners, representatives from Green companies, parents).

B. Best cases which gained the most attention during the project

Based on data coming from the ODS communities' activation, GreenNET tools usage and events organised the Best cases which raised the biggest interest from the participating audience (especially teachers) were:

- My School Garden
- Barcelona 21
- Rio92+
- HOBOS - To Be(e) or not to Be(e)
- Plastic bugs, no thanks!
- Energy - Today and Tomorrow

C. Main lessons learnt from the Implementation events

The first “connection” of teachers with the selected best cases through the organization of the implementation events gave the following main conclusions (in an effort to combine feedback from all events, and present only the most recurring conclusions):

- It is very important a best case must include **practical activities**
- Apart from practicality, a best case would be much more useful if it is directly **connected to specific lessons**

- Getting feedback and providing **motivation to students** is an important element towards the success of a best case usage. Teachers must be provided with practical **training on how to motivate students**.

D. Main lessons learnt from the validation events

As presented above, the main result of the implementation phase was that teachers feel that such activities like the GreeNET best cases have to be connected with practical tasks and specific lessons to assure students motivation.

The additional work done through validation events (connection and getting feedback also from other stakeholders, getting teachers deeper in the GreeNET scope and best cases interconnection and connection with hands on activities) provided further and more specific conclusions which are summarised as follows:

Of course **the connection – in a practical way – with specific school based activities** is the main element to assure successful application but to make such initiatives more successful in a wider scope several additional considerations are important to be taken into account:

- Connection with **career pathways**. This has to be done in compatibility with Green **market needs**.
- It is of highly important to organize **interdisciplinary** activities and therefore connect a best case with several lessons and sciences or combine best cases to make a “new” interdisciplinary set.
- The enhancement of **ICT skills and Social skills** of students through the application of such activities is also an important issues to consider.
- **Community engagement** (e.g. parents) can provide an additional “push” for effective Green activities organization at schools.