

Document for transnational cooperation among different type
of socio-economical organizations and educational institutions
in addressing environment-related issues in educational processes
in regions of Pazardzhik - Bulgaria, Kochani - North Macedonia and Larissa – Greece

INTELLECTUAL OUTPUT 4



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1. Introduction

Education is a key element for the social and economic life of society. The power of quality education yields results at two levels: at the level of personal development of citizens and at the level of development of society.

At the individual level, education enables individuals to acquire knowledge, skills and provide access for critical thinking and choices towards improving the quality of life. At the societal level, education is a strategic sector on which the overall development of the community depends. In fact, education is of strategic importance for the development of society within a municipality/region.

At the same time, climate change calls for targeted and focused work in the field of environmental education and protection. Environmental education is one of the main areas of the education system in schools and is a continuous process that aims at an awareness of environmental problems; acquiring knowledge; formatting values, attitudes, and a sense of responsibility for the rational use of natural resources, as well as encouraging actions towards nature conservation. Love for nature, respect for nature does not come immediately. It is the result of many years of dedicated work on nature studies in the classroom, in the extracurricular classroom and activities, engaging students in their feasible participation in nature protection (propagation and cultivation of houseplants at school and at home; work in the school experimental area; cultivation of organic products (favourite vegetables); care for shelter animals; making bird feeders, etc.).

2. Main project objectives:

1. Development, implementation and promotion of Activity-based educational concepts for secondary school students in tackling challenges from community interest in regions of Pazardzhik-Bulgaria, Kochani-North Macedonia and Larissa-Greece.
2. Increasing of the capacity for transnational cooperation of all partner organisations involved.
3. Interdisciplinary educational approach suitable for any topics from community interest, with high transferability potential which will be suitable for implementation in any educational institution on secondary level in all European countries.

3. Specific project objectives:

1. Development and implementation of four Project Intellectual Outputs:
 - Handbook (small pedagogical material for internal use) for Secondary school teachers “How to implement an activity-based educational concept for tackling of environment-related challenges in non-formal and formal educational activities in secondary schools”.
 - An online software platform for urban air and water pollution based on the performed measurements by secondary school students.
 - A document with recommendations for updating local policies/strategies in addressing the environmental challenges for the three municipalities.
 - A document for transnational cooperation among different types of socio-economical organizations and educational institutions in addressing environment-related issues in educational processes in regions of Pazardzhik-Bulgaria, Kochani-North Macedonia and Larissa-Greece.
2. Increasing STEM Teachers and students skills and competencies which include:
 - Increasing the STEM teachers’ skills and competencies in using of activity-based educational approach in adoption of the environmental-related topics in regular school classes, as well as strengthening STEM teachers’ digital skills and improving their capacity for transnational cooperation with their colleagues from other European countries.
 - Increasing secondary schools students' skills and competences in work-based educational methodology, as well as their skills for teamwork, fostering critical thinking and their active involvement in tackling of environmental-related issues from community interest (consequently enlarging number of secondary school students that will continue their education in STEM-related professions).
3. Raising awareness among main relevant local stakeholders about necessity of urgent measures in tackling air/water pollution challenge and consequently increasing the number of active citizens in tackling of environmental challenges from community interest (including present and future generations of students that will attend educational processes in the project partners secondary schools).

Considering the objectives and activities of the project, the aim of this document is to create a basis for strategic cooperation and international partnership in the field of education between the municipalities of Pazardzhik, Kochani, Larisa by involving representatives of the local, educational and civil society sectors.

Education is a key element for the social and economic life of society. The power of quality education produces results at two levels: 1) the level of personal development of citizens and 2) the level of development of society.

4. Main characteristics of the educational systems in the regions of Pazardzhik, Kochani, and Larissa:

4.1. Overview of the educational system in Pazardzhik, Bulgaria

Educational System in Bulgaria – national level

The Pre-school and School Education Act (effective from 01.08.2016) provides the legal foundation for the overall education system in the country and establishes the right of citizens to continuously enhance their education and qualifications. The Act recognizes the right for education for all children; guarantees equal treatment regardless of their ethnic or social background and residential locality; ensures conditions and provides opportunities for further development and accomplishment of a high level of knowledge in the system of education.

Bulgarian education system has traditionally been organized within the public sector. However, a number of private schools exist at different levels of schooling. The education in Bulgaria is mainly supported by the state through the Ministry of Education and Science (MES). Financial autonomy is given to schools by financial decentralization and the so-called “delegated budgets”. The financial decentralization transfers rights and obligations that are related to the constitution and execution of a budget (delegated budgets). Schools have more operational rights in relation to budget constitution and expenditures, and execute their own independent policies.

Education and training of children starts in kindergartens. They may be public, municipal or private, depending on the type of their budget. Kindergartens are for children at the age between 3 and 6 (when they begin first grade). Pre-primary groups for children aged 4, 5 and 6 are compulsory and may take place either in a kindergarten or in a primary school. School readiness is

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assessed at the end of pre-school education stage by comparing acquired learning outcomes with the learning outcomes described in the state standards. A Personal portfolio is issued at the end of pre-primary stage.

School education is free at pre-primary, primary and secondary level in the public sector. It is compulsory for children between the ages of 4 and 16 (0-10 grades). The levels of schooling in Bulgaria are:

- Primary education (grades 1 - 4 inclusive)
- Pre-secondary education (grades 5 – 7 inclusive)
- Lower secondary education (grades 8 - 10 inclusive)
- Upper secondary education (grades 10 - 12 inclusive)

Schools in Bulgaria are state, municipal, private or spiritual and as according to the type of training and teaching they provide – non-specialized and specialized. According to the stage or degree of education, non-specialized schools are:

- primary (I - IV grade inclusive)
- elementary (I - VII grade inclusive)
- secondary (VIII - XII grade inclusive)
- unified (I - X grade inclusive)
- high school (I – XII inclusive)

According to the content of training, secondary schools can be:

- profiled
- vocational

Special profiled-schools shall include in-depth competences in a specific profile in accordance with the state education standard for the special profile education.

Special profiles are the following:

- foreign languages
- humanities

- social sciences
- economic development
- software and hardware science
- entrepreneurship
- mathematics
- natural sciences
- visual arts
- music
- physical education and sports

Vocational training shall include competencies needed for the acquisition of vocational qualifications, as well as for the meeting of the eligibility requirements of the occupation or profession, if any, including regulated professions and occupations.

Vocational high schools shall aim at attaining the state education standard for the acquisition of vocational qualifications during the two gymnasium stages of the secondary education degree course.

There can be also innovative schools, which are declared such upon an ordinance of the Council of Ministers and those schools should constantly achieve improvement of education quality by:

1. Developing and introducing innovative elements regarding the organization and/or content of the training;
2. Organizing in a new or improved way the management, the training and the learning environment;
3. Using new teaching methods;
4. Developing innovative training content, school curricula, and school plans.

Specialized schools train experts in specific fields like sport, arts, culture and the needs of religions.

Specialized schools are:

- Sport schools (V to XII inclusive)
- Culture schools (grades I to XII, V to XII, or VIII to XII inclusive);
- Arts schools (grades I to XII, V to XII, or VIII to XII inclusive);

- Spiritual schools (grades VIII to XII inclusive);

Primary education starts normally when a child turns seven, but it is not uncommon for parents to consider their children able to start the 1st grade at the age of six. After finishing the fourth grade, students get a certificate for elementary education. To get a basic education diploma, students can go to a lower-secondary school or choose to attend a general secondary school.

In most schools, the school year begins on 15th of September and continues till 15th or 30th of June. Each school year has two terms. In most of the secondary schools, competitive exams for admission are required. Pupils can choose from a number of various types of schools, each offering a different focus (such as mathematics and sciences or foreign languages).

All Exams and External National Examinations are as follows:

1. Primary education – 4th grade (10/11 years of age)

National External Assessment in the following subjects: Bulgarian Language and Literature, Math, Man and Nature, Man and Society

2. Lower Secondary Education – 7th grade (13/14 years of age)

National External Assessment in the following subjects: Bulgarian language and Literature and Math. Optionally, students may sit a third exam in other subjects.

3. First Stage of Secondary Education – 10th grade (16/17 years of age)

National External Assessment in the following subjects: Bulgarian language and Literature, Math, the exams are in test format. Optionally, students may choose to sit an exam in other subjects.

4. Second stage Secondary Education – 11th – 12th grade (18/19 years of age)

National External Assessment in the following subjects: Bulgarian language and Literature, Math. The exams are in test format. Optionally, students may choose to sit an exam in other subjects.

Educational system in Pazardzhik Municipality

Pazardzhik municipality is located in the Eastern part of Pazardzhik region. It occupies an area of 636,722 km² that is 14.21% from the region's territory. The municipality takes the proud second

place among 12 municipalities within the region. Pazardzhik municipality consists of 32 settlements – administrative center town of Pazardzhik and 31 villages.

According to data of the National Statistical Institute for the year of 2022, Pazardzhik Municipality has a population of 90 309 inhabitants, out of which live 55 220 within the city of Pazardzhik and 35 089 within the surrounding villages. It ranks the ninth position over the rest municipalities according to number of inhabitants.

The Educational system of Pazardzhik Municipality consists of 32 municipal kindergartens and 46 schools – 40 municipal and 6 state.

Type of institution from the system of preschool and school education	Financing	Number
Kindergartens	Municipal	32
Primary I-IV grade	Municipal	6
Elementary I-VII grade	Municipal	25
Unified I-XII grade	Municipal	4
Selective/Profiled high schools	Municipal	3
Vocational high schools	State	6
	Municipal	1
Sport high schools	Municipal	1
Centers for Special Educational Support/	State	1
	Municipal	2
Schools dormitories/housing	Municipal	1
Total:		82

According to data of the National Statistical Institute for Pazardzhik Municipality in 2023/2024

- number of children enrolled in kindergartens is – 3 153
- number of students within the schools is – 11 423

Table: School sector in Pazardzhik Municipality

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Educational Institutions	Number of Educational Institutions
Municipal kindergartens	32
Municipal specialized and non-specialized high schools	39
State and municipal vocational schools	7
Total:	78

Below you can find a list of all profiles that can be selected by secondary students within the Municipality after graduation of VII-th grade.

HIGH SCHOOL NAME	Profile
High School „Georgi Bregov”	Music
	Visual arts
High School of Mathematics and Natural Science „Konstantin Velichkov”	Mathematics
	Software and hardware
	Natural Sciences
Profiled High School „Ivan Sergeevich Aksakov”	Humanities
	Natural Science
Language High School „Bertolt Breht”	Foreign Languages
High School „Doctor Petar Beron”	Entrepreneurship
High School „Dimitar Gachev”	Music

Below you can find a list of all professions and vocational trainings in local high schools:

High school	Profession/vocational training	Profile	Level of professional qualification
Sports High school	Assistant coach	Sports	III
Vocational High School of Construction, Architecture and Geodesy	Construction Engineer	Building Construction and Architecture	III
	Construction worker – installer	Window frames installation and glazing	II
	Construction worker – installer	RC (reinforced concrete) constructions	II
	Builder	Masonry/Bricklaying	II
	Builder	Climbing shuttering	II
Vocational High School of Economics and Management	Economist – Informatics	Economical Informatics	III
	Assistant in SMEs	SMEs	II
	Tax and customs agent	Customs and tax administration	III
High School of Mathematics and Natural Sciences „Konstantin Velichkov”	Software developer	Software developer	III
	Operating system	Operating system	III
	Software developer	Software development	
Vocational High School of Hairdressing and Culinary	Cook	Production of culinary products and beverages	II
	Hairdresser	Hairdressing	II
Vocational High School in Industrial Technologies	Automation technician	Automation in continuous production	III
	Technician of energy equipment and	Thermotechnics – heat, air conditioning, ventilation and	III

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	installations	refrigeration equipment	
	Machine operator	Metal cutting machines	II
	Machine operator	Welding Machines and Equipment	II
Vocational High School of Mechanical Engineering	Technician of computer systems	Computer equipment and engineering	III
	Technician of computer systems	Computer networks	III
	Systems software developer	System software development	III
	Operating systems developer	Operating systems development	III
	Graphic designer	Graphic design	III
	Electro technician	Electro equipment of transport technics	III
	Technician of transport technics	Auto transport technics	III
	Technician of power equipment and installations	Thermotechnics – heat, air conditioning, ventilation and refrigeration equipment	III
Vocational High School in Chemistry and Food technology	Chemist technician	Technology of pharmaceutical, perfumery and cosmetic products	III
	Chemist – technician	Technology of cellulose, paper and packaging	III

	Food and beverages quality technician	Food and beverage quality control and safety	III
	Touristic activities organisator, agent activities	Tourism and leisure activities	III
	Bread and pastry cook	Bread and bread-like products	II
Vocational High School in Agriculture „Tsaritsa Yoanna”	Technician of agricultural equipment	Agricultural equipment	III
	Viticulture technician	Viticulture and wine production	III
	Technician in the food industry	Production of meat, meat products and fish	III
	Plant Grower	Tillage and grain production	II
	Cattle breeder	Cattle breeding	II

4.2 Overview of the educational system in Kochani, North Macedonia:

The educational system in the Republic of North Macedonia reflects the needs of the society for educational, scientific and permanent role of the education and science for the economic, social, technological and cultural development of the society as a whole. Consequently, the Ministry of Education and Science facilitates the continuous development of the system of education, moral education and science in the Republic of North Macedonia.

The Macedonian educational system is decentralized. The management of the primary and secondary schools is under responsibility of the municipalities, except for the secondary schools in the capital Skopje which are under responsibility of City of Skopje. The State provides financial resources for the education in the municipalities in a form of Block Grants. Those municipalities

that are still in the first phase of the decentralization, receive block grants for financing the maintenance of the infrastructure, whereas the salaries of the employees in the schools are still centrally distributed. The municipalities that are in the second phase of decentralization receive block grants for both, infrastructure and salaries of the school employees. The councils of the municipalities are fully responsible for the internal distribution of the financial resources from the block grants among the schools that fall under their responsibility. The management of all schools for pupils with special needs is under direct responsibility of the Ministry of Education and Science. The teaching in Macedonian schools is conveyed in four languages. Apart of the Macedonian language as official language in the country, the pupils have option to select studying in Albanian, Turkish or Serbian. In some schools the students also have the option to select non-compulsory (elective) subjects for learning about the culture and language of Aromanians or Roma people. The curricula for the subjects in the primary and general secondary education and for the general subjects in the vocational education are prepared by the Bureau for Development of Education and for the vocational subjects by the Centre for Vocational Education and Training. The quality assurance in the educational institutions is under supervision of the State Educational Inspectorate.

There are 21 higher education institutions in the country, out of which seven are public universities. In the recent years the number of students (regular and part-time) studying at Macedonian universities is steadily increasing.

Special priority of the Republic of North Macedonia is the adult education, an activity which is regulated with the Law on Adult Education and Law for Vocational Education. The system of adult education is promoted by the Centre for Adult Education, an institution established by the government in order to contribute through the adult education to the achievement of socio-economic needs of Macedonia, to meet the needs of the labor market and to assist individuals in their personal development.

The Republic of Macedonia is participating in the Erasmus+ programme as a Programme Country. The country completed the referencing of the National Qualifications Framework to the European Qualification Framework, a process which was implemented by the Ministry of Education and Science with support from the ETF.

Stages of the Education System

Education is compulsory between the ages of six to 19 for general secondary education, or from six to 17, 18 or 19 for vocational education and training depending on the selected VET track.

The educational system in the Republic of North Macedonia consists of three sub-systems:

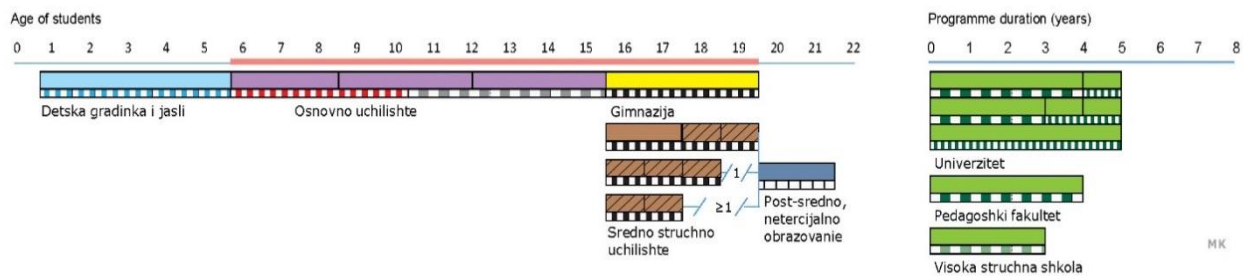
- **Primary education (ISCED 1 and ISCED 2):** in duration of nine years, free of charge and compulsory for all children aged 6 to 15, with no regards to the gender, religion and nationality. The primary education activities are defined and regulated by the Law on the Primary Education and with the Concept for Nine-years Primary Education. The mission of this sub-system is to raise, educate and guide. In the first three grades the assessment of the pupils is descriptive, and for the rest of the grades is numeric (marks 1 to 5). Private primary education schools are not recognized in Macedonian education system. However, private primary schools exist and their pupils are mainly of foreign citizenship.
- **Secondary education (ISCED 3):** general secondary education (Gymnasium) in duration of four years and vocational education (Vocational Schools) in duration of two (vocational education of two years), three (vocational education for professions) or four years (vocational technical education). The secondary education is compulsory and comprises all children in the age cohort 15 to 19 years for the general secondary education, and for the age cohort 15 to 17, 18 or 19 in the VET depending on the selected track. The activities and responsibilities of the secondary education are defined and regulated with the Law on the Secondary Education and the Law for Vocational Education and Training. The secondary education is free of charge in the public secondary schools. The pupils also have the legal option to enroll into the private secondary schools which are officially recognized by the Macedonian educational system; there are 16 private secondary schools in the country. In several schools in the country there are bilingual classes in which the teaching of non-language subjects is performed in foreign language (French or English);
- **Higher education (ISCED 5, 6 and 7):** implements under-graduate, master and doctoral studies in the higher educational institutions and institutes which are autonomous and independent. There are seven state universities and 14 private universities in the Republic of North Macedonia. The activities are defined and regulated by the Law on the Higher Education. In

accordance to the national policy for provision of equal access to the higher education, social cohesion and lifelong learning, the state introduced the Project 35/45, which promotes enrollment of the students from the age cohort 35 to 45 years.

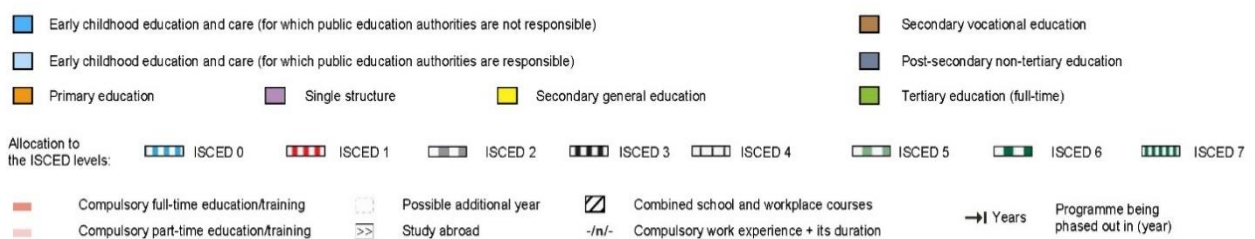
The educational system comprises also the children with special needs and who are enrolled in the schools for special education or within the regular teaching process depending on the preferences of the students and their parents. There is separate curriculum for these schools.

Structure of the National Education System of North Macedonia

North Macedonia – 2023/2024



Note. The leaving age for compulsory education may vary from 17 to 19 years and 6 months depending on the type of programme. The lowest leaving age (17) applies to students attending the two years vocational programme (*strucno osposobuvanje*) while the ending age of 18 applies to those attending the three years vocational programme (*strucno obrazovanie za zanimanja*). The highest leaving age of 19 years and 6 months applies to students attending general secondary education (*gimnazisko obrazovanie*) or a four years programme of vocational education (*chetrigodishno strucno obrazovanie*).



Source: Eurydice.

General Information on the Educational system in Kochani municipality:

In municipality of Kochani there are six primary schools, one of which is a musical school and there are two secondary schools.

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The situation in the primary schools in the school year 2023/24 is as follows in the table below:

Primary school	Number of students	Number of classes	Average number of students per class
PS "Krste P. Misirkov"	197	19	10
PS "St. Cyril and Methodius"	954	48	20
PS "Rade Kratovche"	425	28	15
PS "Malina Popivanova"	482	29	17
PS "Nikola Karev"	500	37	13
Music school "Risto Jurukov" Kochani	164	20	8
TOTAL	2722	181	15

As for the Secondary schools in Municipality of Kochani, the situation in the school year 2023/24 is as follows:

Secondary school	Number of students	Number of classes	Average number of students per class
SS "Ljupcho Santov"	503	31	16
SS "Gosho Vikentiev"	559	34	16
TOTAL	1062	65	16

From August 5th, 2019 (National gazette 161 of Republic of North Macedonia), there are changes in the national Law for education that emphasize the inclusion of the children with special needs and working systematically with the gifted and talented children.

4.3 Overview of the education system in Larissa, Greece

Standard Education system

The standard education system in Greece includes:

- Primary Education / Pre- secondary Education
- Secondary Education (Lower and upper)
- Higher Education
- Level 3 post-secondary vocational education and training
- Level 5 post-secondary vocational training

Compulsory Education in Greece

Compulsory education in Greece consists of:

- two-year compulsory schooling of infants in Kindergarten
- six-year study of students in Primary school
- three-year study of students in High school (Gymnasiums)

Primary education

Primary Education consists of:

- compulsory attendance of children in Kindergarten (4-6 years)
- six-year study in Primary school (6-12 years)

Secondary Education

Secondary Education includes two stages. The first is compulsory and corresponds to the three-year High School - Gymnasiums (day - evening) for students 13-15 years of age.

The second stage is optional – non compulsory. Students can choose between General Lyceum (GEL) and Vocational Lyceum (EPAL), three years of study for students 16-18 years of age. Gymnasiums, like High schools, can be public or private.

General Lyceums: At the 2nd grade students choose direction between the following subjects: Humanistic Studies and Sciences. At the 3rd grade students who chose Sciences are divided in three directions : Positive Sciences, Sciences of Health and Economics- Informatics.

Vocational Lyceums: In the 2nd grade students choose direction between the following sectors:

- Agriculture, Food and Environment Sector
- Department of Administration and Finance
- Construction, Built Environment and Architectural Design Sector
- Field of Applied Arts
- Electricity, Electronics and Automation Sector
- Department of Mechanical Engineering and Automatism
- Maritime Professions Sector
- IT Sector
- Health - Welfare - Wellness Sector

Special Needs Education (public schools)

Schools for students with special needs: in Primary and Secondary education.

Intercultural schools for students (refugees and immigrants, gypsies etc.): in Primary and Secondary education.

Other types of public schools

Musical Schools: only in Secondary Education, lower and upper. Students have the same lessons with other schools, but they also learn music (Theory, Harmony and playing musical instruments).

Arts Schools : only in Secondary Education, lower and upper. In these schools there are three directions : Visual Arts, Theatre- Cinema, Dance. Students are chosen by exams for the 1st grade.

Pattern Schools (Protypa): only in Secondary Education, lower and upper. Students are chosen by exams in Greek Language and Mathematics for the 1st grade. These schools aim to cultivate and spread the idea and practices of excellence in the education system.

Experimental Schools: in Primary and Secondary Education. Students are chosen by draw for the 1st grade. Experimental Schools aim to support the experimentation and pilot application of educational innovations in the educational system, in a random sample of students.

Ecclesiastical Schools: only in Secondary Education, lower and upper. Students are chosen by exams in Greek Language, Mathematics and Religious Education for the 1st grade.

Schools of Minority Education: in Primary and Secondary Education. These schools are for Turkish Minority (Muslims) who remained and live in Thrace today after the Treaty of Lausanne.

Higher Education

Higher education includes only public universities:

- University sector: Universities, Polytechnic, Academy of Fine Arts (ASKT).
- Technology sector: Technological Educational Institutions (ATEI)
- Higher School of Pedagogical and Technological Education (ASPAITE)

General Education of adults

General formal education for adults is part of general formal education and is provided in:

- Second Chance Schools (SDE). Second Chance Schools are public and are aimed at people aged 18 and over, who have not completed the compulsory nine-year education and have a primary school diploma. Studying is two years.
- Evening General High School (for employees)
- Evening Vocational High Schools
- Vocational Training Schools (SEK). They provide level 3 post-secondary vocational education and training.
- Professional Apprenticeship Schools (EPAS) of Labor Force Employment Agency (OAED). They provide level 3 post-secondary vocational education and training. They are public schools.

- Vocational Training Institutes (IEK). Vocational Training Institutes provide initial vocational training to graduates of non-compulsory secondary education, of General High Schools (GEL) and Vocational High Schools (EPAL), as well as holders of equivalent qualifications. Vocational training lasts 4 semesters (an extra semester is Training). Vocational Training Institutes can be public or private and provide degree level 5 post-secondary vocational training.
- Post- Graduate Year - Apprenticeship Class. The Post-Graduate Year - Apprenticeship program lasts 11 months and provide degree level 5 post-secondary vocational training.

General non-formal adult education is provided in an organized educational context outside the formal education system in:

- Lifelong Learning Centers (KDBM)
- Colleges

Lifelong Learning Centers can be public or private. The total duration of the training program is determined based on its subject matter, the purpose of the intervention and the profile of the participants. The Colleges are private and are aimed at graduates of standard non-compulsory secondary education.

Evaluation

High school students (Gymnasiums) participate in their school's promotional or graduation exams during the first fifteen days of June. The students of General and Vocational Lyceums participate in their school's promotion or graduation exams during the May/June examination period. If they pass these exams they are promoted to the next grade or they graduate. If they fail, they must participate in re-exams. If they fail again, they have to repeat the same class. The students of the 3rd grade of General and Vocational Lyceums can participate in Greek National exams in order to succeed in Higher Education and Vocational Training Institutes.

Overview of the Educational System in Municipality of Larisa

Municipality of Larisa is a big municipality with many schools in Primary, Secondary and Higher Education. The education system follows the national plan for Education as it is configured by Ministry of Education, Religious Affairs and Sports, following the European strategies.

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Municipality of Larisa includes educational institutions of Larisa and city sections (Giannouli, Falani and Koilada).

During the school year 2023-2024 in the municipality of Larisa will be functioning the following educational institutions:

Primary/Pre-secondary Education (13.300 students, 2.000 teachers, 132 schools)

- 60 kindergartens: among them 3 kindergartens for Special needs education
- 48 primary schools: among them 3 primary schools for Special needs education
- 24 private schools (4 primary schools and 20 kindergartens)

Secondary Education (13.000 students, 1.800 teachers, 52 schools)

- 21 Gymnasiums (1 evening school)
- 1 Experimental Gymnasium
- 16 Lyceums
- 1 Experimental Lyceum
- 6 Vocational Lyceum (EPAL) – 2 of them are evening schools
- 1 Vocational Gymnasium- Lyceum (Special needs education)
- 3 Vocational Training Schools (SEK)
- 1 Music school (Gymnasium-Lyceum)
- 5 private schools (Gymnasiums- Lyceums)
- 1 school (Special needs education)

Higher Education

- University sector: Medical School (University of Thessaly)
Biochemistry (University of Thessaly)
- Technology sector: Technological Educational Institutions (ATEI of Thessaly)
 - School of technological appliance
 - School of Management and Economics
 - School of Agricultural Technology and Food

- School of Health Professions - Welfare

General Education of adults

- 2 Second Chance Schools (SDE), 1 of them inside prison of Larisa.
- 1 Professional Apprenticeship School (EPAS) of Labor Force Employment Agency (OAED).
- 4 public Vocational Training Institutes (IEK).
- 8 private Vocational Training Institutes (IEK).
- Lifelong Learning Center (KDBM) of Municipality of Larisa
- 3 private Colleges

5. Strengths and weaknesses in the education sector:

Strengths:

A growing number of initiatives and actions related to climate change, biodiversity and sustainability are taking place in education and training in the municipalities of Pazardzhik, Kochani and Larissa.

Ecological citizenship is part of modern cosmopolitan education and is based on the concept of ecological footprint or in other words the impact of people on the environment and ecological systems. In an ecologically fragile and interdependent world, there is no more compelling reason to focus students' attention on their role, and each of us, in reducing our negative ecological footprint and protecting the environment by conserving the forests, waters, soils, plants and animals around us and by recycling waste and reducing sources of pollution.

Regulation No. 6 of 2001 on the allocation of teaching time for the attainment of the general education minimum by grades, stages and levels of education in pre-school and school education provides for classes in the following subjects in Bulgaria "Man and society", "The environment, man and nature", "Chemistry and environmental protection". Extra-curricular activities are also organised to explain the benefits of separate waste collection, tree and flower planting campaigns, and cleaning of areas and spaces. Some class periods include topics for eco-discussions, as well as practical activities to measure air and water with instruments.

North Macedonia's educational system demonstrates a commendable commitment to addressing contemporary global challenges, particularly in the realms of ecology, climate change, and renewable energy resources (RER). One notable strength lies in the mandated inclusion of ecological standards in 30% of teachers' lessons, reflecting a proactive approach to nurturing environmentally conscious citizens.

Teachers in North Macedonia play a pivotal role in shaping the perspectives and values of the younger generation. The obligation to incorporate eco-friendly principles into a significant portion of their lessons ensures that students receive a well-rounded education that encompasses environmental awareness and sustainability.

Furthermore, the educational landscape in the Municipality of Kochani is poised for even greater strides in fostering ecological consciousness. The initiation of new Erasmus+ projects in schools within the municipality signals a progressive step towards holistic education. These projects not only aim to enhance digital skills but also emphasize the integration of ecology-related content and knowledge into the curriculum.

Participating in Erasmus+ projects provides students with invaluable opportunities for international collaboration, exposure to diverse perspectives, and the chance to engage with global environmental issues. This approach not only enriches their educational experience but also equips them with the skills and knowledge needed to navigate an increasingly interconnected world.

The emphasis on digital skills is particularly relevant, considering the evolving nature of the global economy and the increasing reliance on technology. By combining digital literacy with ecological awareness, the educational initiatives in the Municipality of Kochani are preparing students to be informed, responsible, and adaptive individuals capable of contributing to a sustainable future.

In conclusion, North Macedonia's commitment to integrating ecological standards into the educational system, coupled with the forward-looking initiatives in the Municipality of Kochani, underscores a strong dedication to preparing students for the challenges of the 21st century. These efforts not only empower students with essential skills but also cultivate a sense of responsibility towards the environment, ensuring that the next generation is well-equipped to address pressing global issues.

Environmental Education was officially introduced in Greece with a law in 1990 for Secondary Education and in 1991 for Primary education. Ministry of Education compiled a Cross-Curricular Programme Framework of Studies to give directions for project implementation. There was also a curriculum for the Environment and Sustainability compiled in 2010, but it has not been implemented.

Although Environmental Education is not a part of the Ministry of Education's formal curriculum, teachers can still implement Environmental Education on a voluntary basis.

In secondary education, with the voluntary participation of teachers, students, and parental consent, programs such as after-school clubs often take the lead in implementing Environmental Education activities and instruction. Teachers have the right to choose or co-decide with their students, their project topic in relation to the local environment, the local needs, and any immediate needs that arise (such as forest fires or floods). This approach in experiential learning focuses on problem-solving and project- and inquiry-based learning. The duration of these programs is typically 5 months and the outcomes are the development of student-directed action with a particular focus in civic engagement.

Schools can also become members of Environmental Education networks and communities of practice. In addition to schools programs, there are also Centers of Environmental Education in each of the 52 prefectures in Greece. These centers implement one- to two-day programs for K-12 students. These programmes consist of local field trips to forests, beaches, wetlands, cities and cultural and archeological sites.

Weaknesses:

However, despite progress and growing public interest, education on environmental sustainability is not yet a systematic feature of educational policy and practice in the municipality.

There are currently no open classes in the educational institutions in the municipality of Pazardzhik with the profile "Ecology" or "Environmental Education", etc., which explore the issue of environmental awareness in more depth.

Unfortunately, education is mainly focused on theory and practical training is significantly less.

As potential weaknesses in the educational curriculums in North Macedonia in the secondary schools related to the main topic of this project, is that:

- Education is mainly related to frontal lectures, while experiential knowledge is often missing.

This refers to almost all school subjects.

- Not much of lecturing on ICT, for the teachers, which can be implemented in the school subjects, is present in North Macedonia. Teachers have to be thought about the possibilities of using the new technologies in lecturing and then to apply that knowledge to the pupils.

- Lack of financial means for buying ICT equipment.
- No interdisciplinary approach to the theme of sustainable energy, climate changes, RER.

In Greece, although, there is a significant effort from teachers and students to protect environment, climate change makes us realize the weakness of human being in front of nature. The region of Thessaly faced floods and disasters in the summer of 2023. That made us understood that Environmental Education is very important not only for students and kids but for all adults. Environmental Education is crucial for all of us and should be introduced in formal school curriculum, not in theory but also in practice.

6. Good practices identified by project partners

- **Project SAVE4WASTE**

SAVE4WASTE project, funded by the Erasmus+ programme, with reference number 2021-1-BG01-KA220-SCH-000032763, starts in 2022 with a start date of 01.01.2022 and has a duration of 24 months.

Lead Partner: Center for Sustainability and economic Growth, Pazardzhik

Project topic: S4W project focuses on piloting actions upon food waste prevention, management and reduction, and aims at fostering students' ability to think critically and to adopt a proactive attitude by:

- Raising students' awareness of the problem of food waste;

- Increasing their knowledge about reasons for and impacts of food wastage, pointing them towards specific options for actions that are within their sphere of influence by teaching them new skills related to evaluation of food quality and understanding proper food storage, food preservation options, and so on.

Main project objectives:

S4W project aims to promote awareness regarding the economic, social, and environmental consequences of food waste, highlighting actions and habits that people can take to reduce their own food waste. The project will develop a curriculum and pilot activities in three primary schools in Bulgaria, Greece and North Macedonia that will allow teachers to select those activities that best suit the needs, abilities and interests of their students.

- **Project ECO KIDS: Eco gardens in our Kindergartens**

ECO KIDS: Eco gardens in our Kindergartens, funded by the EU Programme ERASMUS+, started at 2018 with duration of 24 months.

Project Partners: Bulgaria, North Macedonia and Croatia.

Project topic: The project focuses on a significant amount of waste generated on a daily basis that can be reused with relatively little effort.

Main project objectives:

The project aims to develop an appropriate framework for teaching pre-school children about topics such as "Reuse and recycle a large part of the waste that is generated on a daily basis", which will be implemented by increasing the competences and skills of kindergarten teachers in order to develop their own approach to teaching topics related to waste management and recycling, an important concept to stimulate kindergarten children to undertake and participate in their own pilot projects for composting and production of eco-products.

- **Project “ECO-EDU- We grow up with eco resources “**

Project “ECO-EDU-We grow up with eco resources “, funded by the EU Programme ERASMUS+, started at 2015 with duration 24 months.

Funded by the European Union. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the Human Resource Development Centre (HRDC). Neither the European Union nor HRDC can be held responsible for them.

Project partners: Bulgaria and North Macedonia

Project topic: Focus on energy efficiency and use of renewable energy sources.

Main project objectives:

The project aims to provide students with a basic knowledge and habits of energy efficiency and the use of renewable energy sources using modern interactive learning tools.

- **Project My Virtual Town: the education system as a democratic way to help students actively participate in all spheres of economic, environmental and social life at local level.**

Project My Virtual Town: the education system as a democratic way to help students actively participate in all spheres of economic, environmental and social life at local level., funded by the EU Programme ERASMUS+, started at 2018 with duration 24 months.

Project partners: Bulgaria, North Macedonia and Slovenia

Project topic: The project focuses on increasing teachers' skills and knowledge in areas such as teamwork and collaboration, which will lead to the development and implementation of common educational approaches targeting their students.

Main project objectives:

The project aims to increase the skills and knowledge of current and future secondary school students related to the various challenges we face in daily public life, thus becoming active members of their local communities.

The project also aims to present the benefits of the Learning by Doing approach to education on topics of great public interest.

The project will help teachers learn about and adopt innovative educational practices, teaching techniques leading to more attractive educational approaches for students.

- **Project “A modern school with a strong European identity”**

Project “A modern school with a strong European identity”, funded by the EU Programme ERASMUS+, with reference number 2022-1-EL01-KA122-SCH-000069230, started in 2022, with a start date of 01.09.2022 and had a duration of 12 months.

Project topic: The project focuses on increasing teachers' and students' skills and knowledge in areas such as teamwork and collaboration, and use of ICT and intercultural education in teaching. This method will lead to the development and implementation of common educational approaches targeting the best educational results.

- **Project “European Parliament Ambassador School Programme (EPAS)”**

Project “European Parliament Ambassador School Programme (EPAS)” funded by European Parliament aims at increasing students' awareness of European parliamentary democracy, the role of the European Parliament and European values. It also encourages them to actively participate in EU democratic processes. It targets students with diverse educational, social and geographical backgrounds.

At the end of each school year, the activities carried out by schools are evaluated. Our school is a European Parliament Ambassador School for the last two years. Teachers and students during last year participated in Euroscola sessions in Strasbourg.

- **Participation in world relay race “Running out of time” (protesting about climate change and nature)**

World relay race “Running out of time” started from Glasgow (Scotland) at September 30th 2022 and ended in Egypt. It was a 7.200 km non-stop relay, carrying a baton with a climate change message from young people to the decision makers at COP27. The baton journeyed through 18 countries - UK (Scotland, Wales, England), France, Belgium, Netherlands, Germany, Austria, Italy, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania, Greece, Cyprus, Israel, Egypt. The baton arrived to Sharm el-Sheikh on November 6th 2022 in time for COP27 meeting from 7th-18th November 2022. Our school, 1st Experimental Lyceum of Larisa took part in this event.

Our students and teachers ran, carried the baton and protested with placards in front of Thessaly Regional Administration in order to raise awareness about climate change.

- **Cooltorise project policy brief document “How to address Summer Energy Poverty in public policies”**

One of the main objectives of Cooltorise project is raising awareness of summer energy poverty but it also aims to identify ways to address it. The main objective of the policy brief document “How to address Summer Energy Poverty in public policies” developed within Cooltorise is exactly this – to identify policy methodologies on how to address summer energy poverty. The added value includes not only the development of project activities but also the fact that it aims to incorporate its experiences, results, and strategies into policymaking. Recognizing the importance of policy development in guiding actions at different levels, the Cooltorise policy brief document provides stakeholders with key guidelines for designing policies to address summer energy poverty. In order to tackle this, the document is structured according to three sections covering:

- 1) **summer energy poverty measurement;**
- 2) **impact on wellbeing conditions and urban scale;**
- 3) **health impact.**

The full policy brief can be found here: <https://cooltorise.eu/training-downloads>.

7. Action Plan

In the action plan, all the main objectives are translated into real examples of potential ideas that can be implemented by the project partners involving different stakeholders in the education sector over the next 5 to 10 years. The activities are presented in an identical way, describing the implementer(s) of the activity, the timeframe for its implementation, the expected results, other potential actors, human resources as well as the prerequisites for the implementation of the foreseen activities.

Activity 1:

Activity description	Project “Tree planting and climate change mitigation” It is a well-known fact that temperatures have been gradually rising in recent decades. This is mainly due to complex climate changes and unfortunately this trend leads to
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extremely high temperatures in urban areas during the hot, summer period. The main objective of this project is to stimulate behaviour among citizens that will lead to the cultivation of trees and plants in cities that can eventually form large green parks. These green spaces and parks will help to combat a growing problem in recent decades: the steadily rising summer temperatures and the fight against so-called 'summer energy poverty'. Green spaces in cities can help to mitigate the effects of 'heat waves', in which urban centres are characterised by excessively high temperatures in summer and living conditions deteriorate. Green spaces will mitigate the effects of heat waves by reducing (cooling) temperatures in European cities during the hot summer period.

One way to tackle this problem is to develop an app that teaches people how to plant different types of vegetation and how to care for it afterwards. This could be one of the solutions to fight environmental problems. The app will be designed to look like an AR mobile game that can be downloaded from the app store - the person using it will have to choose the location and type of plant or tree they want to plant and attach it to a map in the app. There will also be an option to share the location of the seedlings so that other people using the app can see it and join in if they want to, making it a social activity. The more people use the app, the more trees and plants are planted.

This activity can be organized as an event or some kind of competition between schools, universities and even

	companies - with the help of the app they can significantly increase the number of trees and plants on the territory of the participating municipalities.
Activity contractor	<ul style="list-style-type: none"> - People willing to download the app and participate in the activities. - Schools using the app as a way to educate students about greener living. - NGOs, public bodies and companies willing to implement or collaborate with this project. - IT company to develop the Plant App.
Expected results	<p>Improvements:</p> <ul style="list-style-type: none"> - Knowledge of environmental issues; - Knowledge of how to be more environmentally friendly; - Basic skills and competencies on contemporary issues such as clean environment, climate change issues combined with modern technology, summer energy poverty, etc.
Implementation period	2025-2028
Human Resources	<ul style="list-style-type: none"> - Application and website developers; - Experts on topics such as environmental protection and climate change; - Policy experts from different key stakeholder groups such as: public authorities, NGOs and the education sector; - Communication and dissemination experts; - Teachers educating students through the app.
Budget	EUR 150,000 – 200,000

Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.
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Activity 2:

Activity description	<p>Project "Eco-builder"</p> <p>Nowadays, taking care of the environment is not among people's top priorities and it will be very difficult to change that. One way to make it easier to understand such a big and serious topic so that people can take more steps to create solutions to the problem is by making it in a game.</p> <p>Creating an app with elements of a mobile game will both entertain people and raise awareness of the problems affecting the environment as well as their solutions. The app will use augmented reality technology for further immersion to make the game more realistic and have a lasting impact on the user.</p> <p>It will consist of the player pointing their camera at a building and generating information (statistics) about that building. Using this information, he can compare different improvements to the building and try to make it greener and improve its energy efficiency. Players will gain knowledge on specific topics such as:</p> <ul style="list-style-type: none"> - Energy audit of a building; - Measures to improve energy efficiency; - Payback period of the renovation measure investment; - CO2 emissions from different energy sources;
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	<ul style="list-style-type: none"> - Relationship between energy saved and money saved; <p>Buildings will be rated on their energy efficiency and will be given the appropriate level. The higher the level of a building, the more environmentally friendly it is.</p> <p>In this way, the average player will have more knowledge about the energy efficiency of buildings and improve the engineering background of students, which will significantly increase their chances in the labour market, and on the other hand, it will lead to an increase in the number of young people wishing to continue their education in universities with technical studies.</p>
	<ul style="list-style-type: none"> - People/students who wish to download the app and participate in the activities; - Schools using the app as a way to educate students about greener living; - NGOs, public bodies and companies who wish to implement or collaborate with this project; - IT company to develop the app;
<p>Expected results</p>	<p>Improvements:</p> <ul style="list-style-type: none"> - Knowledge of environmental issues; - Knowledge on how to be more environmentally friendly; - Basic skills and competences on contemporary topics such as clean environment projects, energy performance of buildings and climate change issues;

Implementation period	2025-2028
Human Resources	<ul style="list-style-type: none"> - App and Website Developers; - Experts on topics such as environmental protection; - Policy experts from various key stakeholder groups such as: public authorities, NGOs and the education sector; - Communication and dissemination experts;
Budget	EUR 170,000 – 230,000
Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.

Activity 3:

Activity description	<p><i>Digital interactive waste management guide for teachers and students</i></p> <p>Unfortunately, it is no secret that protecting the environment is not among people's priorities and will be extremely difficult to change. The best way to simplify a topic so vast and difficult to understand is to introduce children to nature. Following on from the work of the project and continuing the activities after the end of the project, the partners can further enhance the project by integrating some parts of it into a "digital interactive manual" that will educate students and teachers in an attractive and interactive way on topics such as separate waste collection, composting, recycling, clean environment challenges, etc.</p> <p>By creating a handbook with 3 different modules, we can simultaneously entertain students and teachers and raise awareness about environmental issues and solutions. This digital handbook will consist of 3 parts related to food waste</p>
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	<p>management and recycling.</p> <p>The first part will contain tips on separate waste collection and recycling. The second part will be dedicated to food waste and will deal with how we can use leftover food to make new meals. The last part of the book will contain tips on how to use food scraps to turn them into other products:</p> <ul style="list-style-type: none"> - making a birdhouse out of a milk carton - making compost from your food waste - making a mini greenhouse and planting herbs and spices. <p>This will help to reduce the distance the product will travel to the end users.</p> <p>The digital interactive guide will contain short and attractive videos and cartoons that will illustrate good practices for waste collection, recycling and treatment that have already been successfully implemented in different European regions, and provide interactive guidance on how to improve local waste management systems. It will also provide information on how, by collecting waste separately, we are protecting nature - its waters, soils and the air that we so desperately need. The handbook will be distributed during various activities and events in schools, NGOs, local authorities and other stakeholders.</p>
<p>Activity contractor</p>	<ul style="list-style-type: none"> - Teachers and students interested in using the digital interactive guide and participating in the activities; - Schools using the guide as a tool to teach students about greener living; - NGOs, public authorities and companies willing to

	<p>implement or collaborate with this project;</p> <ul style="list-style-type: none"> - IT company to develop the interactive digital part of the handbook;
Expected results	<p>Improvements:</p> <ul style="list-style-type: none"> - Knowledge of environmental issues; - Knowledge of waste management, composting and food waste reduction; - Knowledge of how to be more environmentally friendly; - Basic skills and competencies on contemporary topics such as clean environment projects, food waste management and climate change issues;
Implementation period	2025-2028
Human Resources	<ul style="list-style-type: none"> - Experts on topics related to health and nutrition; - Experts on ecology; - Policy experts from different key stakeholder groups: public authorities, NGOs and education sector; - Communication and dissemination experts;
Budget	EUR 50,000 – 70,000
Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.

Activity 4:

Activity description	<p><i>Energy management in school</i></p> <p>Within the classes, an "energy team" will be formed. Its members will be trained on energy efficiency in school.</p>
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	<p>Simple measurement devices should be purchased with which the energy team will be able to measure energy consumption in the classroom. In the first stage, at the beginning of the heating season in the school, the energy team will take measurements for a short period (e.g. one month) without taking any energy-efficient action. In the second stage, the energy team will take the same measurements along with implementing some simple energy efficiency actions for the same period as in the first stage (e.g. one month). They will then compare the results which will be reported to the whole class. Based on the findings, each team will prepare an energy audit of the building and calculate the savings for the entire building. In the next step it is also important to disseminate the findings in the wider local environment (knowledge transfer in the home environment, informing the media about the project, etc.).</p>
<p>Activity contractor</p>	<ul style="list-style-type: none"> - People/students who wish to download the app and participate in the activities; - Vocational schools using the app as a way to educate students about a more environmentally friendly lifestyle; - NGOs, public bodies and companies who wish to implement or collaborate with this project; - IT company to develop the app;
<p>Expected results</p>	<ul style="list-style-type: none"> - Reduction of energy use at school; - Behaviour change among students; - Increase knowledge on specific topics such as energy efficiency among teachers and students;
<p>Implementation period</p>	<p>2023-2027</p>

Human resources	<ul style="list-style-type: none"> - Teachers and students; - NGOS; - Local authorities and stakeholders;
Budget	EUR 50,000 – 80,000
Financial resources	Own funding or EU programs from the current programming period 2021-2027.

Activity 5:

Activity description	<p>Project "Observe! React! Change!"</p> <p>The project aims to raise students' awareness of social and environmental issues and how we can influence them through social media. The main highlights are:</p> <ul style="list-style-type: none"> - Encouraging students towards active citizenship, free speech and taking action. They need to understand that their voice matters and that they also have power. - Inviting students to use social media where they can be heard and given a platform to share their opinions on regulations and municipal decisions. Creating a friendly social environment where they can share without worry. - Encouraging students to see and respond. They need to be empathetic to the city's problems, and to exhibit critical thinking and voice their opinions towards local government decisions and how these decisions will affect their future. - Students should observe the changes happening around them in relation to the environment and public issues and a discussion should be held. During this, they should share their views, expectations, thoughts and disagreement/agreement.
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	- Improve teachers' knowledge and skills about social media so that they can have an even better connection with students and can monitor the whole process of students expressing their thoughts on social media.
Activity contractor	<ul style="list-style-type: none"> - Teachers and students; - Education stakeholders; - NGOs working in the field of education, entrepreneurship and human development;
Expected results	<ul style="list-style-type: none"> - Improving education policy; - Creation and promotion of an active civil society among adolescents; - Improving teachers' knowledge and skills on social networking topics;
Implementation period	2025 - 2028
Human Resources	<ul style="list-style-type: none"> - Teachers and students; - Education stakeholders; - NGOs working in the field of education, entrepreneurship and human development; - Local authorities;
Budget	EUR 50,000 – 60,000
Financial resources	Own funding or other potential EU programs from the current programming period 2021-2027.

Activity 6:

Activity description	<p><i>Introduction of ICT-based methods in the subjects through the use of holograms.</i></p> <p>The main objective of the project is to increase students'</p>
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	<p>interest in STEM subjects related to environmental protection and to help them with their academic performance.</p> <p>The objective is planned to be achieved by developing an educational concept based on hologram technology for students aged 13-14 years.</p> <p>Schools have a real need to train and equip staff in ICT and to create modern, innovative approaches to teaching.</p>
Activity contractor	<ul style="list-style-type: none"> - Schools from all three countries (students and teachers); - NGOs; - IT experts;
Expected results	<ul style="list-style-type: none"> - Increased interest and higher grades in STEM subjects; - Creation of new, innovative digital educational materials related to water, air and soil conservation using holograms; - Teachers in schools gain knowledge of ICT usage;
Implementation period	2025 - 2028
Human Resources	<ul style="list-style-type: none"> - Hologram software development experts; - Experts in training teachers to create content in STEM subjects that can be used for hologram software; - Communication experts (to work with different stakeholder groups);
Budget	EUR 250.000
Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.

Activity 7:

Activity description	<i>Introducing the concept of green entrepreneurship to high school students</i> Enabling teachers to acquire additional skills to work with students, training in new teaching methods related to the entrepreneurial potential of the climate change challenge and the transition to a green economy.
Activity contractor	<ul style="list-style-type: none"> - High school teachers and students; - Experts from NGOs to create training on green entrepreneurship and create new teaching methods;
Expected results	Secondary school teachers are trained to recognise the potential of the transition to a green economy and an educational method has been developed to introduce green entrepreneurship in school classrooms, based on creative thinking as a problem-solving method
Implementation period	2025- 2028
Human Resources	<ul style="list-style-type: none"> - Experts in entrepreneurship; - Communication experts (to work with different stakeholder groups);
Budget	EUR 120.000
Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.

Activity 8:

Activity description	<i>Project "Light pollution"</i>
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	<p>Light pollution is a global problem today due to economic, astronomical, safety and health issues that affect people and cause many adverse effects to them. All beings are dependent on the body's natural cycles, called circadian rhythms, and melatonin production, which are regulated by light and dark (e.g. day and night). We all live in areas where these rhythms are disrupted because we are exposed to light all the time. During sleep, melatonin production can be suppressed, which can lead to sleep disorders and other health problems, such as increased headaches, worker fatigue, medically induced stress, some forms of obesity due to lack of sleep, and increased anxiety.</p>
Activity contractor	<ul style="list-style-type: none"> - High school teachers and students; - Experts from NGOs to organize trainings on green entrepreneurship and create new learning methods;
Expected results	<ul style="list-style-type: none"> - Sharing of new knowledge and skills between teachers and students - collaboration with international partners, creating strong links for future cooperation. - A brochure on project activities and best practices, including a multilingual dictionary that can be used by other schools. - Solutions developed against light pollution by students from vocational education and training schools.
Implementation period	2025 - 2028
Human Resources	<ul style="list-style-type: none"> - Application and website developers; - Experts on topics such as environmental protection; - Experts in communication and information

	<p>dissemination;</p> <ul style="list-style-type: none"> - Teachers teaching students through the app.
Budget	EUR 150.000
Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.

Activity 9:

Activity description	<p>Project "Raising the level of understanding of public activities in schools"</p> <p>The project to raise the overall level of understanding of public (socially relevant) activities in schools in the three participating regions aims to:</p> <ul style="list-style-type: none"> - Organizing student visits and observations of the production process in municipal waste collection plants, recycling centers, drinking water treatment plants, wastewater treatment plants, green area maintenance plants; - Real participation in activities of public interest ; - Creation of information material: brochures, leaflets, posters, etc., on the above topics; - Environmental protection ideas (nature without waste, water saving, recycling, separate waste collection, ban on single-use plastics); - Student competitions on the above topics;
Activity contractor	<ul style="list-style-type: none"> - Schools (teachers and students); - Non-governmental organisations; - Local public enterprises; - Local authorities;
Expected results	<ul style="list-style-type: none"> - Increasing teachers' and students' knowledge on

	<p>topics of social importance;</p> <ul style="list-style-type: none"> - Acquire practical skills related to how we can keep nature clean and improve our lifestyles by recycling, saving water, reducing the amount of plastic used; - Creating habits in students to recycle and use natural resources properly;
Implementation period	2025 - 2028
Human Resources	<ul style="list-style-type: none"> - Schools; - Non-governmental sector organisations; - Local public enterprises; - Local authorities; - Other stakeholders;
Budget	EUR 150.000 – 200.000
Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.

Activity 10:

Activity description	<p>Title: Establishment of Environmental Education Resource Centers</p> <p>Project partners will collaborate to establish environmental education resource centers in different countries. These centers will serve as hubs for educators, students, and community members to access educational materials, tools, and information related to environmental topics. They will offer workshops, training sessions, and educational programs to support the integration of environmental education into curricula and extracurricular activities. The centers will also provide networking opportunities and technical assistance to schools and educational institutions.</p>
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- Activity contractor	<ul style="list-style-type: none"> - Municipalities - Regional Authorities - Local – Regional Councils - NGOs
Expected results	<ul style="list-style-type: none"> - Empowerment of communities to take action on local environmental issues through education and awareness - Increased collaboration and knowledge-sharing among educators and environmental experts - Improved access to high-quality environmental education resources for educators and students. - Enhanced capacity of schools and educational institutions to deliver effective environmental education programs.
Implementation period	2023 - 2027
Human Resources	<ul style="list-style-type: none"> - Staff members to manage and operate the resource centers. - Trainers or facilitators to lead workshops and training sessions. - Volunteers or interns to assist with center activities.
Budget	EUR 200.000 – 500.000.
Financial resources	Ministries, European funding opportunities.

Activity 11:

Activity description	<p><i>Title: Establishment of Regional Environmental Education Forums</i></p> <p>The project partners will collaborate to establish regional</p>
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	<p>environmental education forums in different countries. These forums will serve as platforms for stakeholders from educational institutions, governmental bodies, non-governmental organizations (NGOs), businesses, and community members to come together to discuss and address environment-related issues in educational processes. The forums will organize regular meetings, workshops, and conferences focused on sharing</p>
Activity contractor	<ul style="list-style-type: none"> - NGOs
Expected results	<ul style="list-style-type: none"> - Increased awareness and understanding of environment-related issues among stakeholders in the education sector. - Enhanced cooperation and coordination among different socio-economic organizations and educational institutions in addressing environmental challenges. - Development of actionable strategies and initiatives to integrate environmental education into formal and informal educational settings.
Implementation period	2023 - 2027
Human Resources	<ul style="list-style-type: none"> - Project coordinators and facilitators to organize and manage the forums. - Representatives from educational institutions, government agencies, NGOs, businesses, and community organizations to participate in forum activities. - Trainers or experts to lead workshops and provide technical assistance.
Budget	EUR 10.000 - 50.000

Financial resources	Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.
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Activity 12:

Activity description	<p>Title: <i>Environmental Education Youth Camp</i></p> <p>Organize a week-long youth camp focused on environmental education for secondary school students from Pazardzhik, Kochani, and Larissa. The camp will provide hands-on learning experiences, outdoor activities, and workshops on topics such as sustainable agriculture, water conservation, eco-friendly lifestyles, and nature conservation. Participants will engage in experiential learning activities, team-building exercises, and environmental projects aimed at addressing local environmental challenges. The camp will also include cultural exchange activities to promote understanding and friendship among participants.</p>
Activity contractor	<ul style="list-style-type: none"> - Municipalities - NGOs - Private Companies
Expected results	<ul style="list-style-type: none"> - Increased environmental awareness and eco-conscious behaviors among participating students. - Strengthened friendships and cross-cultural understanding among youth from different regions. - Empowerment of students to take action on environmental issues in their communities. - Creation of environmental projects or initiatives

	with a positive impact on local ecosystems.
Implementation period	2023 - 2027
Human Resources	<ul style="list-style-type: none"> - Camp counselors - Environmental educators - Activity facilitators - Support staff - Managers from NGOs
Budget	EUR 25000 -100000
Financial resources	National or Private funding, Erasmus+ Programme; Other potential EU programs from the current programming period 2021-2027.

8. References

- [Ministry of Education and Science](#),
- [Bureau for Development of Education](#),
- [Centre for Adult Education](#),
- [Centre for Vocational Education and Training](#),
- National Examination center
(<http://www.dic.gov.mk>, <http://www.matura.gov.mk/Default.aspx?language=EN>).

Valuable data and analyses, in English as well, about the educational system are publicly available at the portal of the [State Statistical Office](#).

- [National Student Fee and Support Systems](#)
- [Organisation of the Academic Year in Higher Education](#)
- [Organisation of School Time in Europe](#) (Primary and general secondary education)
- [Recommended Annual Instruction Time in Full-Time Compulsory Education in Europe](#) (Presented by grades/stages for full time compulsory education as well as by subject and country.)



- [Teachers and School Heads Salaries and Allowances in Europe](#) (Salaries and allowances of teachers and school heads at pre-primary, primary, lower secondary and upper secondary education levels.)
- www.pazardjik.bg
- www.bnr.bg
- www.bta.bg
- www.reap-bg.eu
- www.cseq.eu