

COMPETENCES4ESD

AN INNOVATIVE ESD KEY COMPETENCES TRAINING MODEL FOR TEACHERS IN THE FRAMES OF THE 4SDG - QUALITY EDUCATION FOR ALL

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COMPARATIVE RESEARCH NETWORK:

WWW

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MOOC PLATFORM

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Framework of reference

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Framework of Reference

Methodology

Each partner had to research how and which of the SDGs are currently integrated in teaching in the VET sector in their country and which recommendations/plans exist to integrate them in the future.

We worked with the general Identification, elaboration, and evaluation of already existing information. The steps of the desk research included identifying research sources, consulting already existing information and data, comparing, combining and re-elaborate the data collected, and evaluating the final outcome. Each partner had carried out one research and shared the results with the partnership.

This document collects the researches held in the different countries part of the consortium: Germany, Finland, Slovenia, Poland, Greece and Cyprus.

The Basics

- VET sector

Structure of the VET sector in the country

Size and relevance of VET in the country

General situation of VET in the country

Slovenia: Primary education in Slovenia combines primary and lower secondary education in a single structure. The percentage of participants in vocational education in Slovenia is over 70%, which puts the country at the top of the list compared to the European Union.

Greece: vocational education and training is strongly state-regulated, and is mainly school-based; in fact, until recently, VET was mostly offered through a school-based approach. The total number of learners enrolled in post-secondary non-tertiary vocational education has increased from 15 852 in 2014 to 82 860 in 2018. Participation in adult education and training remained stable during the previous decade (3.9% in 2019) well below the EU28 average (10.8%).

Germany: Vocational education and training (VET) in Germany is based on close cooperation between the State, companies and social partners. Upper secondary and post-secondary non-tertiary education at ISCED level 3-4, is quite popular (57.4%) in Germany, compared to most other EU Member States.

Finland: In Finland, the qualifications structure in vocational education and training (VET) has three levels. There are three types of qualifications: vocational upper secondary qualification (73% of students in 2017), further vocational qualification (18% of students), specialist vocational qualification (9% of students). In 2017, % of the young applied for vocational upper secondary studies immediately after basic education. The total number of VET graduates in 2017 was 73 837.

Poland: The Vocational Education and Training (VET) management system in Poland comprises three levels: national (relevant ministries), regional (school superintendents, mainly within the framework of pedagogical supervision) and local (cities and county governments, which run the vast majority of schools). Vocational education and training at the secondary (post-secondary) and post-secondary levels is mainly carried out in schools. Education at the secondary level includes both vocational and general education. In the 2018/19 school year, 7,600 secondary and post-secondary schools were in operation. Compared to the previous school year, there was a decrease of 1.4% in the total number of these schools, due to a decline in the school-age population.

Cyprus: The VET size in Cyprus has been decreasing. The RoC population in 2020 was 888 005. The population has increased by 4.8% since 2015 mainly due to the inflow of third-country citizens. However, as in many other EU countries, the population is aging. As a result, VET enrolments have decreased. VET in the Republic of Cyprus (RoC) refers to vocational education, at secondary and tertiary education levels. VET is also available through the new modern apprenticeship system, which is directed towards young people who leave formal education between ages 14 and 18. 'Preparatory apprenticeship' lasts for one school year and young people between 14 and 16 years of age who have not completed lower secondary programmes (EQF 2), may participate.

Challenges to the VET Sector

Slovenia: The challenges of digital transformation and automation, Slovenians in the 15-64 age group are slightly below the European average in terms of their digital skills. shortage of teachers at primary and secondary education.

Greece: high unemployment rates, Unexpected influx of refugees halted on Greek territory, Aging population, Increased brain drain.

Germany: Young women and men continue to orient themselves very differently on the VET market. A big challenge for educators and teachers is to help apprentices overcome language and education deficits in order to acquire specialist theoretical knowledge.

Finland: Youth unemployment is on the increase. Dropout from vocational education and training is far more common than from general upper secondary education.

Poland: -attractiveness of vocational studies, adapting core curricula to current challenges and current needs of the labor market, Increasing the involvement of employers in organizing practical vocational training, identifying and forecasting the demand for skills in the labor market, - adjusting the qualifications and competencies of vocational subject, - Ensuring an adequate number of teachers and instructors of practical vocational education with adequate competencies, by supporting their professional development and encouraging young people people into the profession; encourage lifelong learning among adults.

Cyprus: unemployment, economic crisis, involvement of women, encouraging adult participation in lifelong learning.

Teaching SDGs

How are SDGs integrated overall in the formal education in the country?

Slovenia: In general, the SDGs are treated reductionistically in the existing formal school system, mainly because the school system is unsuited to the introduction of radical transdisciplinary ideas. The SDGs are partially addressed at all levels of education, from primary education to higher education. The integration of explicit SDGs depends on the discipline or type of school, while the majority of VET schools address SDGs related to the natural environment, nutrition, and health.

Greece: These key-themes are addressed through existing subjects, as well as through stand-alone projects ESD is supported in special education and training through:

- the education of students with disability and/or special educational needs in the mainstream class, with parallel support, in inclusive classes;
- individual teaching subjects taught in special schools;
- individualized Education Programs, according to the students' special educational needs;
- flexible zone programs (up to the 4th grade in primary schools) and the Creative Work Zone;
- the co-educational programs; and,
- the Apprenticeship program for the graduates of the Lyceums.

Germany: In the area of basic education, the Ministry assists its partner bodies in initial and in-service teacher training, in curriculum development, in the development of teaching and learning materials and in the improvement of school management. The Ministry also provides funding for the construction, refurbishment and equipping of classrooms as well as of training centers for teachers and provides teaching and learning materials.

Finland: The Finnish Government included the promotion of sustainable development in its development plan for education and research in 2003. This development plan is a key steering tool for the Ministry of Education. The promotion of sustainable development has also been incorporated into the national core curricula in basic education and in general and vocational upper secondary education.

Poland: It seems that nowadays, also in Poland, the conviction is becoming more and more entrenched, that education is the key tool implementation of the assumptions of sustainable development development. Its purpose is not only to transmit knowledge, but also to shape in people the ability to satisfy their own aspirations in a way that will enable the realization of the same needs for future generations.

Cyprus: The integration of SDGs is integrated in formal education through:

- the management and supervision of the Governmental Network of Education Centers for Environmental and Sustainable Development, which consists of seven (7) Environmental Education Centers and constitutes a complementary structure of non-formal education on the issues of sustainable development,
- the implementation of the Curriculum for Education for Sustainable Development (ESD),
- the professional development of teachers and educators in matters of teaching and methodology of ESD, in the competences of ESD, in the Sustainable Development Goals of the Global, United Nations Agenda 2030,
- the authoring and production of educational material on the Sustainable Development Goals,
- the implementation of intervention education programs for the environment and sustainability in schools and communities,
- the promotion of a sustainable school based on a holistic school approach
- the networking and cooperation at the national, regional and international levels with organizations and bodies that perform important work in the field of ESD such as UNESCO, UNECE, UNEP, MIO-ESDE, UoM, GENE, etc.,
- the implementation of European competitive programs for ESD, based on the use of various funding instruments,
- and the preparation of national reports on issues on Education for the Environment and Sustainable Development (EESD), as well as the production of EESD policy texts at the national, regional and international levels (update of National Strategic Planning for EESD, Mediterranean Strategy for ESD, UNECE Strategic Plan for ESD 2030 etc.).

How are SDGs integrated overall in the non-formal education in the country?

Slovenia: Regarding the non-formal education several organizations, such as people's university for third life period, NGOs, environmental associations, and private companies organize courses for citizens or their employees where SDGs related to good health and wellbeing, quality education, no poverty, zero hunger, reduced inequalities, decent work and economic growth and industry, climate action and life on land are rather addressed.

Greece: Some indicative SDG integration examples in the non-formal education by the Ministry are the following:

- The 36 Management Bodies of the 446 Natura 2000 sites in Greece all have environmental education centers that target school students of all ages and help translate, through practical training, overall sustainable development objectives down to the local level.
- The Ministry of Environment and Energy participates as a partner in the LIFE projects. A very important component of all LIFE projects is the information sharing, education and awareness raising of the public, including local communities and youth, to which specialized communication material is prepared and activities are carried out.

Germany: The Non-Formal and Informal Learning/Youth sector is becoming increasingly important in the context of lifelong learning for the necessary transformation of society in line with the SDGs. Non-formal and informal learning comprises all educational activities – for the greatest conceivable variety of target groups – outside of the formal education system. The increasingly important field of adult education also comes under this sector. ESD are integrated in cultural and civic education programs, which lays important foundations for social cohesion.

Finland: SDG integration in the non-formal education follows the same principles and guidelines as in the formal education.

Poland: SDG in its formal dimension is supported as non-formal education, implemented primarily through projects developed and implemented by NGOs, local governments and local institutions.

Its reach is not only to children and adolescents, but also - though still unsatisfactorily - to adults.

Cyprus: The integration in non-formal education takes place in various ways. In order for all parties to be informed about the Network of the Centres for Environmental Education and its' inclusion in the formal educational policy as a complementary structure to schools with the aim of connecting non-formal with informal education, every year a specific circular is distributed by the Ministry of Education and Culture, addressing the importance of non-formal education in ESD activities

How are SDGs Competences defined in your countries?

PRACTICES OF ESD: CASE STUDIES AND GOOD EXAMPLES

4 practice examples of how ESD Frameworks are used in 1. **Education general** 2. **VET** institutions 3. **Companies** 4. **Typical context** of your country (individual, companies, charities etc.)

SLOVENIA :

- **Practice 1: education in general**

People's pursuit of a high standard of living has led to threats and consequences for the environment. Water resources are not unlimited and are unevenly distributed among countries. Therefore, water contamination should be recognized as a serious global public health problem. It is necessary to promote environmental awareness and encourage people to make conscious changes in their daily lives. Previous studies conducted with primary school students in Slovenia have reported concerning poor knowledge about hydrosphere environmental problems and the lack of interest to address these kinds of issues. Another study was conducted in 2021 at the Faculty of Education, University of Ljubljana, and focused on finding the best didactic approaches and teaching methods to improve the quality of students' knowledge, encourage their active participation in solving environmental problems, and support the development of the SDGs. The aim of the research was to optimize and implement an online workshop with examples of integrating environmental problems of the hydrosphere into chemistry lessons, based on the learning objectives of the chemistry curriculum. 145 primary school students participated in the

online workshop, which included four interactive videos focused on the four major water pollutants - plastic waste, agricultural activities, industrial waste, and oil spills. The interactive videos included experiments, animations, simulations, memory games, discussion questions, etc. For example, through experiments, students learned about bioplastics as biodegradable materials from renewable sources that can be used to reduce the problem of plastic waste choking the planet and polluting the environment. Students also discussed the opportunities and challenges of producing materials from bioplastics. Based on these topics, the online workshop focused on achieving three SDGs, such as sanitation and life below water, clean water, and quality education. Another objective of the study was to evaluate the effectiveness of integrating this content by comparing differences in student achievement tests based on their situational and individual interest before and after the online workshop. Students' scores were significantly better on achievement tests after participating in the online workshop. Students with higher levels of individual and situational interest performed better on all achievement tests. From the results, it can be concluded that teachers should use advanced didactic methods (e.g., experimental work, animations, simulations, etc.) to create a learning situation that attracts students' attention and encourages them to participate in discussions or other activities. Motivated students are effective learners and also tend to develop an entire ethical positive attitude toward nature and its values (Klemen, 2022). <http://pefprints.pef.uni-lj.si/7108/>

Pratice 2: ESD in VET

The Center KemikUm (development and innovation school laboratory) at the Faculty of Education is organizing various events to promote Education for Sustainable Development for pre-service teachers in collaboration with primary and secondary school students, e.g., by providing workshops, conferences, training, actions related to the environment, society and economy focused towards sustainable development of communities and people. In one of the KemikUm workshops, primary school students learned about the opportunities and challenges of biofuel production. During experimental work primary students produced bioethanol through the sugar fermentation process and biodiesel from used vegetable oil through the transesterification process. Students analyzed the chemical and physical properties of biofuels and compared their results to the properties of fossil fuels. Students also participated in a roundtable discussion about the dilemma of growing crops for biofuel production at the expense of food supply (food versus fuel). In 2022, The Center KemikUm was a member of the Program and Organizing Committee

for the event "Towards Sustainability Through Co-Creation in STEAM Education." The event provided an opportunity to meet diverse young people and other stakeholders in the field of STEAM education, to inspire and promote mutual understanding of different viewpoints, needs and aspirations, and to present examples of good practices for building a sustainable future. The event included 28 workshops for primary and secondary school students, 11 workshops for primary, secondary, university teachers and others, 4 plenary speakers, 28 section presentations, round tables and other activities. The Center KemikUm and other organizations organized a competition for primary and secondary school students titled "Youth Innovation: responding to the challenges of microplastics in the environment." Students who participated in the competition became initiators of solutions in dealing with the problem of microplastics in the environment and organized activities on microplastics at their school. The students also carried out these activities in the local environment, for example by publishing their own comic strip in the local newspaper. The three best groups of students presented their results at the European Researchers' Night 2022 at the University of Ljubljana, Faculty of Education. <http://kemikum.si/>

- **Practice 3: Companies**

Group Triglav: In the Triglav Group, both company's two strategic activities, insurance and asset management, will focus on climate neutrality, ensuring resilience to climate change and promoting sustainable economic approaches to insurance and investments. Its portfolio already includes insurance for claims resulting from climate change, as well as insurance for solar power plants and micro mobility. With the internal program *Triglav.smo - Zavarujmo zdravje*, they promote health at work and sustainable development of the social environment. They care about employee and customer satisfaction, develop an open culture of diversity and collaboration, promote intergenerational cooperation and insist on high standards of corporate governance. Each month of the year is dedicated to achieving one of the 17 Sustainable Development Goals UN. By clicking on the "My Pledge" button, anyone can commit to at least one specific action for each of the sustainable goals and contribute to a sustainable future. Being aware of the importance of knowledge, they promote additional education, professionalism and training of employees. In the Triglav Group, the bodies that will take care of the management and control of the sustainable aspects of the business and make the relevant decisions have been strategically defined. The sustainable business development function covers all aspects of sustainable development and reporting on them. The sustainability officers are responsible for implementation and coordination.

Sustainable development activities are regularly monitored by the Compliance and Sustainable Development Committee. <https://www.triglav.si/>

Kozmetika Afrodita is a Slovenian beauty brand with more than a hundred employees from various fields (e.g., experts in pharmacy, microbiology, chemistry, cosmetology, management, and marketing). Afrodita offers beauty products based on their own formulas, using only the best natural organic ingredients. The quality of their products is confirmed by the results of accurate physical, chemical and microbiological tests. None of the beauty products are tested on animals. The company shares an awareness of the importance of mutual cooperation with the social and natural environment. It believes in the power of knowledge to find new solutions, innovative and revolutionary ingredients from natural and sustainable resources in an economical way and also to reduce the negative impact of beauty products on the natural environment. The company has already taken another step towards sustainable development by offering beauty products without microplastics and reducing synthetic ingredients. Kozmetika Afrodita contributes not only to improve the quality of life of its employees and their families, but also to a broader social community by donating and supporting various humanitarian, educational, sports and cultural projects and organizations.

<https://webshop.afroditacosmetics.com/int/>

- **Practice 4: Typical context of the country**

Slovenian schools have found many different ways to incorporate ESD into their curricula ("formal curricula" and "applied curricula"). These include:

1. Teaching and learning ESD in existing school subjects, making cross-curricular connections when there are common themes or learning areas. ESD is implemented taking into account the characteristics of these subjects and the developmental level of the students
2. Separately scheduled theme days, activity weeks, and events focused on a specific ESD content or goal (e.g., campaigns on global development issues, promotion of recycling, safe use of the Internet, healthy and locally produced foods, sustainable mobility, healthy lifestyles, etc.), often with block teaching
3. Whole school development plans, strategies and ethos with elements of SD. An educational plan is part of the school development plan, where a clear definition of "responsibility for a

greater whole, responsibility for the future of the planet and humanity" is expected.

Educational plans should include the basic goals of the ESD

4. Activities integrated into the school day (in cooperation with parents)
5. Educational visits and learning opportunities outside of school hours, and visits to schools by SD experts.
6. Projects, initiatives and school networks, e.g.: ECO schools, Healthy Schools, UNESCO ASP net and other networking of schools in the framework of various international cooperation projects (e.g. eTwinning, Eco-Garden Network of the Institute for Sustainable Development, the School Network of the Society for Cohabitation for a Sustainable Future, the Teachers' Club for Global Learning of the Humanitas Society, etc.); a growing number of various national and international ESD projects and programmes on global learning and related topics, e.g., the »Traditional Slovenian Breakfast«, »Europe at School«, »Seeds of Change«, various projects financed through the European Social Fund, e.g. »Hand in hand« (strengthening the social and civic skills of professionals), »Strengthening the competencies of professionals in the management and enforcement of an innovative educational institution«, »Development and implementation of innovative learning environments and flexible forms of learning to raise general competencies«, etc.

https://unece.org/DAM/env/esd/Implementation/NIR_2018/Slovenian_NIR_2019.pdf

In addition, some projects, such as the "Traditional Slovenian Breakfast", are not only carried out in the premises of the school. The Traditional Slovenian Breakfast takes place within the framework of the Slovenian Food Day, which raises the awareness of the entire Slovenian public about the importance of sustainable self-sufficiency in their own country, preservation of a clean and healthy environment, preservation of the countryside, introduction to the processes of food production and processing, etc. Slovenian kindergartens, elementary schools, secondary schools, universities and other institutions and public bodies, as well as a growing number of individuals and companies participate in the projects, making this a traditional Slovenian sustainable development project. <https://www.gov.si/zbirke/projekti-in-programi/dan-slovenske-hrane-in-tradicionalni-slovenski-zajtrk/>

GREECE :

- **Practice 1: education in general**

- In 2016, Organization Earth's «Centre of the Earth» was awarded as the best initiative worldwide for connecting people to nature by the International Union for Conservation of Nature. Workshops predominantly took place at the «Centre of the Earth» but also in schools, refugee camps, local government venues, city farms, summer camps and various other locations. The children are encouraged to explore with all of their senses, instead of listening to teacher-centered instructions in a classroom setting.
- Blog your Heritage – unblock the past, share for the future: organizing and coordinating a school competition for the design and management of blogs on local cultural heritage aiming at raising awareness among young people. The content should cover not just antiquities but various aspects of local heritage (including intangible heritage) of the respective region. The best blogs will be awarded on the basis of their originality, creativity, expressive tools, variety in subjects, and popularity (comments, likes, discussions prompted by posts etc.)

- **Practice 2: VET institution**

The educational activities of Piraeus Bank Group Cultural Foundation (PIOP) are specially designed for various target groups (e.g. school groups of all levels, children and families, adults and sensitive and/or vulnerable social groups, professionals etc.) and adjusted to their specific needs, expectations, requirements and overall profile, in order to achieve the maximum degree of engagement and participation and reinforce awareness, knowledge, values, and behaviors towards the goals of SD. Among others, indicative successful initiatives that are appreciated by and evoke participants' satisfaction and positive remarks are those that are designed around PIOP Museum Network's thematics, the development of personal and technical skills through dedicated workshops, programs that connect generations through sharing of knowledge and experiences, initiatives that support entrepreneurship in the Cultural and Creative Industries etc.

- **Practice 3: Companies**

Action Aid Hellas: The final event “Hope 2030” was very successful since it brought together educators and students along with more than 40 CSOs that work on SDGs, Media, Politicians and general public. Also, the choice to hold the event in Victoria Square, a rather multicultural and often marginalized neighborhood was a great success.

- **Practice 4: typical context of country**

Centre for Life: a number of interventions towards key goals for sustainable development, most noteworthy of which are: a) The “HIV Prevention Programme for High School Students”, b) The “Support for HIV Positive Detainees and Ex-Detainees” Programme, c) The “HIV Positive Women’s Empowerment” Programme, d) The “Equality in the Workspace” Programme.

GERMANY :

- **Practice 1: education in general**

At **UNESCO** project schools, school heads, teachers, pupils, parents and non-school stakeholders and providers work together to develop ESD and climate change action plans for a whole system approach at their school, are provided with continuing training, and engage in international exchange to compare experiences. Starting with twelve German pilot schools in an international UNESCO project, this is to be expanded to 25 German schools from autumn 2017 and ultimately if possible to all German UNESCO project schools. All project guides and learning materials are made publicly available. The project is being implemented in collaboration with the Global Goals Curriculum with academic monitoring and evaluation by Leuphana University of Lüneburg. Autostadt GmbH (Wolfsburg) plans to support the project.

Global Goals Curriculum e. V. is working with the national and international UNESCO project school networks, the **Ashoka Changemaker Schools** and the schools of the Initiative Schule im

Aufbruch to develop a school development process for innovative and practical large-scale implementation of the National Action Plan.

- **Practice 2: VET institution**

Arbeitsgemeinschaft Natur- und Umweltbildung Bundesverband (ANU)

In cooperation with a consortium of providers, ANU has operated an ESD training programme for 20 years in which 25 multipliers had been trained over a two-year period.

<https://www.umweltbildung.de/>

- **Practice 3: Companies**

Commitment of the Association of German Chambers of Commerce and Industry (DIHK) and the Federal Ministry of Education and Research (BMBF)

As well as building the appropriate skills in initial and further training, establishing sustainable development in the workplace also requires a whole organisation approach in business enterprises. DIHK will support this. DIHK-Bildungs-GmbH will therefore, with the support of BMBF, develop and establish corresponding training provision for individuals in leadership positions, primarily in small and medium-sized enterprises.

- **Practice 4: typical context of country**

Media Partner Network/Expert Forum on Non-Formal and Informal Learning/Youth and the Collegium for the Management and Design of Sustainable Development (KMGNE): KMGNE, the Collegium for the Management and Design of Sustainable Development, in collaboration with the Media Partners Network and with the support of further partners, will prepare and organise a series of annual conferences from 2017 to 2020 on storytelling and forms of narrative in ESD.

FINLAND :

- **Practice 3: Companies**

The ESG (environmental, social and governance) framework is intended to help the stakeholders of an organisation to understand how the organisation manages opportunities and risks related to environmental, social and governance criteria (<https://corporatefinanceinstitute.com/resources/knowledge/other/esg-environmental-social-governance/>), and communicates their efforts on corporate social responsibility and sustainability with regard to being accountable towards the society. In practice, there exist numerous different standards of assessing organisations' performance with regard to ESG. What is important is that ESG reporting be done in such a way that it illustrates the way of incorporating sustainability in the management practices of enterprises as an important part of their regular business activities and not as a mere afterthought. (<https://www.esgthereport.com/what-is-an-esg-framework/>)

- **Practice 4: typical context of country**

In order to get an overview about how ESD in reality is adopted, we can have a look e.g. at the small and medium-sized enterprise (SME) responsibility survey commissioned by the Finnish Confederation of Finnish Industries (2021). According to it, 38% of Finnish SMEs employ environmental or other corporate responsibility certificates or standards, such as ISO14001, Joutsenmerkki, LEED or Fair Trade. Furthermore, 9% of Finnish SMEs have implemented the UN SDGs in their business activity in accordance with Agenda 2030. (https://ek.fi/wp-content/uploads/2021/11/EK_Pk-Vastuullisuusbarometri_2021.pdf) In typical practical cases, organisations utilize the ESG framework when they are making financing and investment decisions (<https://www.cgi.com/fi/fi/esg>).

POLAND :

- **Practice 1: education in general**

1. At the Maria Grzegorzewska Academy of Special Education in Warsaw in the 2017/2018 academic year, an all-university subject called "Education for Sustainable Development" was included in the curriculum for the first time. The subject is compulsory for students of the second year of the master's degree in pedagogy (for all specialties, teaching and non-teaching). At the beginning of the course, the instructors conducted a survey to diagnose the level of students' awareness of the goals, tasks and manifestations of sustainable development. The group surveyed was 23-25 year olds. Potentially, in six months they will take up positions as educators at various levels of education and child and youth care, and will themselves be involved in shaping educational policy in Poland and in pedagogical guidance.

2. EDUCATION FOR CHANGE: A HANDBOOK OF EDUCATION FOR SUSTAINABLE DEVELOPMENT, handbook for teachers - <https://docplayer.pl/46439120-Edukacja-ku-zmianie-podrecznik-edukacji-na-rzecz-zrownowazonego-rozwoju.html>

There are many materials for teachers that write about the theory of ESD, they also give practical tips. However, whether these materials are used, it is difficult to say. There is a lot of theory about ESD, but there is a lack of examples of practical solutions that have actually been applied and had a measurable effect in education. The education program itself implies the implementation of ESD, but it is not called that, and hence it is difficult to determine the nationwide scale of implementation of the assumptions.

- **Practice 2: VET institution**

In Poland, there are several postgraduate courses that relate to ESD. For example:

1. Postgraduate studies Education for sustainable development: offshore wind energy, University of Gdansk, more: https://old.ug.edu.pl/oferta_ksztalcenia/studia_podyplomowe/105523/studia_podyplomowe_educacja_na_rzecz_zrownowazonego_rozwoju_morska_energetyka_wiatrowa

2. University of Gdansk, Center for Sustainable Development, more:

<https://czrug.ug.edu.pl/programy/edukacja/>.

3. Other example, but not presenting a new course: Szkoła Główna Handlowa, as the first Polish university, joined the Sustainable Development Goals Accord - an agreement of the international academic and scientific community established to implement the Sustainable Development Goals. The initiative was launched because of the key role of science and education in the implementation of the seventeen Sustainable Development Goals set by the UN for 2015-2030. The SDG Accord is a mutual commitment by the Accord's participants to implement and report on sustainable development activities and share best practices in this regard.

The Sustainable Development Goals Accord, of which SGH has become a partner, is, initiated by the UK-based Environmental Association for Universities and Colleges and 0150 Australasian Campuses Towards Sustainability, an agreement between the academic and scientific community. To date, the SDG Accord has been signed by 92 teaching and research institutions from 6 continents. In addition to the Warsaw School of Economics, members of the Accord include: Boston University, Business School Lausanne, Kedge Business School, Kyoto University, University of Copenhagen, University of Edinburgh, University of Manchester, as well as our School's partner universities - Finland's Aalto University and New Zealand's University of Otago. (more: <https://www.sgh.waw.pl/sdg-accord>)

- **Practice 3: Companies**

1. The publication "Education for Sustainable Development" by the UNEP/GRID-Warsaw Center presents the activities of companies involved in educating young people, consumers, business partners and using modern technologies in the process. (<https://odpowiedzialnybiznes.pl/publikacje/edukacja-dla-zrownowazonego-rozwoju/>)

2. CCC, Henkel and BNP Paribas are the custodians of the League of Responsible Business and started an educational program of the Responsible Business Forum. The program is aimed at students and aims to increase knowledge and competence in CSR among future managers.

3. CSR Consulting has launched the 17 Goals Opens in a New Tab Campaign, which aims to raise awareness of the UN Sustainable Development Goals in business and society.

4. Santander Bank Poland has introduced the Finansiaki project aimed at children under the age of 13. The bank's employees, in the framework of competence volunteering, conduct classes and lessons in kindergartens and schools on the topic of finance.

- **Practice 4: typical context of country**

1. As an example, we can mention the activities carried out by the Włocławek Center for Environmental Education, which is currently conducting a project entitled Today I act. Tomorrow I will gain not only me, but also the environment. The main goal of the project is to strengthen the level of ecological awareness of local communities and promote among children, young people and adults the principles of behavior consistent with the idea of sustainable development (<http://tosieoplaca.org.pl/dzis-dzialam-jutro-zyskam-nie-tylko-ja-ale-i-srodowisko/>).

2. The guide is based on the content and materials of the course "Sustainability in Forestry Education," which was prepared and conducted by the Center for Civic Education in cooperation with the State Forests in 2015. (https://www.lasy.gov.pl/pl/informacje/publikacje/dla-nauczycieli/zrownowazony-rozwoj-w-edukacji-lesnej/poradnik_educatora.pdf).

3. The HumanDoc Foundation continues to improve the quality of education in Poland with regard to the most globally topical issues. This time, together with our content partners, i.e. universities from Poland (Warsaw University, Opole University and Wrocław University and from abroad (Iceland and Norway), we will develop a new subject in the field of sustainable development. This will be the first course of its kind at Polish universities, addressing a gap in the current teaching system in the area of sustainable development. (more: <https://humandoc.pl/projekty/zrownowazone-jutro-projekt-dla-przyszlosci-edukacji-w-polsce-2/>)

4. Foundation CultureLab runs the portal TupTupTup.org.pl

- the largest in Poland and one of the few in the world entirely entirely dedicated to sustainability education. It is designed for parents, teachers and educators of the youngest children. TupTupTup.org.pl is a portal dedicated to important issues presented, however, in a simple and accessible way. Thanks to author's cartoons, games, movement and art tasks, the youngest children will learn about such topics such as climate change, renewable energy, the right for family life or child-friendly cities. They have prepared a manual on ESD for teachers (<https://tuptuptup.org.pl/wp-content/uploads/2018/02/sdg-dla-nauczycieli.pdf>)

5. Silesian Botanical Garden has published a book on ESD, more: file:///C:/Users/niewd/Downloads/146839_Filozofia_psychologia_i_ekologia_w_edukacji_dla_zr.pdf

CYPRUS :

- **Practice 1: education in general**

Selection of 25 schools for pilot energy upgrading in Buildings of Almost Zero Energy Consumption, within the framework of the European Program „PEDOA“.

[ypp13766a \(moec.gov.cy\)](http://ypp13766a.moec.gov.cy)

- **Practice 2: VET institution**

The Game and Fauna Department: Within the relevant legislation on hunting and protection of wild birds it is specifically mentioned that all new hunters who wish to obtain a hunting license for the first time have to participate in hunting education lessons and pass a relevant test. Additionally, the same also applies to people who are convicted for poaching and / or violating other aspects of the national legislation for the Protection and Management of Game & Wild Birds (Law N. 152 (I) / 2003). The people who are convicted through this law can only obtain a hunting license only if they pay a higher / yearly fee which is comparable to how many convictions they may have. www.cypruswildlife.gov.cy

- **Practice 3: Companies**

Piraeus Bank Cyprus was the exclusive sponsor for the printing of 70.000 posters addressed to children with 4 simple saving tips and slogan protect the environment. The aim is the posters to be distributed to all pupils during the educational visits to the elementary schools in Cyprus. Until 2014 more than 50,000 poster have been distributed. The objective of the Energy Agency is to create the same poster for high school students when the necessary additional financial resources will be available.

- **Practice 4: typical context of country**

CYMEPA operates extensive public awareness campaigns with the participation of companies, youth and especially schoolchildren.

Upon becoming a member of CYMEPA, the Declaration of Voluntary Commitment «To Save The Seas» is endorsed and signed. This requires each Member to support the work

of CYMEPA in informing and educating everyone on the importance of protecting the marine and the general environment. <http://www.cymepa.net/en/>

**** What kind of XF on SDGs exists in your country? [APPENDIX]**

SLOVENIA :: The first five SDGs focus on improving human well-being. They relate to eradicating poverty and hunger, improving health and access to education, and promoting gender equality. Certification to international standards supports these goals by demonstrating that products are healthy and safe for human use or consumption and that quality expectations are met. Certification also helps organizations communicate their commitment to socially responsible behavior: Inclusion, non-discrimination and gender equality. The Food Safety Management System (ISO 22000), for example, drives organizations along the value chain to achieve the highest level of food safety. This prevents unhealthy, harmful products from entering the market and contributes to sustainable agriculture and food production.

Organizations can also demonstrate their responsibility for the safety and health of their employees by having their occupational health and safety management system (ISO 45001) certified, thereby managing the risks of workplace injury or illness and demonstrating their commitment to protecting the well-being of employees worldwide

Sustainable Development Goals 7 to 11 relate to industry, innovation and infrastructure, decent work and economic growth. Certification to international standards supports these goals by enhancing competitiveness in the domestic market and promoting domestic and cross-border trade by enabling organizations to meet national regulatory requirements and those of their foreign trading partners. The quality management system certification process (ISO 9001) assists companies in establishing a systematic quality management system that supports continuous improvement. Monitoring, identifying and correcting non-conformances enables organizations to achieve greater efficiency and exceed their customers' expectations. Certification of the transition to clean energy alternatives enables organizations to improve their energy management and align with international sustainability goals. Opportunities include energy management system certification (ISO 50001) and renewable biofuel schemes such as ISCC. Organizations can also

obtain energy conservation certificates and demonstrate the sustainable origin of the bioenergy that powers their operations.

UN Sustainable Development Goal number 6 and goals 12 to 15 relate to protecting the environment, natural resources and people. These include limiting climate change, reducing pollution, protecting biodiversity, managing water, waste and natural resources responsibly, and protecting human rights. The transition to a circular economy business model (CIRCULAR +) includes sustainable waste management. Environmental management system certification (ISO 14001) can help reduce waste, transition operations to a circular recycling model, improve operational control, and integrate environmental aspects into business strategy. Recently, more and more organisations are adopting and communicating carbon-neutral and net-zero targets. The latter involve verifying the carbon footprint of reduced greenhouse gas emissions and demonstrating that they are meeting reduction targets. They can use certified emission offset and removal projects, which must be certified and verified by an independent third party. In this way, companies can objectively prove that they have indeed reduced their emissions and demonstrate their transparency and commitment to a sustainable business strategy.

<https://www.bureauveritas.si/magazine/kako-certificiranje-podpira-cilje-trajnostnega-razvoja-zdruzenih-narodov>

GREECE :: In Greece, there isn't a central certification framework. However, regarding education, guidelines and indicators have been developed – i.e. through the „Guide for interdisciplinary activities for environmental education“, which is distributed every year to all schools of compulsory education, and by programs and networks like “The sustainable school through indicators”, “The sustainable school” and “Eco schools”, which distribute relevant educational material.

A good practice example of certification framework is AEIFORUM “The Sustainable School Label”, implementing the sustainable school through indicators. The SSL is a certification process that awards schools turning to sustainability. Forty (40) indicators divided in three domains (Pedagogy/ Social-Organizational/Environmental) lay in the heart of the SSL and cover the full range of school activities and functions. The schools enrol at the beginning of the school year and by the end of it they apply for the Label, sending filled in the Sustainable School Calendar. This

calendar includes all the different activities, complying with the 40 indicators, which the school has undertaken during the school year. Among others the school has to create the Sustainable School Management Plan and School Activity Program.

GERMANY: The framework used to certificate the SDGs in Germany takes care of the following aspects:

- agreeing to a common quality standard for ESD
- increasing both quality & quantity of non-formal and informal ESD learning and teaching
- connecting to the quality frame and criteria pertaining to schools
- linking up to the quality standards of important supporters and other certifying agents
- providing transparency and orientation for participants of ESD offers
- raising public awareness of the NUN umbrella brand
- developing a sense of unity and supporting networking activities between the NUN certified ESD providers
- facilitating cross-border comparability of ESD standards and guidelines

FINLAND: A multi-stakeholder approach is highly valued in Finland. Society's Commitment to Sustainable Development is one of Finland's key instruments for engaging the whole of society: the public sector, businesses, civil society and private individuals. (<https://sustainabledevelopment.un.org/memberstates/finland>)

In teacher training, sustainable development is integrated to the curricula to some extent and there are also separate studies available for students on SD. Integration to curricula seems to be more common approach. It seems that the curricula are designed in a way that they give the future teachers rather good competences to teach sustainability thinking (future-orientation, critical thinking, holistic and integrated approach, handling of current subjects like climate change). (https://unece.org/fileadmin/DAM/env/esd/7thMeetSC/Country_Reports/Finland.pdf)

CYPRUS: The Republic of Cyprus through the Cyprus Ministry Education and Culture which has the responsibility for coordinating the actions for ESD amongst all interested bodies (governmental services, NGO's, academia, etc) has developed the National Action Plan for ESD. This National Plan is based on the UNECE Strategy for ESD and takes, also, in consideration the

Cyprus particularities and needs. The National Action Plan is on an implementation stage since 2007 when it has been approved by the Council of Ministers.

The decisions about various central actions for ESD are taken by an intersectional committee, chaired by the Director of the Cyprus Pedagogical Institutes, in which all the Directorates of Education participate with individual representatives. Moreover, representatives from other Ministries, Governmental Services, Public Authorities and Non-Governmental Organizations usually participate during the discussion of issues that are of special interest or of specific concern to them.

The Cyprus Ministry of Education and Culture acknowledging the importance of having a permanent body for monitoring the ESD policy in national level, has set as a priority, in the framework of Ministry reformation, the establishment of a permanent Department of ESD, legally regulated, having as a mission to set in the core of educational system the ESD. For that that reason the Cyprus Ministry of Education and Culture is elaborating a specific proposal for the establishment of a permanent department of ESD which will submitted for approval at the end of the 2014, to the Ministerial Board of the Republic of Cyprus as well as to the Cyprus Parliament for approving the regulations that will governing the operation of the ESD Department.

Which are the major challenges in your country?

SLOVENIA : Major challenges relate to the following SDGs: zero hunger (prevalence of obesity, human trophic level, sustainable nitrogen management), responsible consumption and production (nitrogen emissions in imports, electronic waste, plastic waste exports), climate action (CO₂ emissions in imports, CO₂ emissions from fossil fuel combustion and cement production), life below water (fishing by trawling or dredging, Ocean Health Index: Clean Waters score, Mean area that is protected in marine sites important to biodiversity), while significant challenges can be seen in SDG6 clean water and sanitation, SDG9 industry, innovation and infrastructure, SDG15 life on land, and SDG17 partnership for the goals. Particularly critical indicators can be found elsewhere at the link:

<https://s3.amazonaws.com/sustainabledevelopment.report/2022/2022-sustainable-development-report.pdf>

Slovenia also reports a lack of ESD stakeholder coordination in formal and non-formal education. The lack of coordination among key ESD actors in the formal and non-formal levels results in problems concerning the systematic monitoring of this large variety of activities and their stakeholders at all levels of education. Therefore, according to Slovenia, a comprehensive and in-depth content analysis of the curriculum from the perspective of integration of important content from the field of ESD is needed as currently, only partial analyses are available. <https://unece.org/environment-policy/publications/implementation-unece-strategy-esd-across-ece-region-2015-2018>

Other challenges, as reported by Slovenia, include improving the cooperation between stakeholders since ESD is not just about educational content. This is even more the case since the adoption of the Agenda for SD 2030 that identifies education as one of the key tools for realizing SDGs, not only as one of the content objectives. Another challenge for policy, regulatory and operational frameworks on ESD is to ensure adequate funding for making holistic and interactive ESD methods available for all levels of education and across all geographic regions. <https://unece.org/environment-policy/publications/implementation-unece-strategy-esd-across-ece-region-2015-2018>

GREECE:

In Greece, the implementation of plans for ESD remains a challenge. While Greece has sought synergies between policy processes in ESD in their national context, there is a necessity to move away from isolated actions and activities towards a more integrated approach to applying ESD. To this end, the Hellenic Ministry of Education has drafted a new holistic plan for implementing ESD, aligned with the UNESCO GAP requirements and the priority axes of the Mediterranean Action Plan. In this context, a new legislative framework for ESD has been designed that integrates all related thematic areas (environmental education, health education and cultural issues) into a common sustainable whole-school approach with the aim of providing schools with an overall unified framework applied equally to all sectors of education, under which any specific activity can be carried out in a concerted way.

GERMANY :

- How to encourage learners to undertake transformative actions for sustainability?
- Transformation necessitates, among other things, a certain level of disruption, with people opting to step outside the safety of the status quo or the “usual” way of thinking, behaving or living. It requires courage, persistence and determination, which can be present at different degrees, and which are best sourced from personal conviction, insight, or the simple feeling of what is right.
- ESD in action is basically citizenship in action. It evokes the lifelong learning perspective, taking place not only at school, but also outside the school environment, throughout the life of each individual.
- ESD in the future will have to encourage learners to explore values which could provide an alternative to consumer societies, such as sufficiency, fairness and solidarity.
- A critical perspective is required on the continuing relevance of ‘traditional’ sustainability values.

FINLAND: Finland is at the forefront of many international sustainability comparisons and studies and close to reaching many of the SDGs related to social and economic sustainability.

Finland’s key challenges are related to consumption and production patterns, climate action and the state of biodiversity. Obesity is an increasing problem. Gender equality challenges, such as gender-based violence and labour market disparities, including a gender pay gap, still remain. Finland bears its global responsibility by, for example, contributing to international crisis management and supporting developing countries.

Finland recognises one of the top barriers to progress on SDGs with an environmental dimension as the gap between current action and the need for radical transformation. It acknowledges that although some measures have been taken, they have not been ambitious enough. (<https://www.eea.europa.eu/themes/sustainability-transitions/sustainable-development-goals-and-the/country-profiles/finland-country-profile-sdgs-and>)

POLAND :: In the 2017 and 2018 core curriculum, the concept of sustainability and some of its assumptions are included in the curriculum content. Thus, the teacher has the opportunity to implement SDG. Practice shows, however, that in schools, issues closer to EE are still discussing issues closer to EE. Moreover, the formal education system is dominated by programs based on the transmission of knowledge. Their value is in providing facts and information that can influence change the ways of thinking and behaviour of students. However, this approach should be complemented by a program that enables. The acquisition of skills and competencies, that will determine to respond responsibly to the changes that are taking place in the socio-natural environment.

It is worth saying that in Poland there are many organisations offering very interesting programs of education for sustainable development and involving multitudes of students and teachers are participating in these programs. Still it seems that this is education "for enthusiasts," which is conducted only in those schools that are led by principals who are aware of and open to the issues of sustainable development. It is not, however, education that is the mission of the school as an institution of sustainable development, which impacts on students through holistic sustainable functioning development and which engages students, encourages them to think reflectively and take actions for sustainable development both at school and in their personal lives.

CYPRUS: In the period that elapsed since its first VNR in 2017, and given the five years of continuous high economic growth, Cyprus has shown progress in most SDG indicators, even though it continues to rank low among the EU countries. Cyprus performs well with regard to reducing poverty, securing good health and high tertiary educational attainment; however, it falls behind in quality education. It is ahead of many EU countries in terms of the gender pay gap and shows some improvement in the number of women in leadership positions. On the other hand, Cyprus experiences the highest influx of migrants in the EU with the number of asylum applications rising to 8746 in 2019 compared to the EU average of 1411 applications.

Finally, regarding the environment, Cyprus' performance is below the EU average in most SDGs. Severe challenges exist with respect to sustainable agriculture, clean water and sanitation. Cyprus continues to lack behind with respect to affordable and clean energy, responsible consumption and production and climate action. However, the data show a continuous improvement towards most environmental goals, reflecting the fruition of targeted government policies and initiatives. (VNR, 2021)