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REFE

FINAL REPORT

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Table of Contents

1	INTRODUCTION	3
2	OUR GOAL	5
	2.1. ARGUMENTS	5
	2.2. OBJECTIVES	6
3	SURVEY	7
	3.1. TARGHET GROUPS	8
	3.2. RESULTS	8
4	COMMUNICATION PLAN	9
5	IMPACT OF THE PROJECT	10
	5.1. FOLLOW - UP	10
6	CONCLUSIONS	11
	CONTACT	11

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1. INTRODUCTION

Although environmentalism is on the rise throughout Europe, consumerism and mass production are still deeply rooted in large parts of Romanian society. The 5th National Report on the Convention of Biological Diversity in Romania outlines the target to promote innovative traditional knowledge, practices and methods through awareness raising and education. The National Sustainable Development Strategy (NSDS) of the country supports this too. Thus, REFE fosters this with the development of several products that can be incorporated into the educational system.

REFE – Reducing the Ecological Footprint through Eco - Awareness's aimed to increase the knowledge of young people on long-term consequences of climate change and on how to live a sustainable lifestyle.

The project provides the educational sector of the country with eight products in total, which can be used to adjust the school system to the priorities of the 5th National Report on the Convention of Biological Diversity and the NSDS:

- an adjusted measurement tool for the Ecological Footprint;
- a Guide for an educational summer camp on the Ecological Footprint;
- a documentary;
- a grade 6 auxiliary workbook on ecology;
- a teaching material;
- a theatre Script;
- e-Learning modules;
- a report.

With the help of these products, young people in Romania are provided with knowledge on the fundamentals of ecological thinking and with practical options to change their lifestyle to a more sustainable one. All products were piloted throughout the project life cycle and accordingly adjusted. Finally, they are translated into multiple languages to make them accessible and usable by a broad audience across Europe.

We learned that the student's Ecological Footprint can be reduced through education, that the Romanian and Austrian teachers are very opened and interested in the topic of sustainability and any training or materials on this matter is very important in the educational sector.

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In the following pages we are inviting you to come along with us on our journey, to read more about how we did the piloting programmes, and how we connected all the materials in order to be able to have these results.

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2. OUR GOAL

The overall project goal was that a group of young Romanians have increased their awareness on causes and consequences of climate change, wasteful consumption and understood the fundamentals of ecological thinking. Through formal and informal education and measuring of the individual ecological footprint, the project empowered them to recognize their individual opportunities to foster sustainable solutions and disseminate their learnings creatively.

REFE contains 4 main pillars for awareness raising and environmental education:

1. A two-weeks training programme of 20 young urban people in Breb, Maramures, on how to reduce their Ecological Footprint.
2. The development of a grade-6 Auxiliary Workbook on eco-friendly ways of living to inspire children to adapt their lifestyle to environmental needs.
3. One conference and one fair in order to disseminate and discuss outcomes and outputs of the project.
4. An eLearning platform for young people and their teachers on the subject of Ecological Footprint.

Within and during these pillars further products were developed and translated, so that in the end of this project, a broad variety of awareness raising material will be accessible for the broad public in multiple languages: an adjusted measurement tool for the Ecological Footprint; a Guide for an Educational Summer Camp on the Ecological Footprint; a Documentary; a Grade 6-auxiliary workbook; Teaching Material; a written Report; eModules; a Theatre Script.

2.1. ARGUMENTS

Through the goals and activities of the REFE project our desire was to contribute to the National Climate Strategy of Romania, which mirrors the target of the Paris Agreement of having the country's emissions reduced by 40% by 2030. Thus, we strongly believe that the materials we made through this project will support Romania to make use of their valuable knowledge to protect the environment and reduce the country's ecological footprint through awareness-raising and capacity-building.

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2.2. OBJECTIVES

In order to achieve our goal there were implemented two pilot programs where both qualitative and quantitative research tools were used, with the involvement and support of University of Bucharest, Biology University- Ecology Department.

In the first pilot program, a group of 20 young people participated in **Ecological Footprint testing**, coordinated by University of Bucharest, Biology Faculty- Ecology Department, from May 2021, until June 2022, in three stages.

Starting with the Ecological Footprint measurement the pilot programme was documented by filming the whole process, together with the camp, by a film crew. This documented process, on camera, forms the basis of the documentary film *4 to 1 Earths: An Adventure in Ecology*. The title is inspired by the amazing results achieved after the Austerity Day - a day in the camp's programme where pupils were asked to use as few resources as possible in order to see how much we can reduce our ecological footprint if we consciously set out to do so. This documentary film became another environmental footprint awareness material, it was released in April 2022 and has been enrolled at environmental film festivals.

Between the first and the third testing stage, the participants to the camp programme were taught how to live more sustainable in a two-week camp in Maramureş, Romania, in August 2021. At the end of the camp the second stage of testing happened and, after almost one year, in June 2022 the last testing stage took place in order to measure the impact of the camp programme on their behaviour from a more sustainable life point of view, in their home cities.

Before the summer camp **teaching material** for teachers, along with a theatre play on sustainability were developed by Schule für das Leben. All activities, materials and didactic approaches of the Educational Summer Camp were then implemented into the teaching material. Further, there were discussions with the participants which also led to small adaptations of both of the materials.

After the talks with the students from the Educational Summer Camp, Schule für das Leben structured a **guide on how to organise a sustainability summer camp** around practical tips to reduce the use of resources in everyday life. With this guide- inspired by the experience of the camp, we want to encourage teachers to try something new and to go to an Educational Summer Camp with their pupils.

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The **theatre play *Shakespeare and the Golden Toad*** was another material introduced to the young people, during the camp. There, the play was rehearsed and acted in front of a small audience, using the play reading technique. It was very well received, followed by discussions and research about the golden toad. Due to the title of the theatre play which incorporates a symbol of the disappearance of the species, the golden toad, the pupils were opened to do research more on this topic or other cases of disappearances of species. The play was finally played in June in Vienna's Muth theatre by actors of the Wiener Kindertheater to a very open and interested audience.

The teaching material was the base for the auxiliary workbook, part of the second pilot programme.

The second pilot programme involved that EuroEd Foundation to create an auxiliary material for the gymnasium level. This material was based on the content of the teaching materials already created by Schule für das Leben for teachers. The information from the teaching materials was translated into exercises for the gymnasium level in an **auxiliary workbook**, by the team of teachers from five schools in Iasi. This process involved discussions and solutions about each chapter and the material included also the testing of the children who used it, for which the University of Bucharest was consulted and involved.

All the experiences, approaches and learning ideas from the REFE materials are incorporated in the **e-Learning modules**, in three languages. In this way the teachers and students can have an interactive experience and, for more insights, can always use any of the materials which inspired the modules, all available for free access on the website of the project, refeproject.eu.

3. SURVEY

The REFE project had two pilot programmes: one in which we measured the ecological footprint of a group of students before and after they were taught about ecological footprint and environmental issues during a summer camp, and another pilot programme in which teachers from 5 secondary schools built an environmental education workbook which was used for sixth graders. In order to measure the impact of the materials and the educational program on students who participated on the programmes we used tests, questionnaires, feedback forms, interviews and on-line questionnaire forms.

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In the first pilot programme we used an ecological footprint measurement test, adapted through out the programme based on the answers of the pupils and the questions they had when they did it first time, by the University of Bucharest.

For the other pilot programme there were used tests on the fundamentals of ecological thinking meant to measure the impact of the auxiliary workbook on students of the 5 partner schools. Additionally, feedback forms were added in order to improve the material.

3.1. TARGET GROUPS

For the first pilot programme the target group was formed of 20 participants from two of the biggest cities in Romania: Bucharest (which is also the capital) and Iași. They are youngsters, with ages ranging from 12-21 years. It is important to note that this age group period is crucial because they are old enough to be aware of the personal impact they have and to make changes for a more sustainable future. At first, the initial testing (which had incomplete answers) it was analysed in order to have an idea about the quality and range of testing within this type of group.

For the second pilot programme, the one related to the environmental education workbook, the target group was, in the first stage, teachers from five secondary schools who teach biology, chemistry, mathematics, geography, literature. In the second stage, when the material was introduced in schools the target group was formed of 223 sixth graders from 5 secondary schools (11 pilot classes, 3 control classes, 32 teachers).

3.2. RESULTS

Number of data collected from the ecological footprint tool showed that after the third testing stage, on average, the subjects decreased their ecological footprint with almost 1 planet, in comparison with the first stage of testing. Also, an attempt was made to reduce the impact to zero, by conceiving and organizing Austerity Day. The average score for this day led to a grand total of 0.03 planets, which is a zero, depending on the number of decimals are included. So this leads to the incredible idea that we could live with almost no impact on nature, and actually live, not just survive.

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The data collected on the second piloting group was by using a test on the fundamentals of ecological thinking. These were created by the project team members, based on the competences the produced auxiliary material will develop to students. The test includes 20 questions, with 4 answers out of which only one is the correct one. Each student involved in the piloting did the test ones before starting the piloting and did it again after the piloting phase. The results showed that 98,7% of the students of the 5 partner schools, tested on the fundamentals of ecological thinking, passed it with 96.2% or more after the curriculum was piloted at their schools.

The qualitative data collected showed that the pilot groups also inspired the people around them like family, colleagues and teachers, the community.

In conclusion, educational programs with a focus on awareness of the ecological footprint facilitated the transformation towards an environmentally conscious youth in Romania with one planet less. The pupils have increased their awareness on causes and consequences of climate change, waste, full consumption through formal and informal education.

In this way they recognized their individual opportunities by understanding the fundamentals of ecological thinking and this was reflected by their sustainable lifestyle decision.

4. COMMUNICATION PLAN

The activities and materials of the project can be found on its own website, refeproject.eu. The experience and the materials made through the project were promoted on social media platform as Facebook, Instagram, Youtube and Twitter.

In order to raise awareness the project was present at Interpedagogica, in Vienna, where more that 11.000 people, mostly Austrian teachers, were familiarised with our objectives and results.

Both Schule fur das Leben and Children's Viennese Theatre Association organised workshops for teachers from Romania, Austria and Germany on how they can use the materials in their classrooms. Schule fur das Leben made visits to Austrian schools and presented the teaching material and EuroEd Foundation organised a conference in order to present the REFE materials along with a debate on sustainability with representatives from the public sectors.

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We wanted to create a safe and welcoming atmosphere for our participants at our events in order to make them feel welcome, that they have support from our side and that they can have and find a great experience with our materials, to boost their own ideas in the classrooms when Ecological Footprint is addressed as topic. With all these events, more actors in education were directly exposed to the materials, and they will be the multipliers of the Ecological Footprint awareness in their schools and communities.

5. IMPACT OF THE PROJECT

All the events organised for the materials, the ones with physical presence, on-line or hybrid, together with the exposure of the materials in the on-line platforms, supported the dissemination of information about the REFE materials to over 150,000 teachers, pupils, students, representatives of the public and private sector, to non- governmental associations.

The educational program helped 20 young people to reduce their ecological footprint by one less planet, meaning that although they returned to their cities where lifestyle is based on consumerism, the lessons they learned in this program contributed to a change in their behaviour. We believe that this result is based on awareness of environmental issues and the future of the planet for the next generations, which has led to a change in behaviour by choosing a more sustainable lifestyle.

Therefore, educational programs for ecological footprint awareness are one of the directions to follow in order to achieve a positive impact on life and lifestyle. Due to the results obtained within the REFE project, it gives us great joy to support any initiative in this sense, by making its materials available.

5.1. FOLLOW - UP

All REFE materials are freely available on the project website. More information and details about each of these can be found on the pages specially created for this project within the social media platforms, all bearing the name of the project. We encourage all actors in education to disseminate the experience they have had when using the REFE materials. Support is also given to all those interested in using the materials.

The materials can be downloaded from refeproject.eu.

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Follow us on social networks: facebook.com/refeprojecteu, instagram.com/refeprojecteu

6. CONCLUSIONS

We strongly believe, after witnessing the results of the two piloting programmes of this project, that rising awareness about the Ecological Footprint is not just a step in order to reduce it, but, most importantly, it is a path of changing behaviours for a more sustainable way of living.

CONTACT

Thank you for reading the entire report and going through our journey once again. Our sincere appreciation to all the people involved in this project, for their cooperation and dedication to our common mission. We believe that this experience is a starting point for all of us, interested in the topics of sustainability, to accomplish even more great things together, starting with the willingness to decrease the Ecological Footprint by choosing a more meaningful and sustainable life, thinking of each other, of future generations and of our home, The Planet Earth.

You can contact us at the email address: office@teatrulvienezdecopii.ro.

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The content of this Final Report is the sole responsibility of the authors and does not reflect the opinion of the German Federal Ministry for Economic Affairs and Climate Action.