YOUTH ENERGY LABS

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REPORT ON THE TRAINING NEEDS OF YOUTH WORKERS IN THE FIELD OF RENEWABLE ENERGY USE, CIRCULAR ECONOMY, CONSUMPTION PATTERNS AND SUSTAINABLE ENTREPRENEURSHIP

ÍNDEX

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1. INTRODUCTION

The "Youth Energy Labs" project is part of the "Erasmus +" programme. **Its aim is to promote the use of renewable energies and the circular economy in the European Union.** In order to achieve this goal, the project includes the development of a training programme on environmental topics aimed at youth professionals, whose purpose is to broaden their knowledge on various environmental themes and to acquire the capacity to develop as agents promoting environmental awareness among the young people with whom they work. In this way, they will increase the sensitivity of this population group and their capacity to fight against climate change and promote sustainable development.

Therefore, the aim of this report is to identify the training **needs of professionals working with young people in relation to different environmental issues**, in order to subsequently develop a training resource to enhance their skills as environmental awareness-raisers.

This report has been prepared by the **Fundación Santa María la Real (FSMLR)**with the participation of the other member organisations of the project from European territories such as Italy (**Legambiente**), Greece (**Verde**), Latvia (**Ecological Future Education**) and Spain (with the participation of two organisations: **Ciudad Educativa Municipal Hipatia-Fuhem** and FSMLR).

This document compiles the objectives of the research in section two; the third section presents the methodology used; the fourth section contains information on the state of the question that frames the research; the fifth section contains the results obtained; the sixth section sets out the conclusions of the study; and, finally, the seventh section presents the recommendations for the development of a training programme for youth workers on environmental topics.

2. PROJECT OBJECTIVES

The aim of this research report responds to the first of the Specific Objectives (SO1) of the "Youth Energy Labs" project: **"To identify the training needs of professionals working with young people on issues related to the use of renewable energies, circular economy, consumption patterns and sustainable entrepreneurship".**

Based on the needs identified, recommendations are made for the appropriate training of professionals in these issues so that they can, in turn, raise awareness among the young population.

Following the identification of these needs, youth professionals will be trained (SO2) who, in turn, will contribute to the training and environmental awareness of the European youth population on these issues (SO3), especially those related to renewable energy and the circular economy, in order to face climate change (SO6).

3. METHODOLOGY

In order to achieve S.O.1, a mixed methodology is used, consisting of both quantitative and qualitative techniques that integrate the following phases of the research:

1. **Literature and secondary sources review phase**

The research begins by identifying those environmental elements that are most relevant when it comes to promoting greater awareness of the need to fight climate change, among which the following have been selected for their particular relevance: renewable energies, the circular economy, sustainable consumption, green entrepreneurship and environmental sustainability (United Nations, 2015a: 2015b; European Commission, 2019: 2020).

2. **Quantitative analysis phase: survey of European youth workers [1]**

After identifying the most representative themes of each environmental field, a survey was carried out among youth workers distributed throughout the European territories of Spain, Italy, Greece and Latvia. **A total of 273 participants collaborated in the survey.**

3. **Qualitative analysis phase: Interviews with youth professionals and environmental experts.**

In order to deepen the training needs of youth workers, 26 of these profiles from the five countries to which the member organisations belong were interviewed. In parallel, 12 expert profiles have been interviewed: 6 in renewable energies and 6 in circular economy, who have contributed to identify those knowledge of special relevance in the training of professionals. **In total, 38 interviews have been carried out.**

4. **Final phase of analysis: triangulation of information**

Finally, the information obtained through both techniques has been triangulated and presented in the corresponding sub-sections of the results. Based on these, recommendations are made for the development of training in various environmental issues for professionals working with young people.

[1] Explanatory note: The surveys were translated from English by each entity into their national language, with the exception of Latvia, where the surveys were distributed in both English and their national language.

4. CONTEXT

The relevance of the key issues in the European context and the work of youth professionals in achieving environmental objectives is presented below.

4.1. THE ECOLOGICAL TRANSITION: ITS OBJECTIVES AND THE IMPORTANCE OF SOCIAL AWARENESS FOR ITS SUCCESS

The number of environmental challenges caused by current production and consumption dynamics has led to a growing number of **commitments at the international level in search of a development more committed to sustainability, popularly known as the ecological transition.** The 2030 Agenda (United Nations, 2015a), in particular, brings together the 17 goals that humanity faces in order to truly achieve sustainable development (SDGs) by 2030. These include: "Ensure access to affordable, secure, sustainable and modern energy for all" (SDG7), "Promote sustained, inclusive and sustainable economic growth, full employment and decent work for all" (SDG8), "Ensure sustainable consumption and production patterns" (SDG12), "Take urgent action to combat climate change and its impacts" (SDG13), and "Sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss" (SDG15).

These international objectives can be simplified into two major challenges: the **decarbonisation of the economy**, which implies a radical reduction in greenhouse gas (GHG) emissions, accompanied by the replacement of energy from non-renewable sources with energy from renewable sources (European Commission, 2019); and the **implementation of a circular economy**, whose objective is to replace the current linear production system (characterised by following the guidelines: "extract-produce-buy-use-throw away") with a circular one. This model implies that products are kept as long as possible in the economy, considerably reducing the generation of waste and trying to make the most of those that are unavoidable (Carretero García, 2022).

In the European context, these challenges have become particularly relevant and particular strategies have been established for their achievement: such as The Paris Agreement (United Nations, 2015b), the European Green Deal (European Commission, 2019) or the Circular Economy Action Plan (European Commission, 2020). Many of these challenges are interlinked and present similar challenges and strategies for their achievement:

- In order to meet the challenge of decarbonisation, measures such as **optimising energy efficiency and implementing a greater number of renewable energy sources** are required. The reduction of these gases contributes to strengthening the adaptation and

fight against climate change, linking the implementation of renewable energies with environmental sustainability. The latter, in particular, includes challenges such as the preservation of biodiversity, the responsible use of resources and, ultimately, adapting to the conditions presented by climate change (European Commission, 2019).

- In turn, meeting the challenge of the circular economy requires significant changes in consumption patterns to favour **sustainable consumption** that underpins and supports the changes necessary for the a**doption of a circular economy**; this includes a profound reflection on the ways in which we produce, consume and value waste (European Commission, 2020a; 2020b).

- Finally, as a cross-cutting objective in this transformation towards a more sustainable economy and development, the promotion of sustainable and quality employment is considered. This objective is present in both energy strategies (European Commission, 2019) and circular economy strategies (European Commission, 2020) and when such employment is aimed at contributing to the previously stated objectives, it is called "green employment" (UNEP, 2008). Therefore, **entrepreneurship options in the context of the ecological transition must** meet the requirements of quality employment and environmental protection in order to **be considered fully sustainable.**

These three objectives cover the five themes that articulate the key knowledge underpinning environmental awareness in a broad sense: renewable energies, environmental sustainability, circular economy, responsible consumption and sustainable entrepreneurship.

The achievement of these challenges is unfeasible without a broad level of involvement on the part of institutions and citizens; therefore, it is essential to increase the environmental awareness of all agents through educational processes. The ecological transition requires a rearticulation of the relationship between human beings and the environment in which they live, which is why **actions are needed to increase awareness of environmental problems and the alternatives available to respond to them** (Martínez Castillo, 2010).

4.2. YOUTH WORKERS AS KEY AGENTS FOR TRAINING AND AWARENESS-RAISING

In order to meet the environmental challenges presented, citizens must be made aware of the importance of the ecological transition, with the role of the younger population being particularly relevant. Although concern for environmental issues among the population is notable (González-Anleo, 2012; UNFCCC, 2013), studies on their level of knowledge on the subject are scarce.

The role of young people in the ecological transition is of vital importance because of their support for current measures and their contributions to the innovation of future sustainable development (EESC, 2023). For this reason, professionals working with young people, referred to in this work as "youth workers", have a strategic role to play in their training and awareness-raising.

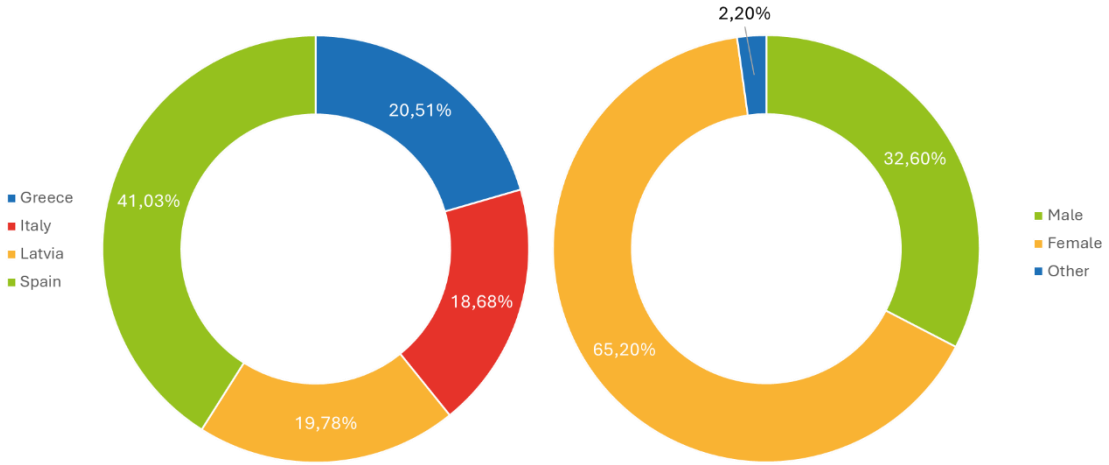
According to the Council Recommendation on learning for environmental sustainability (European Commission, 2022), **educational and training spaces with young people should also be seen as strategic scenarios for promoting awareness of the current ecological transition and the risks involved in not contributing to it.** For its part, the European Economic and Social Committee recommends training in sustainability and environmental issues from an early age, as well as the importance of providing in-depth knowledge of these issues in order to identify the connections between different environmental challenges (EESC, 2023). It is vital to provide quality training in order to meet the objective of raising citizens' awareness and achieving the best possible social commitment to achieving sustainable development objectives.

5. RESULTS

The following are the results obtained after the application of the survey, in which a total of 273 youth professionals participated, with a proportion of 65.20% women and 32.60% men[2].

The weight of the responses from the countries has been homogeneous, with each country's participation accounting for approximately 20%. Except in the case of Spain where, as two of the member entities are located, this percentage accumulates to 40%.

Figure 1: Distribution of the survey sample



***Note*. Own elaboration.**

Of the professionals surveyed, 66.67% work with young people in situations of social vulnerability, providing this study with an inclusive view of the training needs of youth professionals who are responsible for promoting greater environmental awareness among the young population.

[2] 2.20% of the professionals surveyed stated that they did not feel identified with any of the genders indicated, being grouped in this survey under the category of "other".

5.1 ENVIRONMENTAL AWARENESS AMONG YOUNG PEOPLE. A CHALLENGE FOR YOUTH WORKERS

The professionals surveyed express explicit concern for the care of the environment among the young people, although they reflect doubts about their potential as trainers on these issues, especially on some environmental topics.

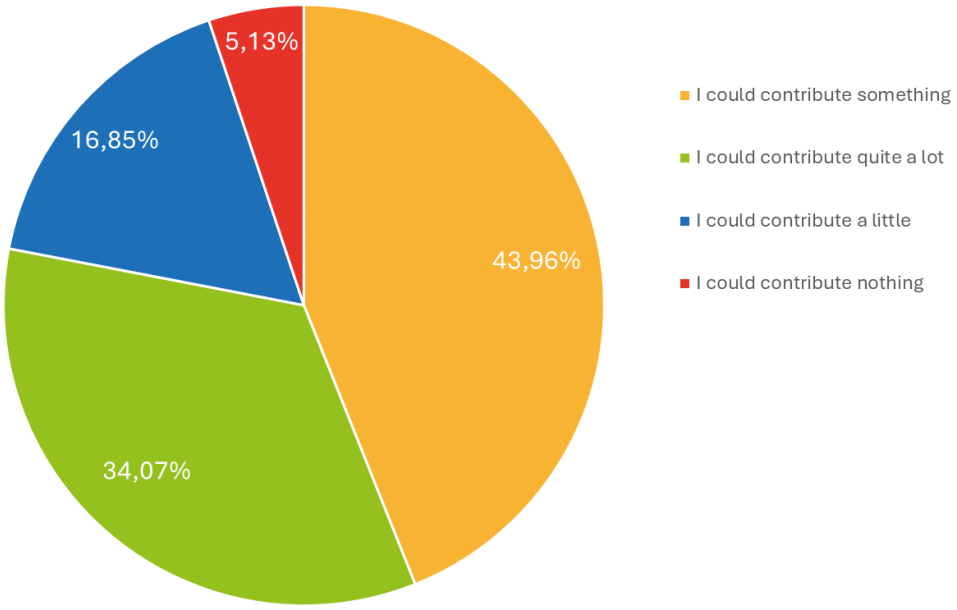
More than half of the youth professionals surveyed (59.34%) perceive that the young population is somewhat or very aware of the importance of caring for and preserving the environment, with **professionals living in Latvia perceiving the least awareness among the young population** (59.26% consider that they are not at all or not very aware, compared to professionals in Greece, Italy and Spain, where more than 60% consider that young people are somewhat or very aware).

Even so, the vast majority consider it somewhat or very necessary to train young people in areas such as environmental sustainability (95.60%), renewable energies (94.87%), sustainable consumption (94.87%), circular economy (94.14%) and sustainable entrepreneurship (91.94%). There are no notable differences between the member countries of the study.

When asked about the importance of the role played by youth professionals in environmental education, a **68.13% consider that these profiles play a "very important"** role. Particularly in Latvia, where a large part of the sample of informants (83.33%) states this work as "very important" (the rest of the countries, they consider this work very important between 58.93% and 67.86%). However, **when asked about their individual capacity to contribute to greater environmental awareness among the young population,**these percentages drop notably and **only 34.07% consider that they "could contribute quite a lot"; and 43.96% "could contribute somewhat" to increasing environmental awareness[3].**

[3] Again, professionals living in Latvia show less confidence in their individual ability to contribute to raising awareness among young people. 59.26% felt that they could contribute little or not at all. In the other countries, the majority of professionals said that they could contribute somewhat or quite a lot to awareness-raising, with percentages ranging from 76.79% to 91.07%.

Figure 2: Ability of youth professionals to contribute to the environmental awareness of young people

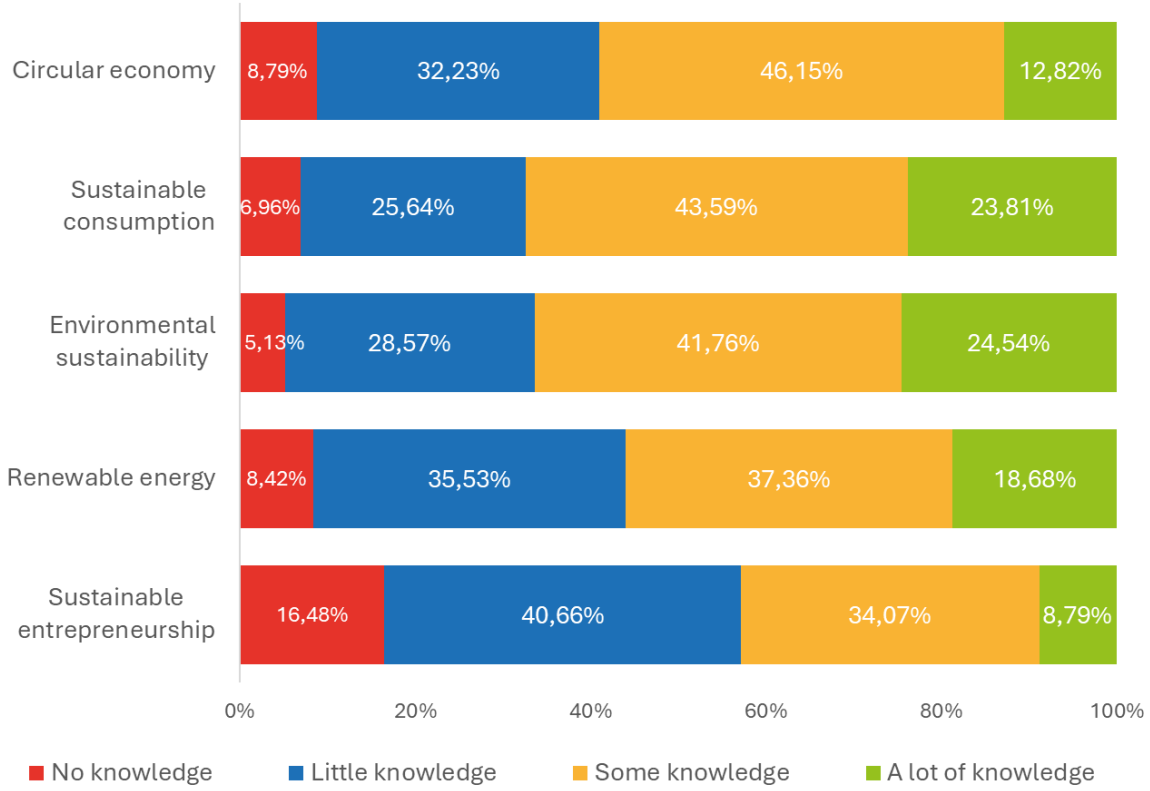


***Note*. Own elaboration.**

The low self-perception of professionals as contributors to raising awareness among young people may be due to the limited training they have received in environmental issues in their professional careers; most of the respondents have received environmental training on a few occasions (43.59%) and 18.68% have not received it at all.

The awareness-raising work of professionals working with young people is limited if they do not have the necessary knowledge to do so. In order to promote their work as agents of environmental awareness, they must have a minimum knowledge of the different environmental issues. However, not all issues are equally well known and, in no case, is there a predominance of broad knowledge on any of them. Most professionals have some knowledge about circular economy (46.15%), sustainable consumption (43.59%), environmental sustainability (41.76%) and renewable energy (37.36%), being sustainable entrepreneurship the subject where most of them have little knowledge on the subject (40.66%).

Figure 3: Level of knowledge of youth professionals on different environmental issues



***Note*. Own elaboration.**

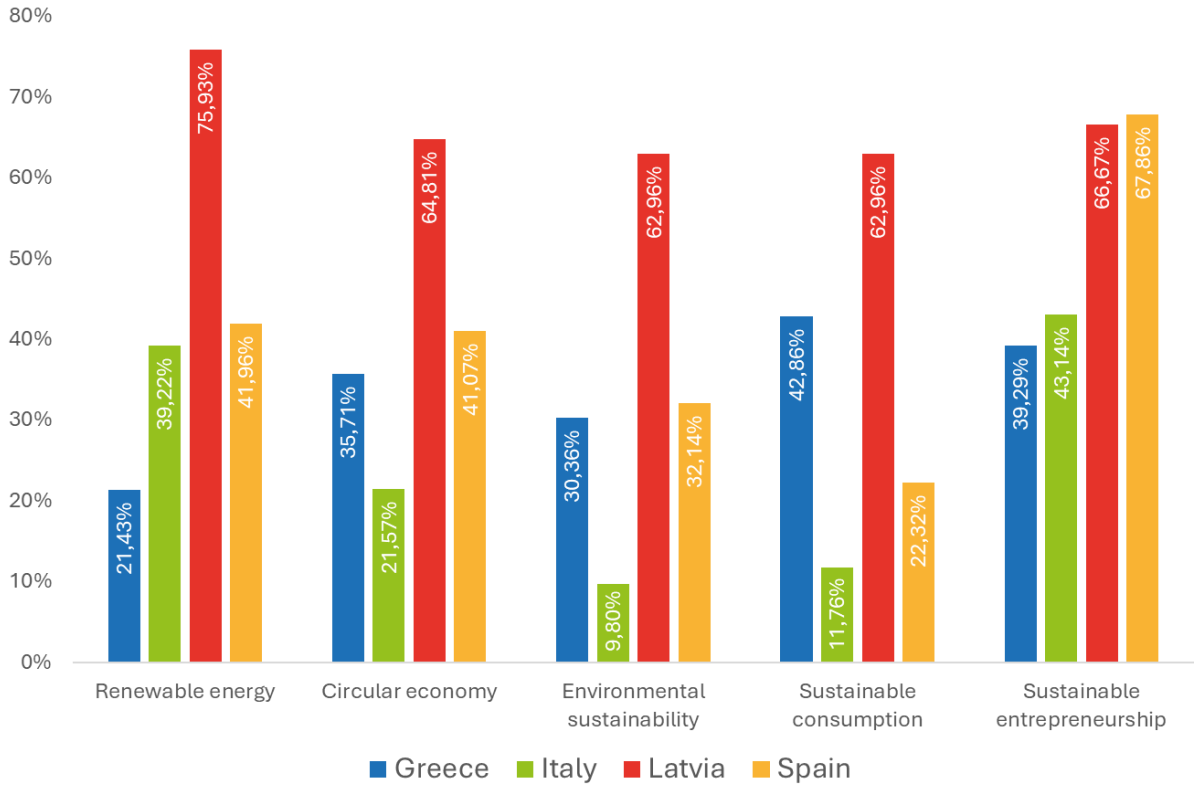
If we pay attention to territorial differences, we find that, in all fields, similar proportions of knowledge are identified among youth professionals; with the exception of two territories where some notable variations are detected:

- **Latvia, in all topics, has predominantly little or no knowledge, with renewable energies being the topic they know the least about[4]:** 75.93% of Latvian professionals consider that they have little or no knowledge of renewable energies, compared to 41.96% in Spain, 39.22% in Italy and 21.43% in Greece.
- **In Spain, sustainable entrepreneurship is the only area in which there is less knowledge:** 67.86% of professionals in Spain (together with 66.67% in Latvia) say they have little or no knowledge of the subject, compared to 43.14% of Italians and 39.29% of Greeks.

[4] 75.3% of Latvian professionals have little or no knowledge in renewable energy, 66.67% in sustainable entrepreneurship, 64.81% in circular economy and 62.96% in environmental sustainability and sustainable consumption.

In the rest of the topics, all the countries have knowledge (some or a lot) of more than 56.86%. Figure 4 shows in detail the topics about which professionals in each country have the least knowledge[5].

Figure 4: Issues about which professionals have the least knowledge according to their country of residence



***Note*. Own elaboration.**

5.2. MAIN TRAINING NEEDS OF YOUTH PROFESSIONALS IN VARIOUS ENVIRONMENTAL SPECIALTIES

Next, we delve into the different environmental subjects, and the particular knowledge within them, in order to detect the main knowledge gaps among youth professionals and to know those subjects on which it is advisable to have more training. To this end, we analyze the information obtained from both the surveys to professionals and the interviews to experts in renewable energy and circular economy.

[5] For the representation of lesser-known topics, we have grouped together the percentages of professionals who said they had little or no knowledge of the subject.

5.2.1. RENEWABLE ENERGIES

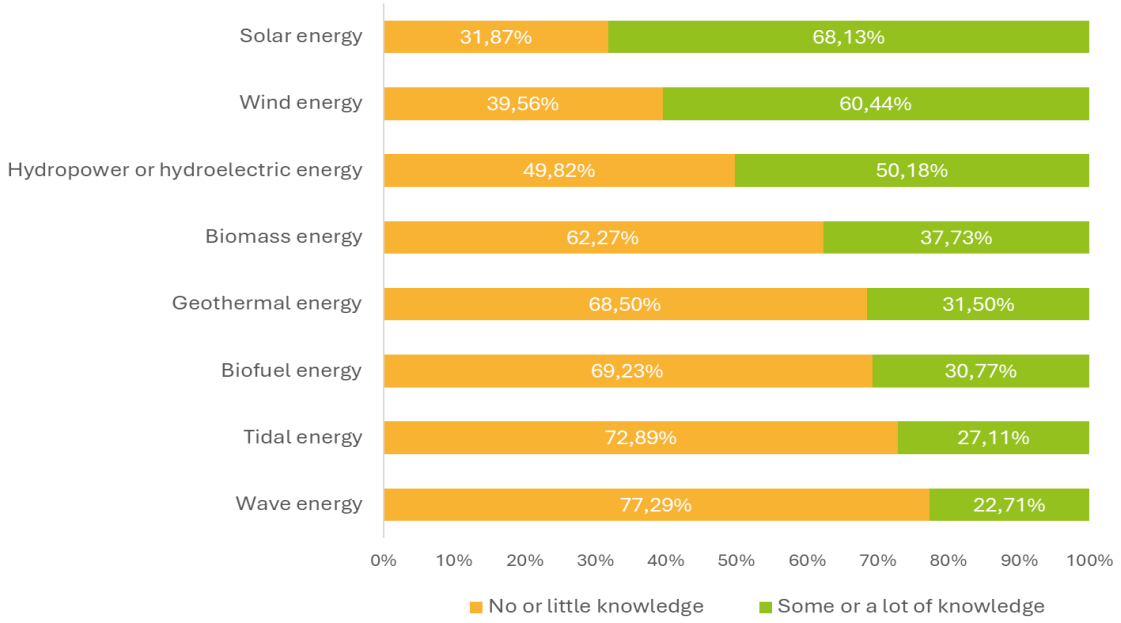
Renewable energy (RE) turns out to be one of the topics better known by youth professionals compared to others, thanks to the diffusion of this topic in the media, according to several professionals interviewed[6] thanks to the diffusion of this topic in the media, according to several professionals interviewed.

This is also reflected in the survey results, which show that practically half of the professionals are somewhat familiar with the notion of "renewable energies" (48.72%), followed by those who consider themselves to be very familiar (27.84%), with those who are not very or not at all familiar being the least representative (23.44%)[7].

However, their levels of knowledge of the various subtopics of this topic are uneven. Although most of them know the definition of the term "renewable energies" (67.77%), not all of its typologies are equally well known[8] (67.77%), not all of its typologies are equally well known. According to the professionals interviewed, the most well-known energy sources are solar, wind and hydroelectric; while **geothermal energy was mentioned as one of the least known** (especially by informants from Latvia). Accordingly, the survey results indicate that the three known ones are solar, wind and hydro/hydro, about which respondents have some or a lot of knowledge (68.13 %, 60.44 % and 50.18 %, respectively). However, **those three energy sources about which there is the least knowledge are biofuel (60.23%), wave (77.29%) or tidal (72.89%).**

[6] With the exception of youth professionals from Latvia, who are more unfamiliar with this topic.
[7] Professionals in Greece, Italy and Spain reported 82.14% to 94.12% familiarity, compared to 62.96% of professionals in Latvia, who considered themselves not at all or not very familiar.
[8] To determine whether the professionals surveyed knew the definition of "renewable energy", they were offered a list of three options, only one of which was correct: "Renewable energy is energy derived from inexhaustible natural resources such as the sun, wind or water that contributes to reducing greenhouse gas emissions and dependence on other finite energy sources". Following the definition offered by the European Parliament (2024).

Figure 5: Level of knowledge of youth professionals on different environmental issues



***Note*. Own elaboration.**

Greece turns out to be one of the countries where youth professionals know the most about the different types of RE, knowing all of them somewhat or fairly well (tidal energy being the least known by 50% and solar energy the most known by 80.36%).

The information provided by the informants interviewed coincides with the quantitative results. In general, the informants interviewed stated that they have a basic knowledge of renewable energies, with the sub-themes that they most reported knowing about being: the different typologies of existing energy sources and the pros and cons of their implementation. To a lesser extent, a group of informants also showed themselves to be particularly knowledgeable about the social issues related to the energy transition (ET), such as, for example, the loss of employment in traditional energy sectors. This particular knowledge has been expressed especially by informants from Greece and Spain.

Knowledge about the different types of renewable energies and their pros and cons can be seen in the results obtained from the survey, where a large part of the professionals (more than 60%) is able to recognize the different myths surrounding these issues[9] (table 1).

[9] In order to identify whether respondents were aware of the myths presented, the following statements were listed, indicating whether they considered them to be true or false. Given that all the statements were myths surrounding renewable energy, all those who indicated these statements as false would be recognising this information as a myth.

Table 1: List of myths about renewable energies and percentage of professionals able to recognize them.

List of myths	% of professionals able to recognise it
Renewable energies, in general, are and will be more expensive than conventional energies.	80,95%
Renewable energies cannot and will not be able to cover all the planet's energy demand.	64,10%
The construction of elements such as wind turbines (windmills) consumes more energy than it produces.	76,92%
Elements such as solar panels cannot be recycled after their useful life	64,84%

***Note*. Own elaboration.**

However, again, some differences can be seen depending on the country of residence of the professionals. In Latvia, they were unable to recognize any of the myths presented (between 50% and 70.37% of them were true). The most controversial information is the one related to the recyclability of solar panels, on which the Greek professionals were also confused[10].

Despite having a generalized knowledge about the definition and typologies of renewable energies, **youth professionals do not consider that they have the necessary knowledge and tools to train the young population they work with in this area, obtaining an average of 4.92 on a scale of 0 to 10** in which they evaluated the extent to which they had the necessary knowledge and tools to do so[11].

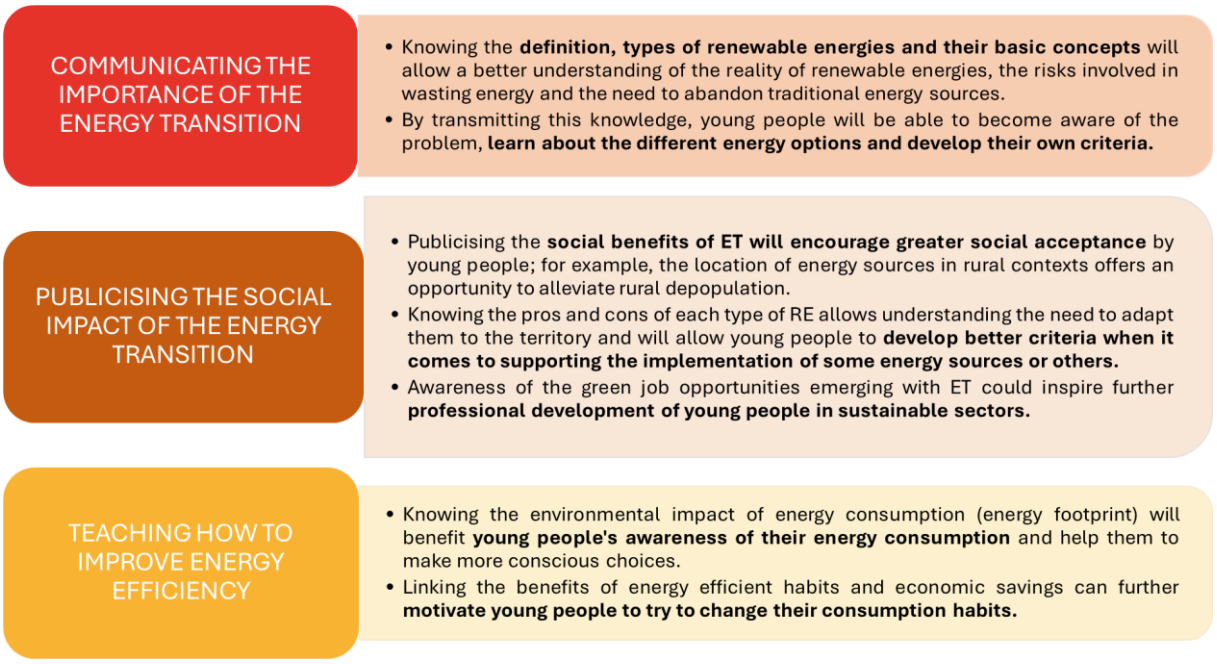
The expert informants on renewable energies indicate that **much of the information that is popularized on this issue is outdated,** so it is necessary for the professional profiles to develop an interest in this subject and to keep updated on its progress. In this regard, there is a broad consensus among the expert profiles interviewed on the most relevant topics in which professionals should be trained. Graph 6 summarizes them and adds the relevance of transmitting this knowledge to the young population.

[10] The myth "Solar panels cannot be recycled" was reported to be true by 50% of the professionals in Greece, reflecting a very narrow knowledge. In the case of Latvia, 70.37%.

[11] To find the average score of the knowledge needed to train the young population, the following question was asked: Now that you have been able to review the different knowledge you have about renewable energies, do you think you have the necessary knowledge and tools to train the young population in this subject? The answer was 0 "I do not have any knowledge or tools necessary" and 10 "I have all the necessary knowledge and tools".

The knowledge reported by the expert profiles reflects the diversity of knowledge relevant to youth professionals, and can be grouped into three main themes: conveying the importance of the energy transition, raising awareness of the social impact of ET and teaching how to improve energy efficiency.

Figure 6: Themes to be included in RE training for professionals and their relevance for young people.



***Note*. Own elaboration.**

According to the information gathered by the professional profiles, their main knowledge gaps would be in the second and third block of those indicated by the experts.

85.35% of the youth professionals surveyed are interested in training in renewable energies. According to the information gathered from the interviews, the professionals are interested in the topics studied, mainly because of their relevance and, not only to transmit it to the young population, but also because they consider it to be relevant knowledge for themselves. The topics in which they are most interested coincide in several of the key knowledge areas indicated by the experts. Among the topics indicated by the professionals in which they would be most interested in training, we find the following:

- Knowing the **job opportunities linked to the energy transition** in order to be able to best advise the young population about their job opportunities. This information has been the most repeated among professionals and they consider it vital to guide them in their careers and contribute to the development of a sustainable future.

- Knowing how to **improve their own energy efficiency habits** in order to encourage more conscious and efficient consumption among young people.
- An in-depth knowledge of the **social risks** associated with the energy transition will allow them to broaden their arguments for awareness-raising; for example, the reduction of jobs in traditional energy sectors and the compensation in the creation of new ones, or the opportunities for rural development and the fight against depopulation.

They also point out other cross-cutting issues such as:

- Acquire the **ability to transmit this knowledge in a simple and practical way**.

5.2.2. CIRCULAR ECONOMY

The circular economy (CE), on the other hand, is a topic less familiar to youth professionals than renewable energy. On this occasion, less than half of the professionals surveyed (46.89%) are somewhat familiar with the term "circular economy", followed by those who are not very familiar (35.16%)[12] followed by those who are not very familiar (35.16%). Only 11.36% consider themselves to be very familiar with this term and 6.59% say they are not familiar with it at all[13].

They also express more doubts regarding the definition of the term compared to renewable energies, where the percentage of professionals who knew the definition was close to 70%, and this time it is 56.78%. **Nearly 1 in 2 professionals (43.22%) do not know the definition of "circular economy"**.

When considering their knowledge of the most characteristic definitions in this field, it is worth noting that the term "eco-design" is known by 87.55% of those surveyed[14] is known

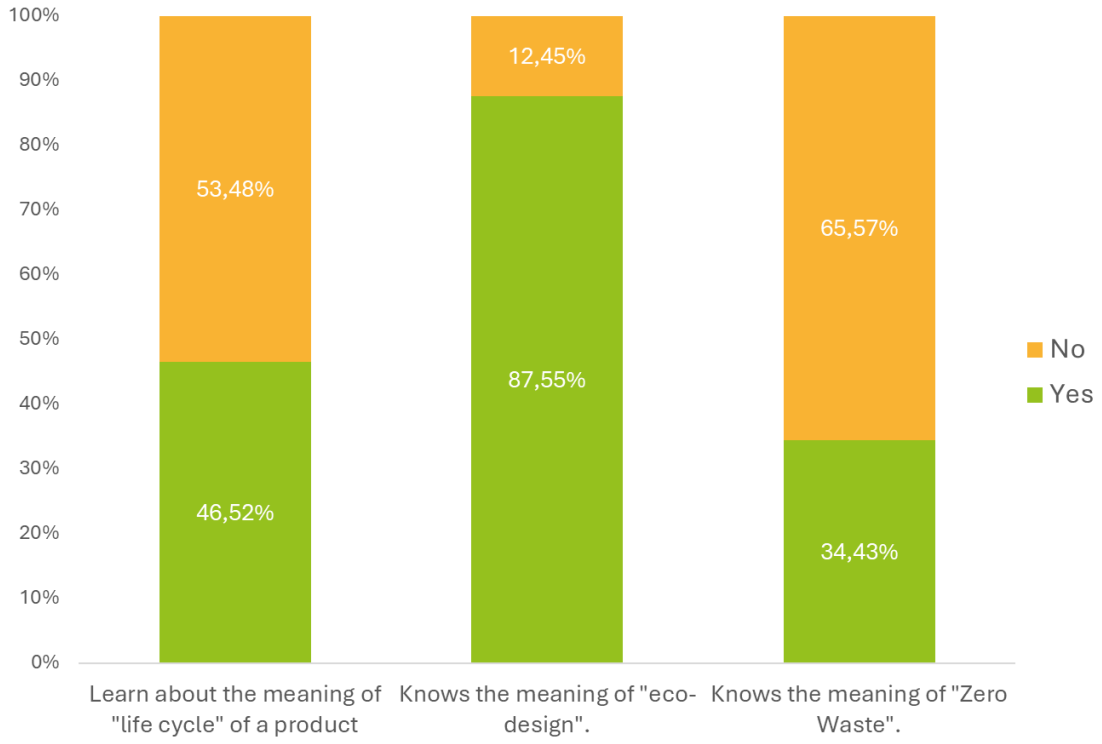
[12] To identify whether respondents were familiar with the term, three response options were offered with different definitions of the term, only one of which was correct: The circular economy is a model that affects the processes of production, consumption, reuse and recycling of products in order to extend their useful life as long as possible and reduce waste generation. According to the definition of the European Parliament (2023a).

[13] Professionals from Italy are the most familiar with the term (82.35% are somewhat or very familiar with it), followed by Spain (60.71%) and Greece (53.57%). In the case of Latvian professionals, 64.81% are not at all familiar with the term.

[14] On this occasion, in order to determine the knowledge or not of this concept, only one correct definition of the term was offered, which had to indicate whether it was considered true or false. In this case, the definition offered was the following: "Eco-design" refers to the ecological design of a product, where the objective is to produce the lowest possible environmental impact throughout its life cycle. The definition chosen follows the criteria established by the European Parliament (2023b).

by 87.55% of respondents. However, **notions such as the "life cycle of a product"[15] or "zero waste"**(Zero Waste[16]) **are known only to 46.52% and 34.43%, respectively.**

Figure 7: Knowledge of youth professionals on concepts in the field of circular economy



***Note*. Own elaboration.**

Only professionals in Italy and Spain were aware of the term "life cycle" of a product, by 54.90% and 64.29%, respectively.

The quantitative information coincides with what is reflected in the interviews, in which the vast majority of youth professionals state that they have limited knowledge of the circular economy, particularly indicating knowledge of its principles, the relevance of its implementation and knowledge of some terms, the most mentioned being eco-design. This

[15] On this occasion, the definition presented for evaluation as true or false was erroneous, so that those who indicated that statement as false were considered to be knowledgeable about the definition of the life cycle of a product. The definition offered was: The "life cycle" of a product refers to the different stages through which a product passes from the time its raw materials are extracted until it is used, without considering the management of its waste. According to the European Commission's definition, the life cycle also includes in its definition the management of waste in this process (European Commission, 2001).

[16] Similarly, the statement made about the definition of the term "Zero Waste" in the survey was false: "Zero waste" refers to the goal of converting all waste into resources. According to the European Network "Zero Waste Europe" (2020) "While waste management aims to turn waste into resources, zero waste is about preventing resources from becoming waste" (2020:15).

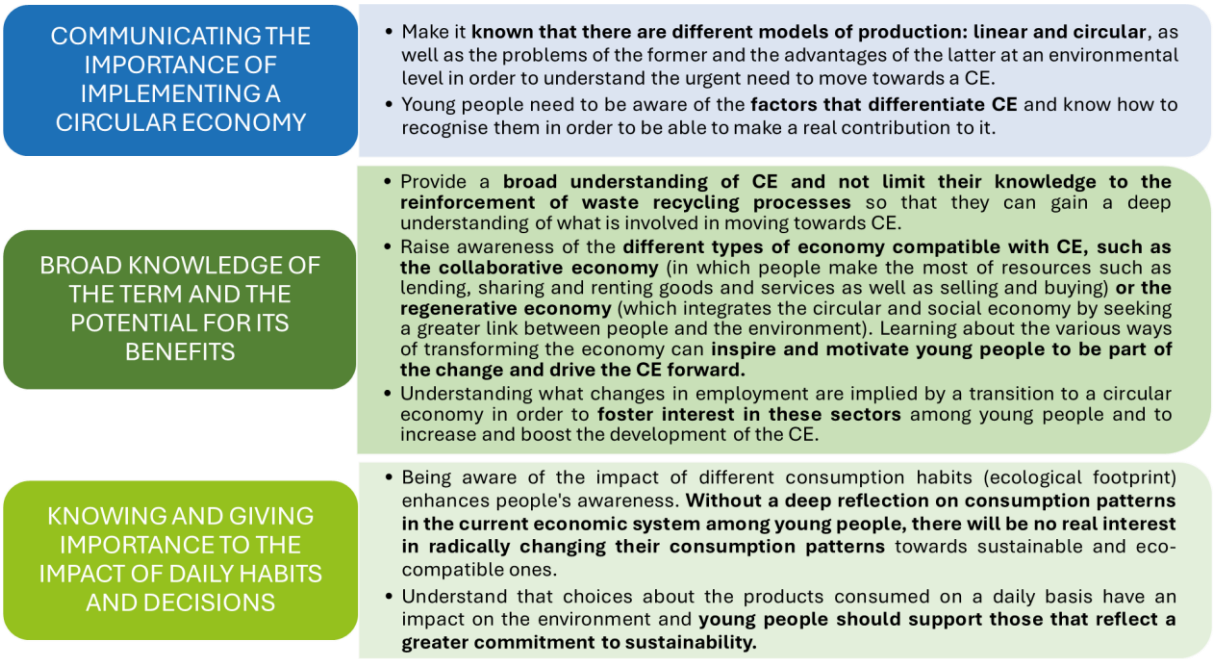
information is homogeneous among informants from all project member countries. Those who have expressed greater knowledge on this issue indicate that this is due to a personal interest in the subject that has led them to seek more information or to participate in specific workshops on the subject. These informants are from Italy, Spain and Latvia.

Accordingly, **the vast majority of youth professionals (75.46%) consider the implementation of a circular economy at the global level to be very relevant,** followed by those who consider this objective to be somewhat relevant (20.88%).

However, as in the case of renewable energy, they do not consider that they have the knowledge and tools to train the young people with whom they work in this area and, when evaluating from 0 to 10 the extent to which they had the necessary knowledge and tools, they obtained a lower average: 4.70.

On this occasion, the issues raised by circular economy experts interviewed focus on three issues: conveying the importance of implementing a circular economy, broad knowledge of the term along with the diversity of benefits it brings, and knowledge of the impact of daily habits and decisions. Figure 8 summarizes how such knowledge is relevant for raising awareness among young people.

Figure 8: Themes to be included in CE training for professionals and their relevance for young people



***Note*. Own elaboration.**

On this occasion, the knowledge gaps of the professional profiles are located along the three fields of knowledge indicated by the experts.

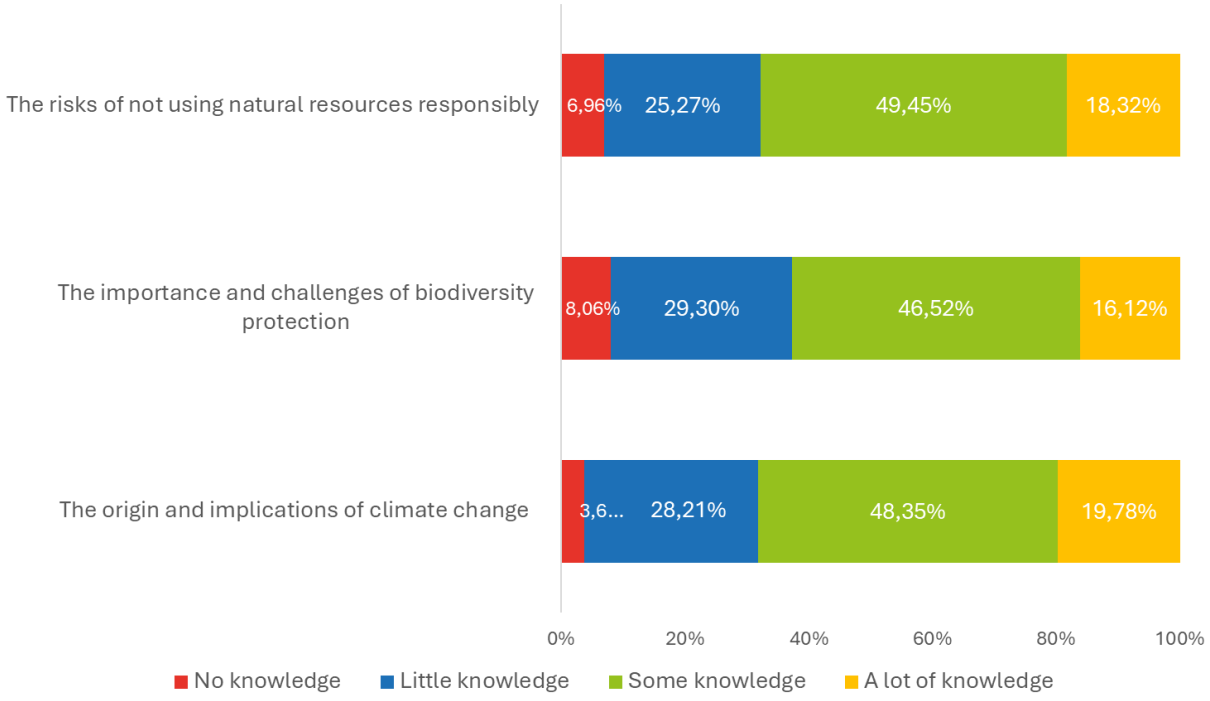
The percentage of **professionals interested in training in CE** is slightly higher than that of RE, reaching **89.74%.** Given the scarce knowledge expressed by the youth professionals interviewed, most of them have shown interest in training in this subject. Likewise, **they consider that it is a knowledge that is relevant for the future of young people and for society in general.** Among the main topics that they have pointed out with greater interest to be trained we identify:

- Again, **emerging labour opportunities in CE**, in order to foster the development of careers among young people that are compatible with a sustainable circular model.
- **Learn more about the environmental and social benefits of CE** in order to inspire young people and facilitate their cooperation for change.
- **Acquire more knowledge about strategies to improve product consumption** (criteria and elements to take into account when consuming products), basic knowledge about **repair, or learn how to reduce waste production**. Professionals say that they need this knowledge beforehand in order to be able to advise and disseminate this learning among the young population.

5.2.3. ENVIRONMENTAL SUSTAINABILITY

Regarding various issues of environmental sustainability, we found that the majority of youth professionals have some or a lot of knowledge on these topics. Specifically, 19.78% consider that they know a lot about the origin and implications of climate change; 18.32% about the risks of not using natural resources responsibly; and 16.12% about the importance and difficulties of biodiversity protection.

Figure 9: Level of knowledge of youth professionals on issues related to environmental sustainability



***Note*. Own elaboration.**

On this occasion, the Latvian professionals report having less knowledge on all the topics, between 68.52% and 74.07% know little or nothing about these issues. Instead, professionals from Greece, Italy and Spain predominantly have some or a lot of knowledge, especially in Italy, where all of them are known by at least 84.31%.

Similarly, the interviews with youth professionals reflect how knowledge on this issue is diverse; on the one hand, informants report having very generic knowledge about the origins of climate change or the difficulties in preserving biodiversity, especially among those from Spain and Latvia. On this occasion, the media are also repeatedly mentioned as the main means of knowledge of professionals (especially among those from Spain). On

the other hand, **those informants who say they know more about this topic indicate that they know the risks involved in not using natural resources responsibly, the consequences of excessive consumption, deforestation or pollution**. On this occasion, informants from Greece and Italy were the most informed on this issue.

Compared to the previous topics (RD and CE), the professionals surveyed consider that they have **the necessary knowledge and tools to train the young population they work with in this area, obtaining an average of 5.26** on a scale of 0 to 10. Despite this, **89.74% are interested in expanding their knowledge in this area**.

Professionals are interested in training in these areas for two reasons:

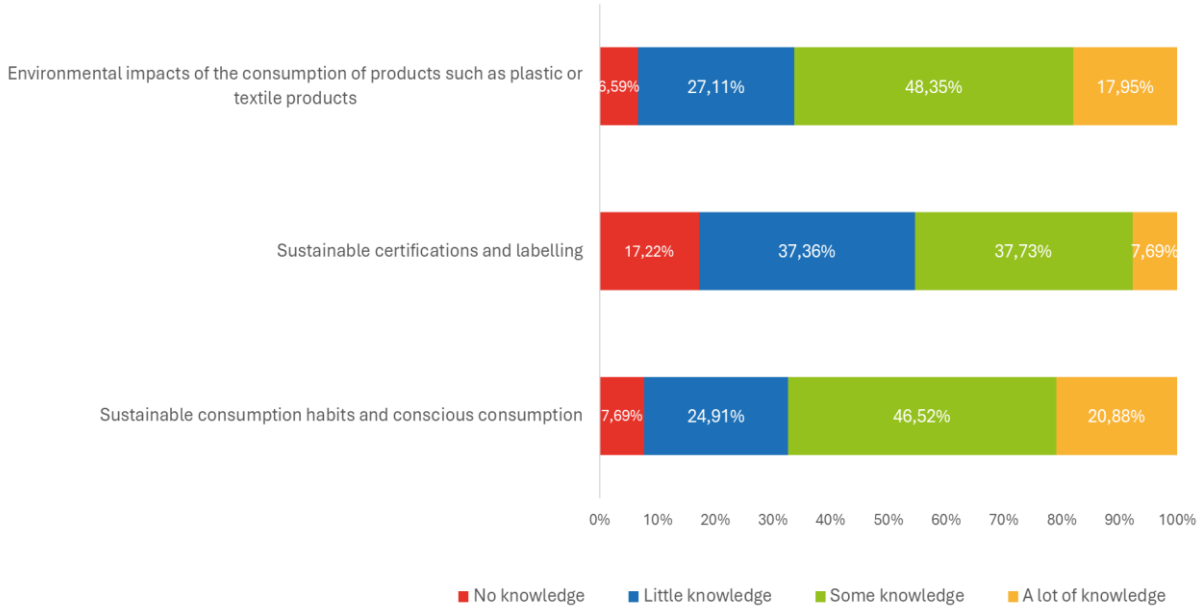
- The first is to **answer questions about the origin and implications of climate change, the difficulties in protecting biodiversity and the risks involved in caring for natural resources.**
- The second is to **alleviate young people's eco-anxiety**[17] and inspire them to take an active role in caring for the environment.

[17] Eco-anxiety' refers to the fear of environmental consequences caused by climate change, including the fear of environmental collapse and its consequences at the societal level (Reátegui Lozano, 2022).

5.2.4. SUSTAINABLE CONSUMPTION

Regarding sustainable consumption, we found that the surveyed youth professionals have more knowledge about the environmental impacts of the consumption of products such as plastic or textile products (48.35% have some knowledge) and sustainable consumption habits and conscious consumption (46.52%). While in **those issues related to certifications and sustainable labeling result there is less knowledge** (17.22% have no knowledge and 37.36% have little knowledge in this regard).

Figure 10: Level of knowledge of youth professionals on issues related to sustainable consumption



***Note*. Own elaboration.**

Again, Latvian professionals report having less knowledge about all the issues raised in the field of sustainable consumption (in all cases they have little or no knowledge between 58.52% and 75.93% of professionals). Similarly, in Spain, 59.82% of professionals have little or no knowledge about sustainable certifications and labeling in particular.

Similarly to the subject of environmental sustainability, sustainable consumption is a subject on which the professional profiles surveyed are more confident and have obtained an **average of 5.11 on a scale of 1 to 10, evaluating whether they have the knowledge and tools necessary to train the young people with whom they work** in this subject. Although, similar to other environmental areas, the vast majority **(93.04%), are interested in expanding their knowledge in this regard**.

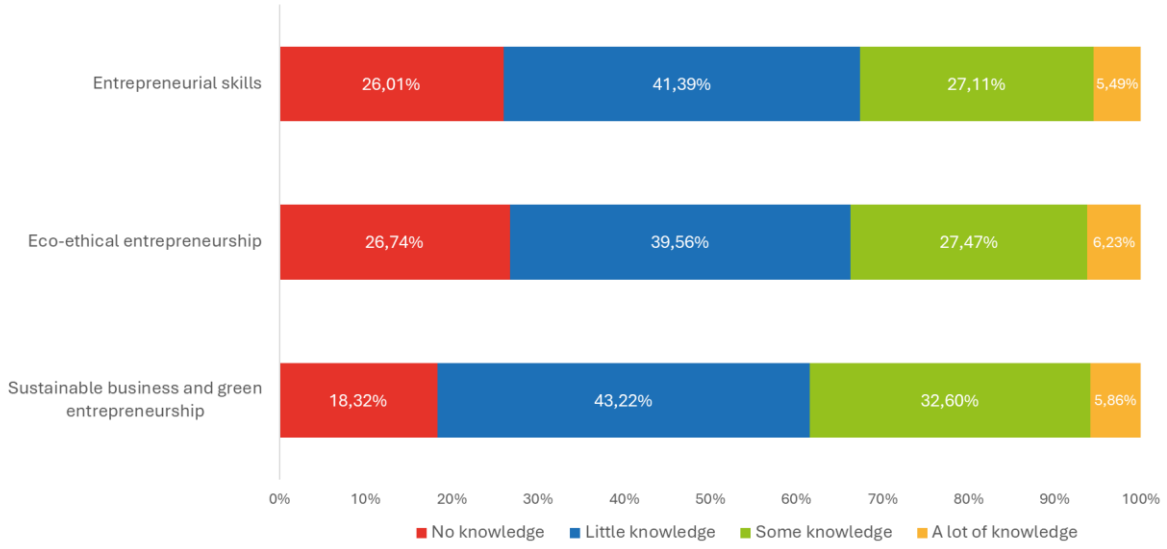
Likewise, most of the youth professionals interviewed stated that, although they have been informed about issues such as the environmental impact of products like plastic or the need to adopt sustainable consumption habits, it is necessary to broaden their knowledge in this regard. The following are some of the topics in which they are particularly interested:

- Due to their limited knowledge on the subject and its relevance for responsible consumption, they would like to learn more about **labels and sustainable certification.**
- Learn about the **social implications** linked to **the social impacts of the production of certain products** and thus increase their arguments to promote a greater ethical culture among young people as consumers.
- Broaden their knowledge of **data and statistics on pollution in order to be able to keep up to date** on the progress of these issues.

5.2.5. SUSTAINABLE ENTREPRENEURSHIP

The field of knowledge related to sustainable entrepreneurship has been the most unknown among youth professionals. The results of the survey show a scarce knowledge about several of the topics within this field of knowledge. Unifying those with no or little knowledge, **the knowledge they know the least in the field of green entrepreneurship are: entrepreneurial competences (with 67.40%), eco-ethics (66.30%) and sustainable business and green entrepreneurship (61.54%).**

Figure 11: Level of knowledge of youth professionals on sustainable entrepreneurship issues



***Note*. Own elaboration.**

Knowledge about sustainable business and green entrepreneurship together with entrepreneurial competences are especially known by youth professionals in Greece (58.93% and 51.79% know a little or a lot about these issues). However, as far as knowledge about eco-ethics in business is concerned, in all countries, professionals who know little or nothing about these issues predominate[18].

On this occasion, the predominant information reflected in the interviews is that youth professions do not consider that they have much information on sustainable entrepreneurship (common in all countries). Those who said they had more knowledge mentioned knowing **Corporate Social Responsibility (CSR) as a measure to check the**

[18] In Greece, the percentage of professionals who know little or nothing about eco-ethics is 51.79%, in Italy 58.82%, in Latvia 66.67% and in Spain 76.79%.

environmental performance of a company or the importance of sustainable entrepreneurship being accompanied by positive social impacts (these informants reside in the countries of Spain and Greece).

The results of the survey show that this is the area in which **professionals obtained the lowest average score of 3.99 when assessing whether they had the knowledge and tools to train on this issue. Accordingly, the percentage of professionals interested in training on this subject reached 84.98%.**

The information from the interviews reflects a broad interest among professionals to be trained in these issues, also indicating that it could be relevant for the future of young people. We also detected a number of profiles that do not know how they could benefit from training on this issue in order to increase the awareness of the young people they work with. Precisely because of the scarcity of information on the subject, they report few topics on which they would like to broaden their knowledge, although we detected some of them:

- **Learn about sustainable entrepreneurship initiatives** in their country or nearest territory in order to be able to offer real and inspiring success stories. And, in addition, to be able to offer another alternative when it comes to guiding young people in the labour market.
- Learn to **distinguish when an enterprise is adopting true sustainable practices and not "greensashing"**, i.e. practices that seek greater social acceptance among consumers by pointing out an apparent environmental benefit but which, in essence, are exaggerated to avoid social questioning and rejection (Hallama et al, 2011).

6. DIFFICULTIES IN TRAINING FOR YOUTH PROFESSIONALS

The main elements that may limit the participation of youth professionals in environmental training on these topics are four: knowledge about the existence of training programs, availability of time and economic resources, and the decrease of motivation in the long term.

- According to the results of the survey, 39.19% are unaware of free training offers available in their territory. This is what some of the professionals interviewed stated, arguing that the economic issue is difficult for them to solve.
- **About 4 out of 10 professionals do not have time available for training (40.29%).** Lack of time was cited as the main constraint reported by the professionals interviewed for not participating in training outside their working hours.
- **57.14% do not have the financial resources to be able to pay for training if it is not free of charge.** Again, according to what was indicated by the professional informants interviewed.
- In interviews with RE and CE experts, they pointed out that the complexity of these topics and the diversity of issues in each environmental theme require training courses of extensive duration, so it is necessary that the professionals participating in such training courses remain interested throughout the duration of the training. For this reason, having prior knowledge of the subject benefits the content of the training courses to be more accessible to the professionals; favorably,81.68% of those surveyed consider that they have a minimum knowledge of matters related to the environment.

7. CONCLUSIONS

The main conclusion of the research is that youth professionals are very interested in expanding their knowledge of environmental issues.

Although more than half of the professionals surveyed (59.34%) stated that the young population is aware of the importance of environmental care and preservation, more than 90% consider it necessary to train young people in areas such as renewable energies, circular economy, environmental sustainability, sustainable consumption and entrepreneurship.

However, youth professionals **do not consider themselves to have the knowledge and tools necessary to train the young population in 3 of the 5 environmental topics addressed (with an average rating below 5):** renewable energies, circular economy and sustainable entrepreneurship. Only in the areas of environmental sustainability and sustainable consumption do they perceive themselves to be more capable (with averages above 5).

Different knowledge gaps have been detected in each of the environmental topics studied:

- In the area of **renewable energy**, knowledge gaps appear in the most basic aspects of renewable energies (such as their definition, typologies, pros and cons of each one). The updating of such basic knowledge is required, as well as further **deepening on specialized topics (such as knowing the social impact of the energy transition and teaching how to achieve energy efficiency)**. This subject is particularly unfamiliar to Latvian youth professionals.

- In the case of the **circular economy,** there is a greater need for training among youth professionals, ranging from basic knowledge of the definition of the term, to the relevance of its implementation, through its main concepts (especially those such as "life cycle" or "zero waste")" and the major difficulties to achieve it. Thus, the main issues identified by the experts could be addressed, such as: **transmitting**

the importance of implementing a circular economy, knowing the term and the diversity of benefits it brings, and learning about the impact of daily habits and decisions. This training need has been identified in all countries equally.

- In relation to environmental sustainability, given the knowledge on the subject, the knowledge gaps are concentrated in specific particularities such as the ability to resolve doubts about the origin and implications of climate change, the difficulties to protect biodiversity or the risk of caring for natural resources. A special training need is detected in this issue in Latvian professionals.

- **The main gap detected in the field of sustainable consumption has to do with the lack of knowledge of sustainable certifications and labeling**, although they have also indicated an interest in knowing in depth the social implications linked to the environmental impacts of certain products. This training need is especially identified among professionals from Spain and Latvia.

- In the case of **sustainable entrepreneurship**, a comprehensive approach is required on all topics: entrepreneurial skills, eco-ethics, sustainable business and green entrepreneurship. This training need is present in all the countries analyzed.

In all the environmental fields, more than 80% of the professionals have expressed their interest in continuing their training, especially due to their responsibility as professionals and their commitment to the future of the young population with whom they work, according to what was reflected in the interviews. **The major limitations that may hinder the training of these profiles have to do with the lack of knowledge of training programs, the availability of time and resources or the capacity to remain interested** in the subject in the long term.

8. RECOMMENDATIONS FOR THE DEVELOPMENT OF A TRAINING RESOURCE FOR YOUTH WORKERS ON ENVIRONMENTAL AWARENESS RAISING

Thanks to the information obtained from the interviews with both professional profiles and experts, the following are the main recommendations to articulate a training program aimed at youth professionals in environmental matters:

Regarding the topics on training: .

- Given the diversity of levels of knowledge that youth professionals may have, **it is required that the training proposed be adaptable to the different levels of knowledge on the subject**. Therefore, the expert profiles propose to articulate two types of training, one with more basic knowledge (definitions of concepts and relevance of the subject matter) and the other with more advanced ones (with more technical knowledge or with more in-depth knowledge of the particularities of each subject matter). In this way, it would be possible to adapt the training to the different profiles according to their needs.

- Both expert and professional profiles have pointed out the relevance of acquiring basic technical skills (such as calculating the ecological or energy footprint) but also transversal communication skills and developing the ability to transmit this knowledge in a simple way. Therefore, it is recommended **to include in the training of professionals, not only knowledge related to environmental issues, but also the acquisition of skills as trainers and communicators**.

Regarding the methodology to be followed in the trainings: .

- Both experts and youth professionals have expressed the usefulness of having practical cases (and, if possible, adapted to the territory) that allow the theoretical knowledge to be grounded. In this regard, **it is recommended that training courses include more practical** than theoretical methodologies to facilitate the understanding of this knowledge.

- It is recommended, according to the expert profiles, to **simplify the concepts to facilitate their understanding and transmission**; for this purpose, it is advisable to use audiovisual support material in the training.

- It is recommended to **provide resources and technological platforms for consultation** so that youth professionals can keep up to date on different

environmental issues. This recommendation addresses the need for professionals to be autonomous in these issues and to keep up to date in their progress, a need explicitly expressed by the expert profiles.

- Professionals and experts have emphasized the importance of training being provided by experts in order to offer exhaustive knowledge and to be able to resolve all possible doubts.

- According to information gathered by experts and professionals, it is recommended that the learning methodologies used in this type of training be dynamic, interactive and participatory, allowing for the exchange of experiences and collaboration. Sharing daily experiences and real stories helps to reinforce knowledge and, given the practical nature of this type of knowledge related to environmental care, these dynamics are particularly useful.

Regarding training formalities:

- It is recommended that the training be of hybrid modality, online to facilitate schedule flexibility and access to specialized resources, but also face-to-face to take advantage of the benefits of team learning dynamics.

- Due to the time availability problems of youth professionals, they recommend **taking advantage of the summer season** to carry out this type of training.

- According to the information provided by the expert profiles, given the breadth of various environmental topics, a duration of two months is recommended, with one or more weekly sessions. However, this duration can be reduced if the number of hours per week is intensified.

- Finally, in response to the needs expressed by the professional profiles, we recommend offering this training free of charge and with the availability of certification.

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