GREEN VET CHOICES

Transnational Survey Report

EXECUTIVE SUMMARY

Fighting climate change and fostering Innovation by increasing interest in Green VET professions trough empowering digital storytelling

Project N°2021-1-IT01-KA220-VET-000032968

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Partners

P1 - CO&SO (IT) – project coordinator

P2 - AUX\ILIUM (AT)

P3 - THE RURAL HUB CLG (IE)

P4 - CARDET (CY)

P5 - REATTIVA - EUROPA REGIONE ATTIVA (IT)

P6 - ISIS LEONARDO DA VINCI (IT)

P7 - TRAINING FOR FUTURE (PT)

P8 - GOSPODARSKA ZBORNICA SLOVENIJE CENTER ZA POSLOVNO USPOSABLJANJE (SI

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Introduction

"GREEN VET CHOICES - Fighting climate change and fostering innovation by increasing interest in green VET professions through empowering digital storytelling" is a KA2 Cooperation Partnership Erasmus+ project in the field of Vocational Education and Training.

Climate change concerns everyone and is a very real threat to global society, affecting millions of people and causing natural disasters all over the world. The European Union is taking a stand against climate change and for a greener future, launching several initiatives such as the European Green Deal.

The Green VET Choices project joins the fight for a healthier planet by developing and implementing an innovative learning methodology to increase green skills and raise interest in green vocational education and training.

The project involves 8 partner organisations from 6 EU countries (AT, CY, IE, IT, PT, SI) aiming at:

- Raising environmental consciousness
- Fostering interest in green VET careers: there are many innovative green professions and VET offers related to environmental issues, but the awareness of these possible and attractive career paths needs to be raised among current and potential VET learners to satisfy the labour market and societal demand of these specific professionals
- Increasing competences necessary for these professions such as green and digital skills
- Increasing the disposition for environmentally friendly lifestyles.

The project lasts 28 months, from February 2022 to May 2024 and develops the following project results:

R1 – GREEN VET CHOICES Transnational Survey Report, that is to say a transnational report discussing national environmental issues, skills necessary for contributing to a carbon-neutral future and awareness of VET professions and green industries.

R2 – Green VET Choices Virtual Portal, that is to say a portal which enables digital learning on environmental topics and inspires current and future VET learners to pursue green VET options. It trains soft, green, and digital skills relevant for contributing to a carbon-neutral future.

R3 - Green VET Choices Digital Model, that is to say a professional magazine (available as e-book and video anthology) which showcase the project's innovative methodological approach combined with successful didactic concepts (e. g. immersive storytelling, challenge-based learning) in a non-formal educational setting.

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This online publication is the executive summary of the first project result, the Green VET Choices Transnational Survey Report. It is available also through a short video clip in En, De, Gr, It, PT, Si. All these products are downloadable from the project website www.greenvetchoices.eu.

Here, we summarize the main findings of the Transnational Survey report and in particular we offer information about the methodology used to carry it out, and the analysis of similar trends and strategies in partner countries.

The findings of this Report constitute the starting point for the project consortium to develop the next project results, and in particular to understand the necessary soft, green and digital skills useful for VET students to undertake green VET careers.

Objectives and Methodology

The main objectives of the Green VET Choices Transnational Survey Report are:

- To investigate on innovative green jobs and green career paths in the VET field in partner countries
- To investigate on environmental challenges relevant to partner countries
- To provide data on the current situation and regional opportunities to engage with VET offers in green industries and environmental participation possibilities in partner countries
- To discuss VET learners and professional expertise and opinions concerning the environmental, green, soft, and digital skills they consider necessary for contributing to a carbon neutral future as well as their awareness of VET professions in green industries.

The methodology used to develop the Transnational Survey Report was made up of desk research and a field survey (through a focus group discussion) implemented in each partner country.

Consorzio CO&SO (It), the leading partner for this project result, provided all the other partner organisations with some Guidelines to follow in order to carry out both the desk research and the field survey. A template to compile in order to draw the National Survey Report was also provided.

Therefore, thanks to the desk research and the field survey, each partner was able to collect the data and information needed to draw its own National Survey Report, which was then included into the transnational one.

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Findings

Similar trends and common strategies in partner countries

This section dives into the comparison and analysis of the situation in the project's partner countries, as pointed out in the GREEN VET CHOICES partners' National Survey reports.

In this first part of the transnational study, we will take into consideration similar trends highlighted by partners through their desk researches.
In fact, as emphasised by all partner's, the main environmental challenges are:

- CLIMATE CHANGE
- WASTE PRODUCTION
- WASTEWATER
- AIR POLLUTION
- Other reported environmental challenges concern plastic waste, the pollution of water, the consumption of the land i.e. the prevalent sealing of the soil surface for constructions, roads etc, which is a huge problem for the availability of water, flora and fauna.

For further details on the environmental challenges highlighted by the partnership please read the complete GREEN VET Choices Transnational Survey report.

Regional/national initiative or programme undertaken to overcome environmental challenges

In all partner countries it has been found some existing regional / national initiatives/programmes undertaken to overcome different environmental challenges. We recommend to read the National Survey report of each partner (available in the main document of the GREEN VET Choices Transnational Survey report) to get more insights in the existing regional / national initiatives/programmes undertaken to overcome environmental challenges.

Presence of training module and work-based learning experience on green skills

In each respective National Survey report, each partner has thoroughly described its Vocational Education and Training system. We advise to read each National Survey report for a detailed overview about the organisation of the VET system in each partner country.

Here, we summarize the presence of a specific training course / training module / WBL experience on green skills in each country.

For what concerns Austria, the degree to which green skills are taught in VET schools depends on the individual setting and chosen educational path as well as on involved institutions and persons (teachers, mentors). Overall, many aspects of sustainable lifestyles are included in the curricula. However, a stronger focus on these topics should be raised up.

In Cyprus, the project "SMEm Power Efficiency" aims to empower SMEs to run energy audits and implement their proposals. This initiative uses a holistic methodology to address different barriers,

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where the first concerns the design and delivery of an integrated Education & Training programme targeting energy related SME staff, of 5 ECTS/EQF 6.

In Ireland, it appears that there are more than 50 programmes being delivered by 16 Education and Training Boards with a focus on green skills. Some of these training programmes include:

- Environmental sustainability for the Workplace
- Lean Practice for Sustainable Business
- Resource Efficiency in the Workplace
- The Circular Economy
- Sustainable Procurement
- Greening the Supply Chain.

An interesting Italian project aimed at bringing green skills at school is the Progetto Green Jobs (http://www.progettogreenjobs.eu/), which is a project promoted by the Cariplo Foundation in 2015 as a school-work alternation pathway to orientate and train VET students on the sustainability culture in the cultural, social, environmental and professional field. The project, as already mentioned, aimed at stimulating students and teachers in the acquisition of green skills as a tool to protect the territory where they live as well as a professional opportunity. If you would like to know more about this project, please read the National Survey Report provided by Italy.

In relation to green skills offer, Portugal has reported the presence of the following courses:

1) Professional Courses with double certification: they have a duration of 3 years and are valid for young people up to 20 years old. Some examples are:
    - Environmental Management Professional Course
    - Professional Course of Photovoltaic Solar Systems Installer
    - Professional Course of Renewable Energy Thermal Systems Installer
2) Professional Courses (online or face-to-face) with certification:
    - Organic and Sustainable Agriculture Course
    - Agricultural Management
    - Renewable Energies
    - Solar Energy
    - Transport vehicle emissions inspector
    - Environmental Management
    - Photovoltaic Solar Energy.

In addition, there are different courses and workshops for adults on green skills.

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At last, in Slovenia it's possible to find a general training on green skills, a training on sustainable development, a workshop on green jobs. However, it has been reported that none of them provide a formal VET certificate.

Initiatives, programmes, and projects undertaken in each country to include green / environmental awareness in VET programmes / courses

Environmental awareness has also been included in VET programmes / courses in partner countries as follows:

in Austria, green skills are included in the curricula to a certain extent, but there should be a stronger focus on them, as highlighted in the previous paragraph. Moreover, sustainability topics are part of teaching and many aspects of sustainable lifestyles are part of the curricula. It is, however, rather difficult to implement sustainability in the actual training during real life situations in the apprenticeship companies.

Cyprus presented two projects available in the country on environmental awareness in VET:

1. The project WE-Qualify and the Build-up Skills initiative - «Improve Skills and Qualifications in the Building Workforce in Cyprus». It is an EU co-funded project through the «Intelligent Energy Europe» programme under the European initiative «Build Up Skills». The initiative aimed at promoting the continuing vocational education and training of workers in technical occupations in the Construction sector, as well as other relevant sectors in connection with the installation and maintenance of energy saving and renewable energy systems.
2. HRDA Subsidised Training Programmes from the PV Technology Lab of FOSS Research Centre for Sustainable Energy of the University of Cyprus. The PV Technology Lab has intensified its efforts to shape the wide range of educational activities it offers. As climate change and energy security is an intergenerational and multifaceted problem, it has tailored its educational courses to meet a variety of people of different age groups, educational backgrounds, and a cross-section of topics. The PV Technology Lab currently offers vocational training on topics such as smart grids, renewable energy sources and nearly zero energy buildings. The PV Technology Lab provides vocational training courses to professionals on energy issues.

In Ireland, and more specifically in the Cavan Region, the Cavan training institute offers the following training programmes on environmental awareness (please read the Irish National Survey report for further details):

1. Sustainable Energy and Construction Technology
2. Renewable Energy Technology and Control Systems
3. Carpentry Techniques course

In Italy, the Ministry of Education has developed the RiGenerazione Scuola plan (https://www.istruzione.it/ri-generazione-scuola/index.html) implementing the objectives of the 2030 UN Agenda. The Plan is designed to accompany schools in the ecological and cultural transition and implementation of educational paths on sustainable development.

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In Portugal, the municipality of Oeiras (in Lisbon District) provides an annual Environmental Education programme for Educators called PEA (Programa de Educação Ambiental). It aims to constitute a set of transversal and multidisciplinary resources through which schools can promote education for sustainability.

At last, in Slovenia there are several VET programmes which take into consideration environmental awareness such as the higher education study programme "NATURE PROTECTION: NATURE PROTECTION AND SPATIAL PLANNING", two secondary professional education programmes called "Environmental Technician: Environmental Protection, etc. For further details on these environmental awareness VET programmes, please read the Slovenian National Survey report.

Green career paths in partner countries' VET systems

In the table below we have summarized different green career paths and if and to which extent they are part of the VET system in each partner country, in accordance with the information provided by project partners. For further details and information, we recommend to read the complete Transnational Survey report.

Is one of the following green career paths, part of the VET system in your country?

	Austria	Cyprus	Ireland	Italy	Portugal	Slovenia
HIGH-SKILLED OCCUPATIONS						
Engineering technologist	University degree (university of applied science) required for professions falling into this category e.g., medical technologist, health assisting engineering, safety and systems engineering, electronics technician, information technology technician.	University degree required.	N/A	17 Istituti Tecnici Superiori (ITS) focus on the environment, an eco-sustainable future and energy efficiency	The courses related to engineering have academical degree and a duration of 6 semesters.	Several paths are available as higher education study programme

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Environmental engineer	University degree (university of applied science) required	University degree required.	N/A	To some extent part of the VET system. University degree required.	The courses related to engineering have academical degree and a duration of 6 semesters.	Available as higher education study programme
Other			Eco-construction specialist, energy data analyst, sustainable energy engineer, green asset manager and carbon analyst.		Environmental management available as VET course.	Nature conservation engineer
MEDIUM-SKILLED OCCUPATIONS						
Energy auditor	A number of certifications are required, but not through a VET programme	VET programme available. The VET programme of the University in Cyprus -PV Technology Lab includes solar photovoltaic installer skills and energy auditor skills.	N/A	To some extent, part of the VET system.	VET programme available.	VET programme available.
Transport vehicle emissions inspector	VET programme available	VET programme available.	N/A	To some extent, part of the VET system.	VET programme available.	VET programme available.
Insulation worker	VET programme available	VET programme available	N/A	To some extent, part of the VET system.	VET programme available.	VET programme available.

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		(not at university).				
Electrician	VET programme available	VET programme available (not at university).	N/A	To some extent, part of the VET system.	VET programme available.	VET programme available - secondary vocational education.
Solar photovoltaic installer	VET programme available	VET programme available. The VET programme of the University in Cyprus -PV Technology Lab includes solar photovoltaic installer skills and energy auditor skills.	N/A	To some extent, part of the VET system.	VET programme available.	VET programme available.
sheet-metal worker	VET programme available	VET programme available.	N/A	To some extent, part of the VET system.	VET programme available.	N/A
Other						Environmental technician and nature conservation technician available as Secondary Professional Education; agricultural and entrepreneurial technician available as Vocational and Technical Education.

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LOW-SKILLED OCCUPATIONS						
Refuse/recycling collector	No VET programme available	VET programme available.	N/A	To some extent, part of the VET system.	No specific course for people who would like to work in this profession. Each company give their employees the training necessary for them to be able to do their activities.	N/A
Other	A VET programme for waste management is available					A VET programme for waste management is available

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Green jobs occupational trends.

The general EU trend in the last decade clearly goes towards a greener future, in fact there is a rise of green jobs as well as more inclusion of green topics in the educational curricula in all partner countries.

In Ireland, for instance, there are approximately 37.400 people employed through the green economy. Around 27.800 of them, work in the industry sector.
For what concerns Italy, the request of green jobs in the next years is expected to be pulled strongly from Eco-sustainability and the digital revolution. These two sectors will play an important role in the characterization of Employment needs in various economic sectors, involving in the next five years 26-29% of workers both from the Public Administration and the private companies. Overall, it's foreseen that the need of green jobs will increase of the 38% by 2025.
The new construction industry In Italy, but also in Cyprus and elsewhere, is growing because it is focused on requalification, energy saving, the recovery of abandoned urban areas and earthquake safety: all jobs which will become increasingly central as Europe sets increasing ambitious targets in cutting emissions.

Employment in the environmental goods and services sector has increased in Slovenia from 2010 to 2019. In EU average there was a 15,4% increase, while in Slovenia there was a 24,4% increase.

A slightly different trend has been reported by Portugal as, according to INE (National Institute of Statistics), in 2020 companies in the industrial sectors employed 10.858 people dedicated to environmental protection, 1.809 less people compared to 2019.
The key green skills in demand reported by Ireland, but also applicable to the other partner countries, are:

- Energy and resource efficiency awareness across all occupations
- Entrepreneurial skills to meet demand for eco-friendly goods and services
- Eco-design and Innovation skills applied to processes, products, and services
- Interdisciplinary Sustainable Engineering, Science and Building skills
- Sustainable Supply Chain Management and Logistics skills
- Lean Manufacturing skills - minimising waste, improving productivity
- Commercial and Marketing skills to advise consumers on energy efficiency solutions
- Sustainable and Ethical Procurement skills
- Enterprise Carbon Monitoring and Accounting skills
- Clean Energy Research & Development skills.

Some of these skills are very specific and technical, however some of them (entrepreneurial skills, energy and resource efficiency awareness, commercial and marketing skills) might be considered as transversal and might be taught even through the GREEN VET CHOICES Virtual Portal. For a more detailed overview on the occupational trends in green jobs in partner countries, please read the National Survey reports section available in the GREEN VET Choices Transnational Survey report.

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Similar trends and common strategies in partner countries according to field survey participants

In this section, we will compare and analyse the opinion of the field survey participants, gathered through the focus group surveys held in partner countries.

General overview on the focus groups participants

In total, 58 participants out of the 60 foreseen attended the focus groups in partner countries.

Half of them (29 out of 58) were VET staff, while the remaining 29 persons were learners.

Regarding the gender division, 35 participants were male, while 23 participants were female.

No division between current and future learners have been reported, as some partners mentioned it, but others didn't mention this data.

Which are in your opinion the most relevant regional / national environmental challenges in your country? Why?

According to the opinions of focus groups' participants, climate changes are severely impacting partner countries territories everywhere. Temperatures have been rising over the last few years, leading not only to warmer summers, but also to warmer winters and a decline in snowfall in most countries (e.g. Austria and northern Italy), melting glaciers and causing erosion. Warmer temperatures also influence biodiversity as it attracts non-native plants and animals which, in turn, frequently cause a threat to native species.

Increased temperatures, especially in summer, disturbs various sectors of the industry, such as agriculture and tourism. extreme weather events have also been observed in recent years, e.g. heavy rain, and hail (especially during the winter), destroying crops and private properties.

Other environmental challenges highlighted by focus groups participants in all partner countries are air pollution, water pollution and waste disposal. Both air pollution and water pollution have been seen as more dangerous than others because they may cause health problems among people or even damage the ecosystems.

It is worth mentioning that these challenges correspond to the ones identified by partners through their desk researches.

Some solutions pointed out by VET teachers and learners from the Italian focus group to fight against these environmental challenges are the following:

- incentivize investments to support the production of renewable energy, from solar to geothermal, from wind to biomass, from waste recycling to hydroelectric, also promoting the use of new technologies for the capture and storage of CO2
- succeeding in combining environmental sustainability with economic sustainability
- carry out a profound cultural change and apply political strategies that know how to combine environment and development.

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- reduce CO2 emissions to decrease the greenhouse effect by replacing fossil fuels with renewable forms of energy.

What would in your opinion make vocational education and training systems more responsive to environmental challenges?

In order to make VET offers more responsive to environmental challenges focus groups participants from Italy and Austria propose to deliver more hands-on trainings on climate-related issues as well as more education on these topics at school level. Participants from Italy advise to create active learning environments that might be useful to engage VET students through real-life experiences. Furthermore, in their opinion, teachers must be trained to teach sustainability by promoting collaboration and synergies with the local community, for instance co-operating with local companies and stakeholders.

In Austria, participants provided additional advises to make the VET offer more responsive to environmental challenges, as follows:

- Understand job local demands so that VET professionals could be trained accordingly
- Internalization to see what other countries do.

Participants from Ireland advise the following:

- Continued investment in green skills training programme, because people need to be encouraged and guided to take up these courses
- CPD training for teachers and trainers – allocation of credits under the Croke Park Agreements – to encourage teachers and trainers to improve their skills and knowledge
- Expand the Green Flag initiative from primary schools to secondary and FET schools so as to encourage young people to continue with their environmental projects and positive behaviours.

Participants from Cyprus also suggest focussing on the particularity of each country and the available industries in order to train up to date professionals.

At last, Slovenian participants propose to introduce themes/modules in relation with environmental problems in the education system. Anyway, some participants think that in the last years the education and training systems started to emphasize more the environmental problems. However, it depends on the profession people are being trained for: builders talk about how important it is to know where they can dispose construction waste, how to handle it, how to reduce it, why it is important not to dispose of waste in black dumps, etc.

Are in your opinion existing curricula, qualification standards and training programmes up to date in terms of green skills / environmental awareness? What would you eventually propose in order to have them more respondent to the labour market demand?

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For this issue, on one hand we have the opinion of Austria, Italy, Portugal, and Slovenia. In fact, in Austria, the general consensus of the focus group participants is that the existing curricula and training programmes and the current qualification standards for VET are not sufficiently up to date. There needs to be a shift from traditional VET professions towards an increased focus on occupations in the environmental field. Participants also think that VET students are not sufficiently aware of environmental aspects in the potential green careers they might undertake.

In Italy, focus group participants think that there is a sort of disorder, as Italy follows regional guidelines. There is a lack of a large-scale vision of training courses, qualifications and curricula and participants think that VET courses should be structured in such a way to be more attractive on the job market. Furthermore, in their opinion, the school system lacks training courses for the occupations of Environmental Manager and Expert in Waste Management. In addition, for them it would be necessary to host companies operating in the green sector, to strengthen work-based learning activities, to facilitate students' access to green jobs.

For focus group participants from Portugal, understanding the labour market needs in terms of required green skills, is a process which should start with the initiative of the policy makers.

At last, for participants from Slovenia there is a lack of transfer of knowledge into everyday life and of incentives to use this knowledge. Some participants think that the VET system should provide more technical skills (not just theoretical) to gain accurate green skills. The gaps in gaining the right green skills according to the employment trends should also be considered.

On the other hand, we have the opinion of Ireland and Cyprus. In fact, participants from Cyprus and Ireland reported that the existing curricula, qualification standards and training programmes are to a very high extent up-to- date: in Ireland, they have been developed in consultation with industry, therefore they reflect the skills that are needed in the labour market. According to focus group participants from Cyprus, the adequate assessment of the labour market demand in terms of the required green skills, is essential to better link it with the curricula, qualification standards and training programmes.

To conclude, we can affirm that in all partner countries the main idea of focus groups participants is that VET courses should be designed keeping more into consideration the labour market needs in terms of new required green and environmental skills, to respond adequately to the labour market requirements and to the challenges of the ecological and digital transition operated by all EU member states. However, VET courses should be developed at systemic level involving and consulting different industries/companies/stakeholders.

Do you think that existing regional / national systems of information, advice and guidance provide enough information to attract potential learners in green career opportunities?

Focus groups participants from all partner countries think that existing regional / national systems of information, advice and guidance do not provide enough information to attract potential learners in green career opportunities. In some partner countries, VET courses are seen as inferior in comparison to university courses, while in other countries, such as Italy, the subject is not given the importance it should have, especially among young people. For further insights in the replyes of partner

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countries' participants to this issue, please read the complete GREEN VET Choices Transnational Survey report.

We summarize the "tools" to attract more learners in green vet careers proposed by the focus groups' participants, in three main categories as follows:

- Campaigns on different media, social media, and new digital platforms
- Live seminars / events on green skills and green VET opportunities
- Collaboration and networking with green industries (meetings, work placements, training paths, etc).

The following questions have been addressed to VET TRAINERS ONLY

As VET trainer, do you feel you have enough knowledge / expertise on green issues to provide your students with these skills? In which field / topic do you feel more competent? In which area do you think you need additional training?

When asked to VET teachers if they felt they have enough knowledge / expertise on green issues to provide their students with, these are the main answers they provided:

Austrian VET teachers are convinced that they can already convey a general idea about environmental protection and environmentally friendly actions, such as recycling, to their students. They are also quite confident that they have a good knowledge about environmental aspects in their own field of expertise. Despite of that, they would like to get more input and more well-founded background knowledge on environmental topics – and, in particular, about future trends and developments in the green sector in terms of modern jobs and newly created professional fields and positions.

In Cyprus, VET teachers also think that they need a wider training on environmental issues and on soft skills.

Irish participants say that they need more specific green skills such as environment protection, biodiversity, waste management, green technologies knowledges (such as renewable energies), sewage treatment, etc.

Italian VET teachers also highlight the importance to get continuous training and updating as technologies evolve.

All of the VET trainers who participated in the focus group in Portugal think that they need to better understand the current scenario with concrete data and more information on the loss of biodiversity and on the widespread impact of man on level of natural ecosystems.

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Most of VET professionals involved in the Slovenian focus group are educated in the field of construction, economy, and traffic, that's why they are skilled on energy use and waste management. However, they pointed out that they would need additional training for example in ecosystem management, environmental policy, sustainable fashion, prevention of pollution of surface waters and biodiversity/biology.

At conclusion of this analysis, we can surely affirm that overall, most of the VET teachers who attended the focus groups in partner countries have got basic green skills but that they would like to gain additional skills to be able to convey specific green skills to their VET students.

What do you think would help you in designing and implementing a training programme which deals with environmental awareness / environmental issues?

The main factors identified by VET trainers of partner countries for designing and implementing a training programme which deals with environmental awareness / environmental issues, are the following:

- Continuous professional training for the VET teachers and trainers
- Availability of high-quality learning material
- Interdisciplinary and coordinated training paths, in collaboration with green experts, green companies and green industries (meetings, practical workshops, WBL experiences, work placements, etc)

Availability of appropriate equipment (thanks to incentives or free of charge for the VET centres).

Have you ever collaborated with or involved green entrepreneurs / green industries in your training programme (e.g. through work-based learning opportunities)?

On one hand, in Austria, because of the dual system, there is a strong connection and good networking between VET schools and apprenticeship companies, however, according to Austrian VET trainers, there could be a stronger focus on networking in relation to environmental topics.

The same is in Italy, as according to the VET trainers who attended the focus group, the training system is not yet able to respond concretely, quickly, and effectively to this need of innovative skills. Networking is the best answer, but adequate skills are needed and the educational system must develop them. In general, there is a sort of networking between VET centres and companies, but it should be strengthened for the acquisition of these new demanded green skills.

On the other hand, VET trainers from Cyprus and Ireland declare that they have never collaborated with green companies and industries in their VET programmes as well as most of the VET trainers from Slovenia. Just one of the Slovenian trainers said that he collaborated with companies engaged in the processing, recycling of construction waste materials, and companies engaged in the production of energy from renewable energy sources.

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To conclude, from the answers collected to this question, we can affirm that networking with green companies and industries should be strengthened in all partner countries, to design and implement an effective training path, based on the acquisition of green skills as well as all the skills necessary for a digital and ecological transition.

The following questions have been addressed to LEARNERS ONLY

As VET learner, do you feel you have enough knowledge / expertise on green issues and environmental awareness?

In Austria, VET learners and future VET learners state that they have got a high level of basic knowledge about environmental awareness such as general waste management and recycling, energy saving potential in the house and of the importance of an intact nature. However, what is often missing in their opinion, is an in-depth knowledge about these topics and, more importantly, a profound knowledge about environmentally friendly actions in the workplace.

VET learners from Cyprus, Italy and Slovenia also think that they have got some general knowledge but that they need an in-depth knowledge and more technical skills on green issues.

The participating VET learners from Austria and, in particular, the future Austrian VET learners complained again the fact that there was little information available about trendy, green future job opportunities. The same has been reported from the Italian VET learners involved within the focus group in Italy.

While VET learners from Austria, Cyprus, Italy and Slovenia think that they have got a general knowledge on environmental awareness, all VET learners from Ireland agreed on the fact that they do not have these skills. Through their vocational studies, green skills were not a feature and they would like to be provided a general understanding on environmental issues throughout their training programmes.

At last, it is important to point out that learners from Slovenia also think that the use of critical thinking is essential in the training for green jobs, because people need to own the skills to recognize the wrong and the right ways to do something and to have the skills to find accurate solutions for specific environmental problems. Risk management, environmental impact assessment and circular economy were also some of the skills they mentioned when talking about the topics they think they need additional training in.

What are in your opinion green jobs and skills, how do they impact current occupations and how can they contribute to a greener and more modern economy?

Summarizing the answers provided by the VET learners who attended the focus groups in all partner countries, we can state that according to the GREEN VET CHOICES field survey participants, green skills are those which include the person's attitude to always seek "energy saving" and try to make a company, activity, industry, etc, ecological and sustainable. They can also be seen as being

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environmentally-conscious (e.g. knowledge about how to separate waste or how to save energy in the house) and knowing how to implement positive climate actions.

According to field survey participants, green jobs are those aimed at protecting and promoting the environment, or those which consider their impact on the health of the planet at all times and endeavour to minimise it. Therefore, green jobs are those professions where efforts are made to safeguard the environment and the planet by reducing waste and the pollution. It is important to be aware that some existing jobs can become greener. In fact, most professions nowadays show a shift towards a "greener" approach in their policies, even if they are traditionally not a green business.

Participants listed a number of professional fields that fall into this category: anything connected to renewable energy, professional waste management, product and package design, gardening and landscaping, ecotourism, etc.

To conclude, learners from Portugal say that no matter what kind of position a person has got, they must have the skills and know-how to be aware of the impact their actions will have on the environment.

In your opinion, which are the most demanded green jobs in your region / country?

The answers to this question are very similar from a partner country to another. Therefore, we assume that there are a lot of new potential green professions and opportunities which are evolving all over EU, and VET institutions should pay more attention on creating training offers able to provide suitable training paths in these sectors to answer to the labour market needs.

After listing different green jobs, VET learners were also asked if they know how / who to get in contact with, in order to pursue one of these green career paths. We advise to check the respective National Survey report, to get information on the answers provided by participants in partner countries.

Skills to train in the GREEN VET Choices Virtual Learning Portal

The GREEN VET Choices partnership aims at developing a learning portal (R2) where VET learners will be trained on green, soft and digital skills useful for a greener transition and more sustainable economy.

For this reason, one of the last two questions of the field survey, aimed at understanding if VET trainers and learners were satisfied with the skills trained in their VET institution.

For this survey, we have got 43 respondents: 5 from Austria, 5 from Cyprus, 6 from Ireland, 10 from Italy, 11 from Portugal and 6 from Slovenia. In fact, Austria, Cyprus and Slovenia had the answers only of their VET learners, while Italy, Portugal and Ireland had the answers of all the participants involved within the focus groups.

Participants had to evaluate their level of satisfaction on a scale from 1 to 5, where 1 meant "Not satisfied" and 5 meant "very satisfied".

According to the findings of this question, participants are overall satisfied on the training received in the following skills: teamwork, problem solving, numeracy, computer literacy, Word processing,

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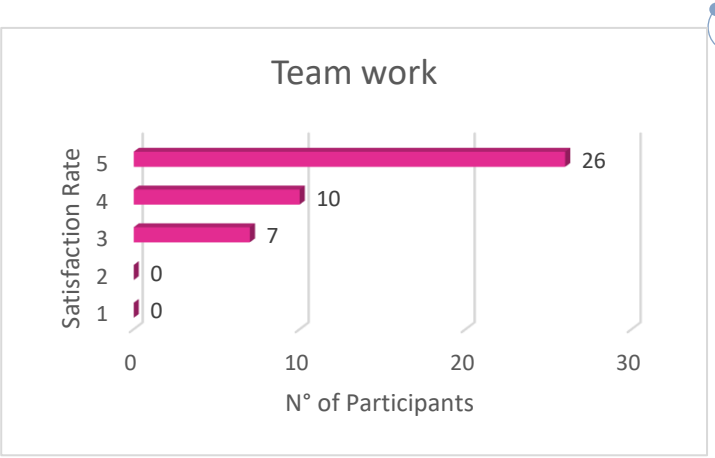
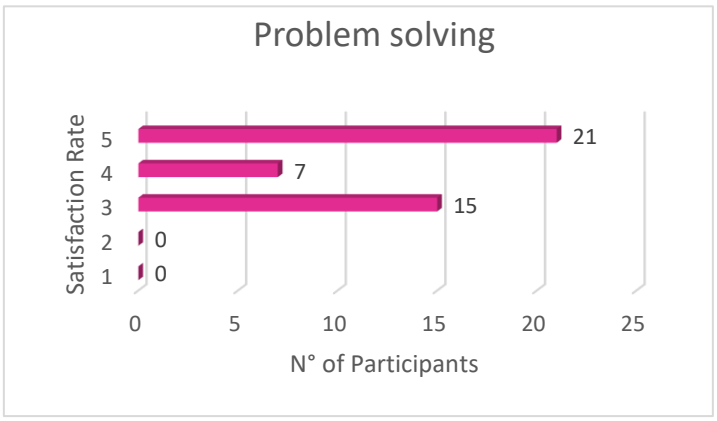
web-based communications and research, recycling consciousness and water consuming and consciousness.
In fact, as we can observe from the charts below:

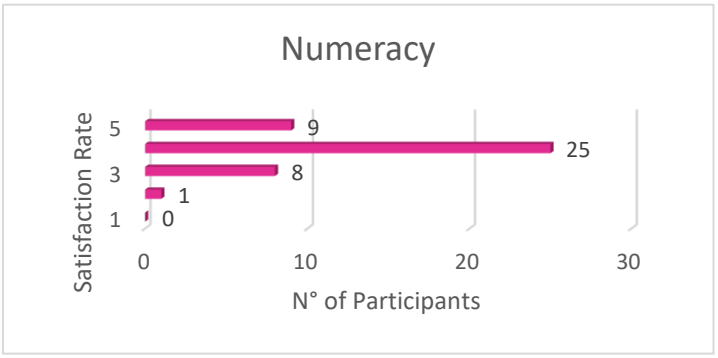
- 26 participants are very satisfied (5th rate on the scale) and 10 participants are satisfied (4th rate on the scale) on the training received on team work





- 21 participants are very satisfied (5th rate on the scale), 7 participants are satisfied (4th rate on the scale) and 15 are neutral on the training received on problem solving

- 25 participants are satisfied (4th rate on the scale) and 9 participants are very satisfied (5th rate on the scale) on the training received on numeracy



- 22 participants are very satisfied (5th rate on the scale), and 8 participants are satisfied (4th rate on the scale) on the training received on computer literacy

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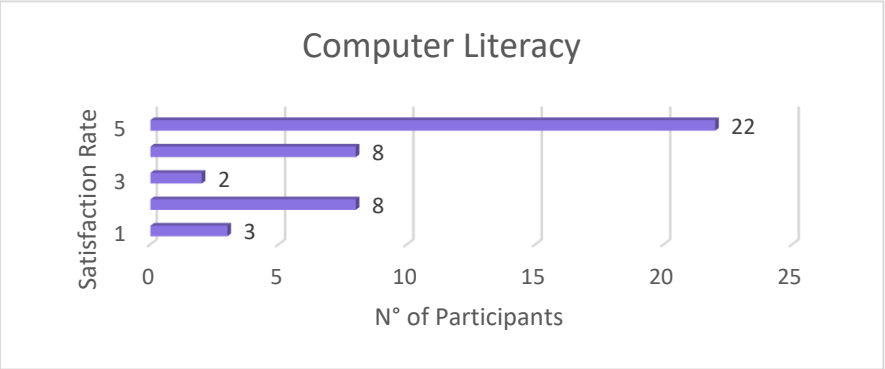
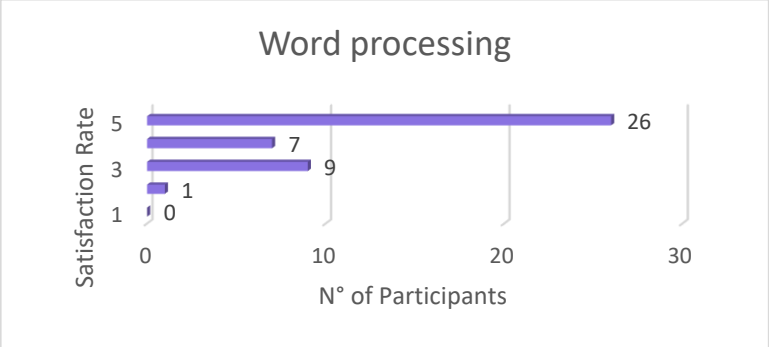
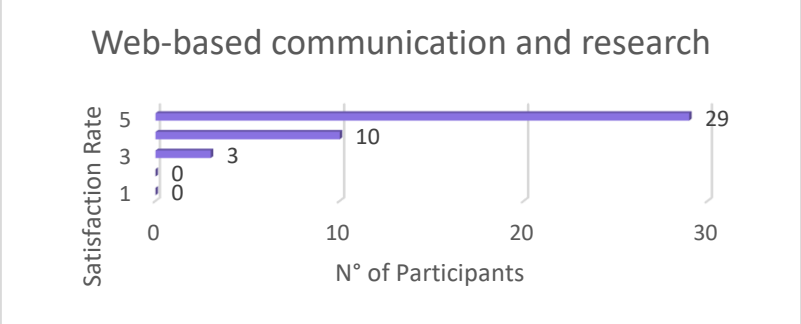


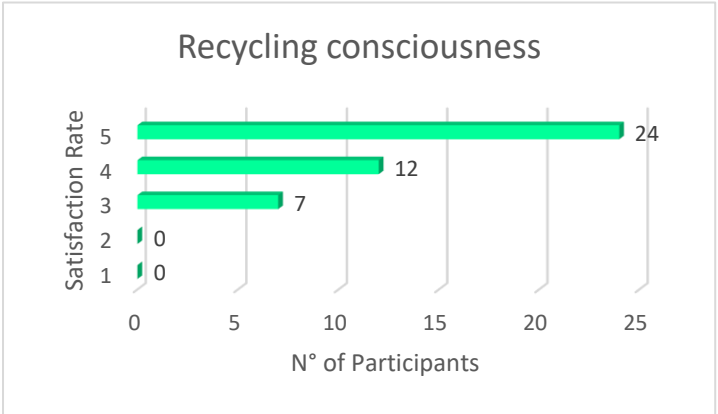
- 26 participants are very satisfied (5th rate on the scale) and 7 participants are satisfied (4th rate on the scale) on the training received on Word processing





- 29 participants are very satisfied (5th rate on the scale) and 10 participants are satisfied (4th rate on the scale) on the training received on web-based communication and research

- 24 participants are very satisfied (5th rate on the scale) and 12 participants are satisfied (4th rate on the scale) on the training received on recycling consciousness



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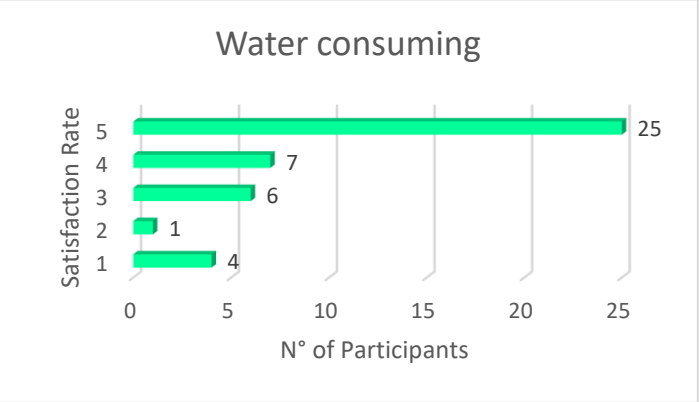
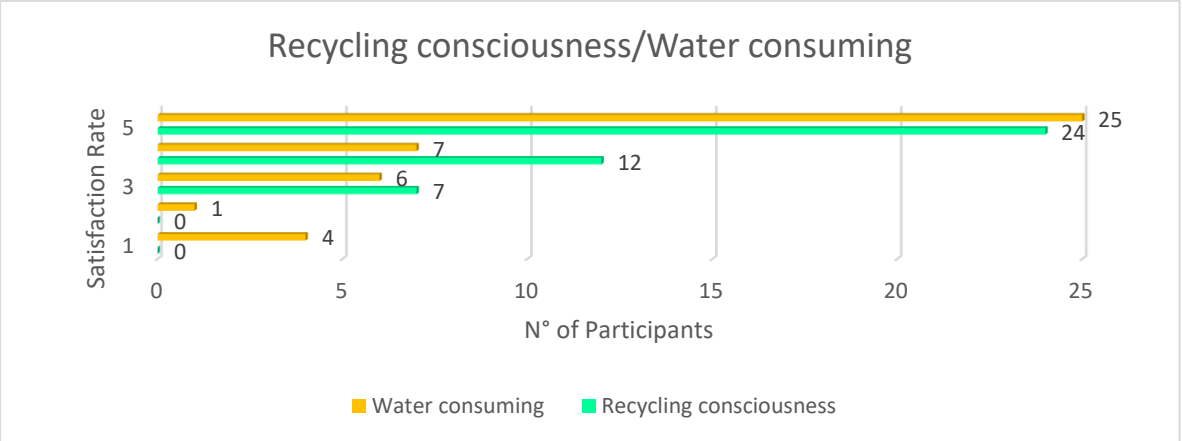
- 25 participants are very satisfied (5th rate on the scale) and 7 participants are satisfied (4th rate on the scale) on the training received on water consuming and consciousness.

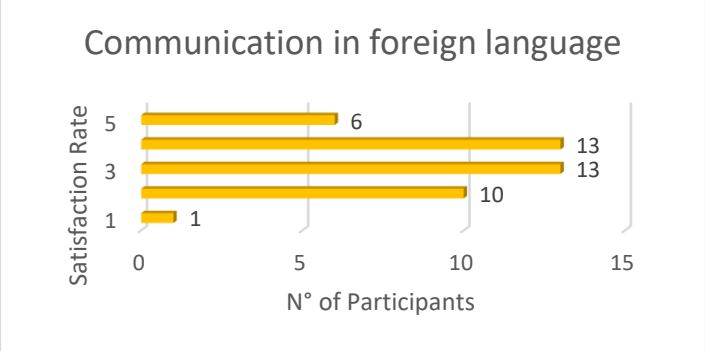


It is interesting to observe that participants are satisfied with the training received on three digital skills, that is to say computer literacy, Word processing and web-based communication and research, which are basic IT skills very essential nowadays.

It is also worth mentioning that, the number of respondents which are overall satisfied with the training received on recycling consciousness (36 persons) overcomes greatly the overall satisfaction on the training received on water consuming and consciousness (32 persons).



On the other hand, the charts below show that participants are overall les satisfied with the training received in the following skills:



- Communication in a foreign language

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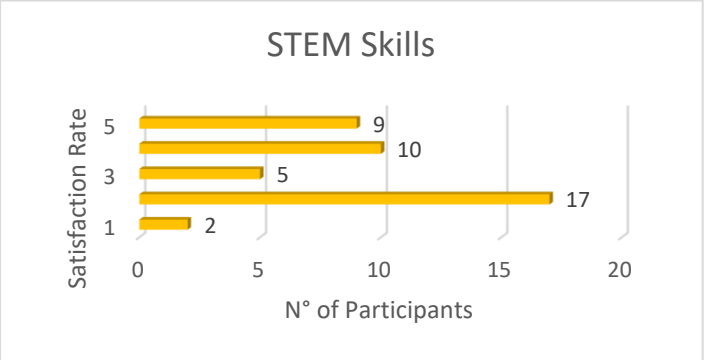
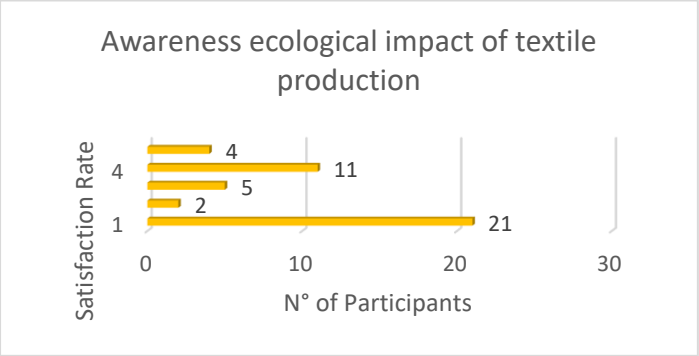


- STEM skills



- Awareness about ecological impact of textile materials production.

Therefore, we assume that in the GREEN VET Choices Virtual Learning Portal it would be significant to focus also on these skills, where participants feel they have received less training so far.

In the last question, participants were asked if they wanted that one or more of the green, soft, and digital skills chosen by the partnership, are trained in the GREEN VET Choices Virtual Learning Portal.

Participants had to state if they would like to get some training in a specific skill “Yes”, “No” or if they “don’t know”.

For this survey we have got 48 respondents: 5 from Austria, 5 from Cyprus, 6 from Ireland, 10 from Italy, 11 from Portugal and 11 from Slovenia. This time, in Slovenia both the VET teachers and the VET learners have answered to the question (11 participants instead of just the 6 learners attending the focus group as for the previous question).

According to the findings of this survey, participants would like to be trained in the following skills: problem solving, logical thinking, adaptability, flexibility, decision making, secure information processing, environmental footprint, awareness about ecological impact of textile materials production, critical consumer behaviour (grocery/food/clothing…), water consuming and consciousness.

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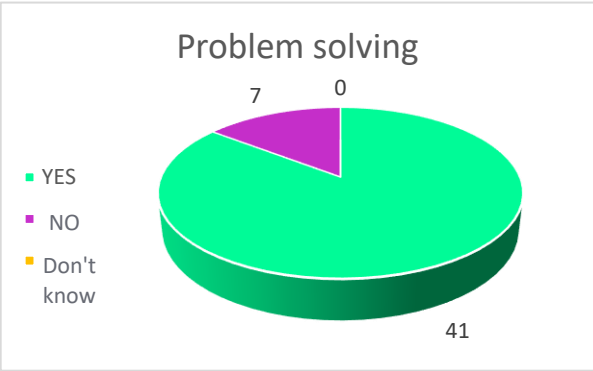
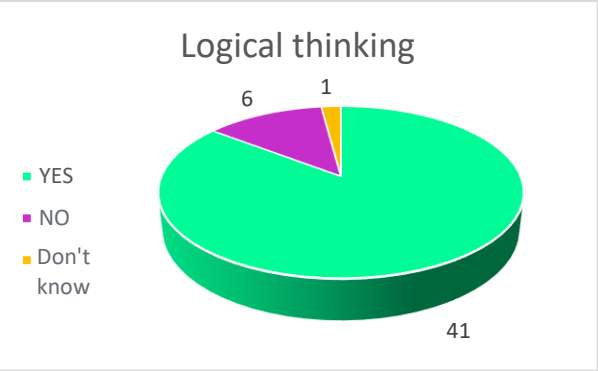
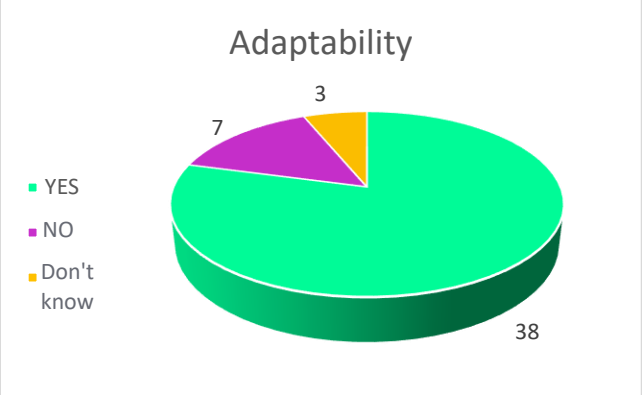
Among the soft skills, problem solving, and logical thinking are the most demanded ones (41 yes each)

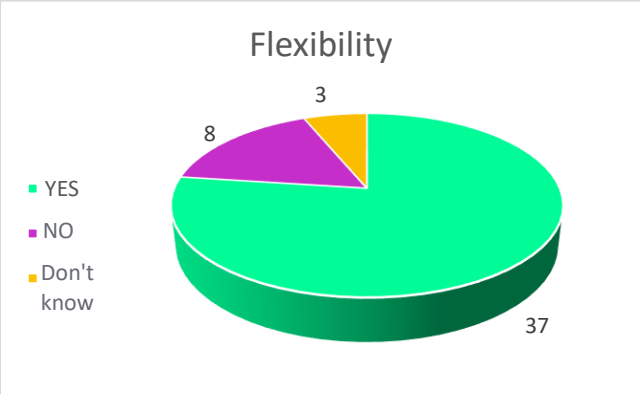


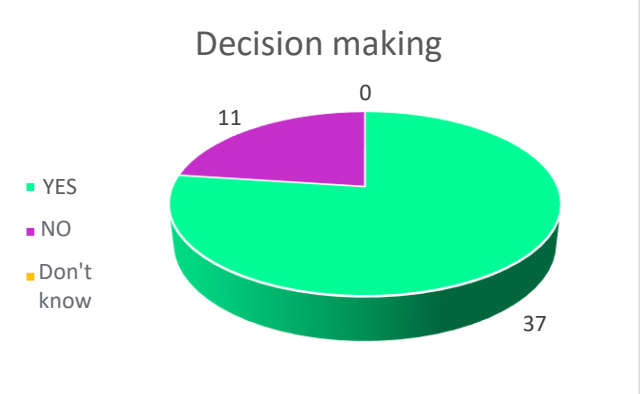


followed by adaptability (with 38 yes)



and by flexibility and decision-making





(both with 37 yes).

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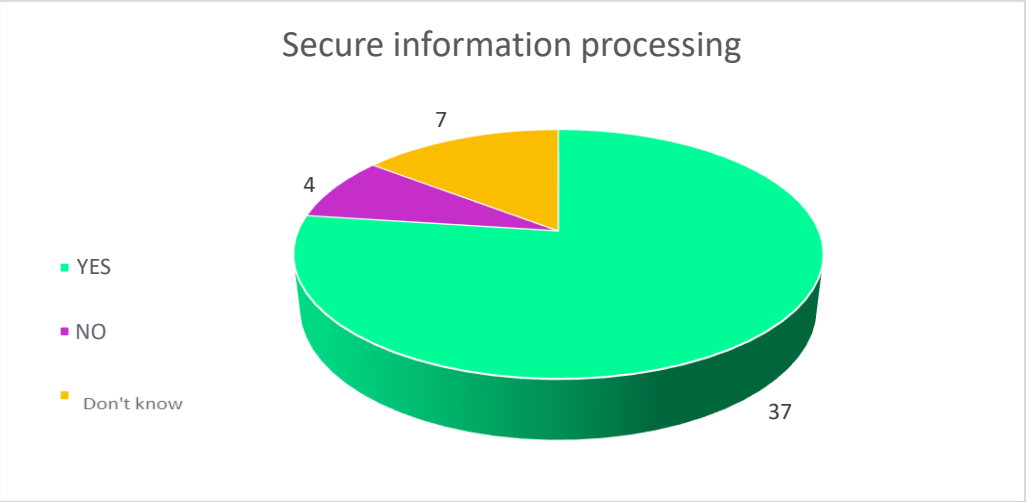
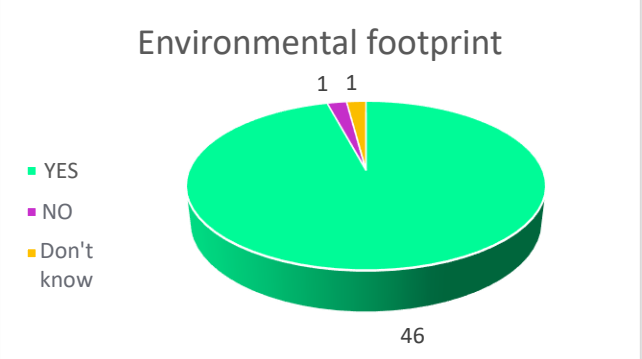
Among the digital skills, the most demanded one is secure information processing which received 37 “yes”.

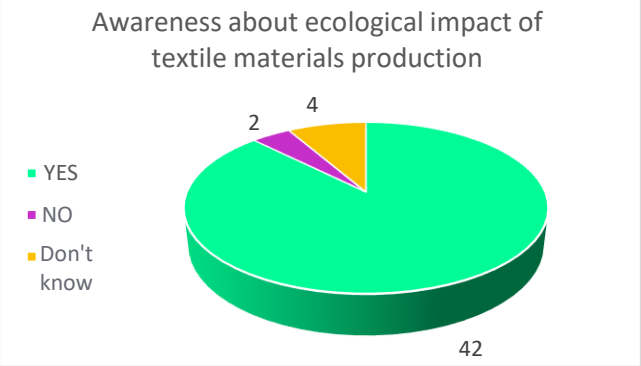


Looking at the green skills, we can observe that in comparison to the soft skills and the digital skills they are the most demanded ones in terms of the overall number of participants who think they require to be trained on them.

In fact, environmental footprint received 46 “yes”



followed by awareness about ecological impact of textile materials production (with 42 yes)



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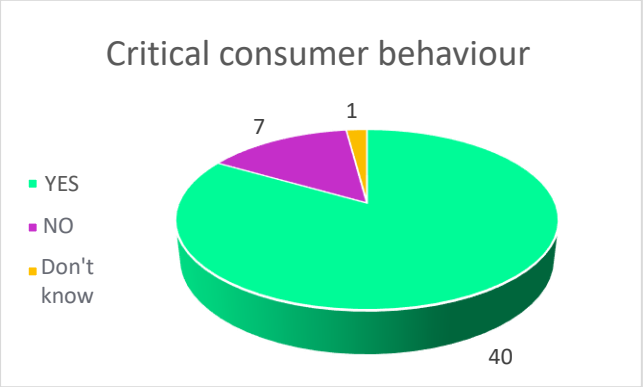
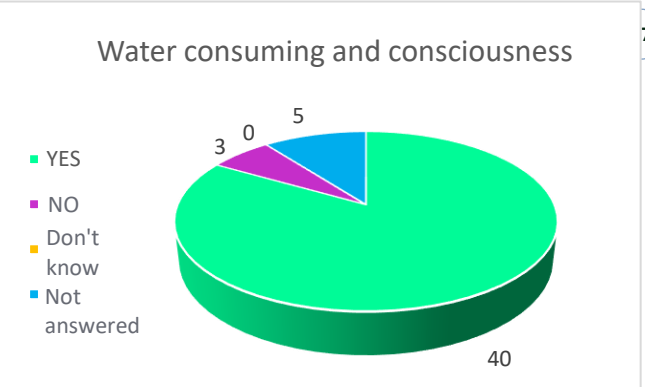
and by critical consumer behaviour (grocery/food/clothing...) and water consuming and consciousness (both with 40 yes).





It is worth mentioning that the awareness about ecological impact of textile materials production has been identified as a skill where participants feel they have not received enough training in their VET institution, as well as a skill they would like to be trained in the GREEN VET Choices Virtual Learning Portal.

To conclude, the results of the last two questions of the field survey, appear to be very useful for our study. They indicate that the GREEN VET Choices Virtual Learning Portal which will be elaborated by the partnership through the Project Result N° 2 should allow VET learners to be trained on the acquisition of the following skills:

- problem solving
- logical thinking
- adaptability
- flexibility
- decision-making
- secure information processing
- environmental footprint
- awareness about ecological impact of textile materials production
- critical consumer behaviour (grocery/food/clothing…)
- water consuming and consciousness.

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Conclusions

Thanks to the Green VET Choices Transnational Survey report the partnership analysed national environmental issues, skills necessary for contributing to a carbon-neutral future as well as awareness of the green VET professions and of environmental topics.

According to these findings, it is clear that we should go towards an increased focus on environmental education and towards an increased number of green career opportunities, even though in some partner countries it already exists projects, training modules, WBL experiences which show that in the last years there has been a higher interest on this matter all over EU.

In general, VET students seem not to be sufficiently aware of environmental aspects in the potential green careers they might undertake. For this reason, VET courses should be structured and delivered in such a way to be more attractive on the job market.

At first, existing regional / national systems of information, advice and guidance should provide information to attract potential learners in green career opportunities, trough, for instance:

- Campaigns on different media, social media, and new digital platforms
- Live seminars / events on green skills and green VET opportunities
- Collaboration and networking with green industries (meetings, work placements, training paths, etc).

On this regard, it is worth mentioning that one of the aims of the Green VET Choices Virtual Portal is to provide green career information through digital storytelling, thus replying to the lack of information on green VET career opportunities for potential VET learners. Another element which should be taken into consideration from the very beginning by VET institutions, but more than all by decision makers, it is to understand the green jobs' local demand to plan suitable VET programmes as well as to train new green professionals accordingly. For this reason, VET courses should be developed at systemic level involving and consulting different industries/companies/stakeholders.

Then, in order to make VET offers more responsive to environmental challenges, VET institutions should offer more practical trainings on climate-related issues such as, for instance, environmental education and /or sustainability workshops, meetings with green industries / entrepreneurs, work-based learning experiences in green companies, etc. In this way, it will be possible to engage VET students through real-life experiences. In addition, it is imperative that VET trainers / teachers are trained to teach environmental subjects and are ready to promote collaboration and synergies with local companies and stakeholders. Co-operation with green industries, entrepreneurs and stakeholders has been pointed out again as a key factor to foster environmental awareness as well as to promote green VET careers.

To conclude, the acquisition of the necessary knowledge and skills to employ more persons in green occupations is a necessary prerequisite for the achievement of the goal for the transition to a greener, digital and more resilient economy all over EU. It is also important to continuously upgrade and enhance the soft and hard skills needed in these occupations by persons who are already employed to enhance the envisaged ecological and digital transition. These identified green skills are new skills that relate to new green technologies, environmental legislation and digital skills that require a high degree of specialisation. Digital skills appear also to be fundamental, as highlighted by the Digital Education Action Plan 2021-2027.

To sum up, the aims of the project well fit to the actual needs, also highlighted in the Transnational Survey Report. Its outcomes will, therefore, be taken into account for the development of the Green VET Choices virtual Portal.

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