

FUNGI PRENEURS

Inclusion of vulnerable groups in rural areas by environmental awareness and social entrepreneurship through mycology



Training Curriculum on social inclusion by environmental awareness and social entrepreneurship through mycology



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Work package 2

Training Curriculum on social inclusion by environmental awareness and social entrepreneurship through mycology

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Opening note

Fungi are the most importance species of organisms in Europe, playing an essential ecological role in forest ecosystems. Most forest mushrooms are also marketable as medicinal or edible products and might present itself as an interesting source of income for people in rural areas.

Fungipreneurs is a term that combines two words “Fungi” + “Entrepreneur” and it is here used to refer to individuals who are involved in entrepreneurial activities related to mushrooms. These can include cultivation, production, processing, and marketing of fungi and fungal-based products.

Fungipreneurship is a growing field answering to the demand for sustainable and eco-friendly alternatives in different sectors, industries and providing a range of diverse applications such as growing gourmet, medicinal mushrooms, innovative fungal-based products, bioremediation, sustainable agriculture, or pharmaceuticals.

The FUNGIPRENEURS project seeks to capitalize such opportunities by implementing and testing an innovative approach based on inclusion by environmental awareness and social entrepreneurship through mycology, to support the social inclusion of people at risk of poverty or social exclusion (ARPE) in rural areas, more specifically women, youth, elderly, migrants, ethnic minorities, small farmers, and agricultural seasonal workers.

Coordinated by Mindshift Talent Advisory, this training curriculum, the first result of this Erasmus+ project, describes the structure of competences on social inclusion by environmental awareness and social entrepreneurship through mycology that should be developed by adult educators working with vulnerable groups in rural areas.

Learning outcomes-based framework

The FUNGIPRENEURS Training Curriculum is developed in accordance with the EQF, an 8-level learning outcomes-based translation tool that helps to improve transparency, comparability and portability qualifications and makes it possible to compare qualifications from different European countries. The EQF covers all types and all levels of qualifications, and the use of learning outcomes makes it clear what a person knows, understands and is able to do. The EQF applies to all types of education, training, and qualifications, from school education to academic, vocational, and adult education. This approach shifts the focus from the traditional system which emphasises “learning inputs”, such as the length of a learning experience, or type of institution. It also encourages lifelong learning by promoting the validation of non-formal and informal learning. In the frame of EQF, learning outcomes are described in terms of knowledge (i.e., theoretical and/or factual learning domain), skills (i.e., cognitive, and practical learning domain) what a person needs to know), and responsibility and autonomy (i.e., attitudes to effective learning). The table below summarises eight levels descriptors of EQF.

levels	knowledge	skills	responsibility and autonomy
1	basic general knowledge	basic skills required to carry out simple tasks	performance under direct supervision
2	basic factual knowledge	basic cognitive and practical skills required to use simple rules and tools	performance under supervision with some autonomy
3	knowledge of facts, principles, processes and general concepts	a range of cognitive and practical skills required to use basic methods, tools, materials and information	take responsibility for completion of tasks, adapting behaviour to circumstances
4	factual and theoretical knowledge	a range of cognitive and practical skills required to generate solutions to specific problems	exercise self-management
5	comprehensive, specialised, factual and theoretical knowledge	a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	exercise management and supervision; review and develop performance of self and others
6	advanced knowledge involving a critical understanding of theories and principles	advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems	manage complex activities or projects; take responsibility for managing professional development of others
7	highly specialised knowledge; critical awareness of knowledge	specialised problem-solving skills required to develop new knowledge and procedures	manage and transform contexts that are complex and unpredictable
8	knowledge at the most advanced	the most advanced and specialised skills and techniques	demonstrate substantial authority, innovation, autonomy and scholarly

EQF level

To guarantee a common starting base for adult learners in different countries, considering the distinct levels of needs and expectations, is designed for a EQF level 6 established on both EQF and partnership countries' National Qualification Framework (NQF) descriptors.

EQF level 6 descriptors elements ¹		
Knowledge	Skills	Responsibility and autonomy
advanced knowledge involving a critical understanding of theories and principles	advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems	manage complex activities or projects; take responsibility for managing professional development of others

The following table summarises the results of the EQF and an NQF comparative analysis² conducted by the FUNGIPRENEURS partners.

Country	NQF Level	EQF Level
Spain	Level 2 MECES, Degree (Grado)	6
Portugal	Level 6 Bachelor's degree (Licenciatura)	6
Austria	Level 6 Bachelor's degree (Bachelorgrade)	6
Cyprus	Level 6 SVQ, University degree (Ptychion/bachelor's degree)	6
Ireland	Level 8 Honours bachelor's degree, higher diploma	6

ECVET credit points

The European Credit System for Vocational Education and Training (ECVET) is one of the mobility and lifelong learning instruments for learners and workers and it is based in four main principles: **1)** Units of learning outcomes; **2)** Transfer and accumulation of learning outcomes; **3)** Learning agreement and personal transcript; **4)** ECVET (credit) points.

ECVET is recognised as a mechanism for the official recognition, accumulation, and transfer of individually achieved learning outcomes, thus guaranteeing equity of the different forms of learning (formal education and training; non-formal training and in-formal learning).

¹ <https://europa.eu/europass/en/description-eight-efl-levels> (last access 17/05/2023)

² National qualifications frameworks across Europe : <https://europa.eu/europass/en/compare-qualifications> (last access 01/03/2021)

The FUNGIPRENEURS Training Curriculum features the following ECVET principles:

- 1)** Units of learning outcomes
- 2)** Learning outcomes described in terms of knowledge, skills, responsibility and autonomy
- 3)** Teaching and learning hours with allocation of respective ECVET points

Currently, across Europe, is consensual to commensurate 1 ECVET point to approximately 25 hours of learning (i.e., hands-on, self-study and assessment hours). FUNGIPRENEURS approach adopts this reference to allocate ECVET points to its training programme (i.e., 25 hours of learning = 1 ECVET point).

FUNGIPRENEURS Training profile and learning units

The FUNGIPRENEURS Training Curriculum determines the set of competences that adult educators need to acquire, develop, or improve to correctly guide vulnerable groups in rural areas towards social inclusion through environmental awareness, green skills development, and social entrepreneurship. It comprises a total of seven learning units for a total of 70 hours of training.

Training Curriculum on social inclusion by environmental awareness and social entrepreneurship through mycology

EQF Level	ECVET points	Training type	Target group
6	3	B-learning	Adult educators Organisations supporting social inclusion

Units of learning outcomes	Learning hours ECVET points
1. Roadmapping methodology as a tool to create easy-to-follow training itineraries	10h00
2. Social inclusion of vulnerable groups in rural areas	10h00
3. Environmental awareness	10h00
4. Fungi ecosystems and marketable value of mycological resources	10h00
5. Mycology for green skills development	10h00
6. Social entrepreneurship for sustainability and social impact	10h00
7. Digital literacy skills and competences through mycology	10h00

70h00 Learning hours	3 ECVET points
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Learning unit 1: Roadmapping methodology as a tool to create easy-to-follow training itineraries

A “Roadmapping” methodology is a strategic process of identifying the actions, steps and resources needed -- along with the communication of strategy and innovation -- to take an idea or initiative from vision to reality. This process is used across academia, industry, and other spaces to provide clarity, structure, and impact. There are many types of roadmaps and roadmap methodologies, all dependant on the intended outcome, context, product (if any), etc. There is not specific set approach that can be applied to any and all roadmapping processes, but these may follow a process broadly outlined below:

1. Define the purpose and scope
2. Set goals and objectives
3. Conduct research and analysis
4. Define key milestones
5. Prioritize initiatives
6. Establish timelines
7. Communicate and collaborate
8. Monitor and adjust

Defining the Purpose and Scope of a roadmap

An essential first step for effective roadmapping is to clearly identify the purpose of the roadmap. Is it for a product, project, or organisational strategy? Who will it serve or be affected by it? From this, it is a question of determining the scope and boundaries of what the roadmap will cover to structure the following process.

Establishing Timelines for a roadmap

An important step in creating a roadmap is to develop a timeline that outlines the sequence of initiatives, milestones, and key deliverables that the process should follow. It is important at this stage to consider the estimated timeframes for each activity and determine any dependencies or critical paths. As part of this, or as a separate step, it may be useful to think about prioritising Initiatives - identify the major initiatives or activities that need to be undertaken to reach the defined milestones and prioritise these initiatives based on their strategic importance, resource requirements, etc.

Monitoring and adjusting the roadmap

An often-overlooked element of effective roadmapping - one should regularly review the roadmap's progress and adjust as needed. Monitoring key performance indicators (KPIs) and metrics to track progress towards milestones is an important element and should be "baked-in" from the start of the project". You should adapt the roadmap if new opportunities or challenges arise or if there are changes in the market or organisational priorities. Some common roadmapping approaches may include - but are not limited to: GIST (Wagenblatt & Wagenblatt, 2019); OKR (Niven & Lamorte, 2016); Three Horizon Framework (Hodgson et al, 2016; Business Model Canvas (Sparviero, 2019).

**Roadmapping methodology as a tool
to create easy-to-follow training itineraries**

This learning unit will primarily focus on inculcating in the user a basic understanding of the area of roadmapping - the concept, the general structure, the benefits, typical key steps, etc. - before moving on from understanding to application by supporting learners in their application of roadmapping approaches to their own experiences and contexts. Aligning with the intentions and objectives of the Fungipreneurs project, a final phase of this learning unit will examine the potential of the roadmapping methodology with a view to areas and concepts related to the inclusion of vulnerable groups in rural areas, environmental awareness and sustainable practice and social entrepreneurship. On completion of the learning unit, the learner should be able to outline the benefits of a roadmapping approach; explain how one may develop a roadmap for a product, service, or process; align the process of roadmapping to key social and environmental requirements or activities and create their own roadmap in these areas.

Upon the completion of this leaning unit learners will be able to:

Knowledge	<p>Define Roadmapping as a methodology</p> <p>Recognise the key characteristics of easy-to-follow training itineraries</p> <p>Explain the benefits of roadmapping with respect to developing training itineraries</p> <p>Recognise some roadmapping methodologies and frameworks for supporting the development of easy-to-follow training itineraries</p>
Skills	<p>Use roadmapping tools and methodologies</p> <p>Create a roadmapping process with respect to the development of easy-to-follow training itineraries</p>
Responsibility & Autonomy	<p>Apply a roadmapping process with respect to the development of easy-to-follow training itineraries with learners</p> <p>Support learners to develop the knowledge and skills to use roadmapping as a learning methodology</p>

Learning unit 2: Social inclusion of vulnerable groups in rural areas

Social inclusion promotes equality, diversity, and human rights by actively working to reduce inequalities and create a more inclusive society. It involves recognising and valuing the diversity of individuals and their contributions and fostering a sense of belonging and acceptance for everyone. Vulnerable groups are social categories or communities that face systemic barriers, discrimination, and unequal access to resources, opportunities, and rights. These groups often experience disadvantages based on various factors such as race, ethnicity, gender, age, socioeconomic status, disability, sexual orientation, or religious beliefs. The following list includes the potential barriers different target groups may face in accessing opportunities:

Disabilities: physical, mental, intellectual, or sensory impairments which, in interaction with various barriers, may hinder someone's full and effective participation in society on the same footing as others.

Health problems: severe illnesses, chronic diseases, or any other physical or mental health-related situation that prevents from participating in society.

Barriers linked to education and training systems: early school-leavers and low-skilled adults may face barriers. Individuals can also face barriers to participation when the structure of curricula makes it difficult to undertake a learning or training mobility abroad as part of their studies.

Cultural differences: while cultural differences may be perceived as barriers by people from any backgrounds, they can particularly affect people with fewer opportunities.

Social barriers: social adjustment difficulties such as limited social competences, anti-social or high-risk behaviours, (former) offenders, (former) drug or alcohol abusers, or social marginalisation may represent a barrier.

Economic barriers: limited access to education, employment opportunities, healthcare, and basic resources can perpetuate cycles of poverty and exclusion, making it difficult for individuals to participate fully in society.

Barriers linked to discrimination: based on factors such as race, ethnicity, gender, sexual orientation, religion, disability, or socioeconomic status can create significant barriers to social inclusion.

Geographical barriers: living in remote or rural areas, on small islands or in peripheral/outermost regions⁴, in urban suburbs, in less serviced areas (limited public transport, poor facilities) or less developed areas in third countries, etc., may constitute a barrier.

Social inclusion of vulnerable groups in rural areas

Social inclusion is essential for the overall well-being of individuals and society. When everyone is included, diverse perspectives and talents can contribute to innovation, economic growth, and social development. It promotes a more just and equitable society where everyone can fulfil their potential and lead a meaningful life. This learning unit aims to enable professionals to support disadvantaged groups to engage in social entrepreneurship in the field of mycology, notably in the more remote rural areas. The overall goal is to provide educators with competences to promote social inclusion aiming at improving the outreach to people with fewer opportunities, including people with disabilities and people with a migrant background, as well as people living in rural and remote areas such as outermost regions, people facing gender inequalities, socio-economic difficulties or any other potential source of discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation.

Upon the completion of this leaning unit learners will be able to:

Knowledge	<ul style="list-style-type: none"> Define social inclusion Describe the type of barriers that social disadvantaged groups face List social entrepreneurship initiatives in the mycology area
Skills	<ul style="list-style-type: none"> Discuss definition of social inclusion Identify examples of different types of barriers disadvantaged groups face Benchmark entrepreneurial actions nationwide in the mycology area
Responsibility & Autonomy	<ul style="list-style-type: none"> Guide group in identifying the best definition of social inclusion Supervise exercise of matching types of barriers with their definitions Produce a mock example of social entrepreneurship fungi based

Learning unit 3: Environmental awareness

Environmental awareness plays a crucial role in addressing the challenges posed by climate change, resource depletion, and ecological degradation. It encompasses the knowledge, attitudes, and behaviours that individuals and communities exhibit towards the environment. By fostering environmental awareness, we can empower individuals to make informed decisions and take actions that promote sustainability.

Environmental awareness helps individuals comprehend the pressing environmental issues affecting our planet. It provides insights into climate change, biodiversity loss, deforestation, pollution, and other challenges. With this understanding, individuals are better equipped to engage in meaningful discussions, support conservation efforts, and contribute to finding innovative solutions.

Environmental awareness promotes sustainable behaviours by instilling a sense of responsibility and care for the environment. It motivates individuals to adopt practices such as reducing energy consumption, conserving water, recycling, and supporting eco-friendly initiatives. By making sustainable choices, individuals contribute to the preservation of natural resources and the reduction of environmental impact.

Environmental awareness empowers individuals to advocate for policy changes and support environmental initiatives. Informed citizens are more likely to engage in environmental activism, participate in grassroots movements, and promote environmentally friendly policies. By influencing decision-makers and policymakers, they can drive positive change at local, national, and global levels.

Environmental awareness

This learning unit aims to deepen the understanding of adult educators regarding environmental issues prevalent in rural areas. It seeks to equip them with knowledge about local ecosystems, natural resource management, climate change, and sustainable development. By fostering environmental awareness, educators can inspire and guide vulnerable groups to recognize the interdependence between their well-being and the environment.

Another objective of the learning unit is to foster an understanding of social entrepreneurship among adult educators. It aims to equip them with the knowledge of how social entrepreneurship can serve as a catalyst for social change and economic empowerment in rural areas. Educators will learn about identifying social needs, developing innovative solutions, and supporting vulnerable groups in establishing sustainable enterprises that address social and environmental challenges.

Upon the completion of this learning unit learners will be able to:

Knowledge	<p>Explain the role of fungi in ecosystems, and the financial sustainability they can provide</p> <p>Describe the impact of human activities on fungal populations and the broader environment</p> <p>Recognise the fungal diversity and the different groups of fungi and their unique characteristics</p> <p>Tell the ethical and cultural aspects related to fungi and their use, including respecting indigenous knowledge and sustainable practices</p> <p>List the potential effects of climate change on fungi and how fungi can contribute to climate change mitigation and adaptation</p>
Skills	<p>Make informed decisions regarding the responsible use of fungi and the environment</p> <p>Participate in community-based mycology initiatives and environmental projects, fostering community engagement</p> <p>Practice responsible harvesting to protect fungal populations and their ecosystems</p>
Responsibility & Autonomy	<p>Develop environmental stewardship by understanding their role in protecting and conserving local ecosystems and fungal biodiversity</p> <p>Promote the sustainable harvesting practices and avoid overexploitation of fungi</p> <p>Explore independently more mycology-related topics</p>

Learning unit 4: Fungi ecosystems and marketable value of mycological resources

Fungi, often overlooked but essential components of ecosystems, play a critical role in maintaining ecological balance and providing valuable resources to both natural environments and commercial markets.

Fungi fulfil various ecological functions that contribute to the health and vitality of ecosystems. They act as primary decomposers, breaking down organic matter and facilitating nutrient cycling (saprotrophic fungi). There are some important and valued edible species of saprotrophic mushrooms, as *Agaricus bisporus*, *Pleurotus ostreatus*, *Pleurotus eryngii* or *Lentinula edodes*. Additionally, mycorrhizal associations between fungi and plant roots enhance nutrient uptake, improve soil structure, and promote the overall health and resilience of plants. Fungi also play a crucial role in the symbiotic relationships with other organisms, such as lichens and bacteria, and provide habitats for countless species, including insects and microorganisms.

Beyond their ecological significance, fungi possess substantial marketable value. Edible mushrooms form a significant part of the global food industry, offering diverse flavours, textures, and nutritional benefits (*Amanita* spp., *Boletus* spp., *Lactarius* spp., *Tuber* spp., etc). The demand for gourmet and medicinal mushrooms continues to grow due to their unique taste profiles and potential health-enhancing properties. Furthermore, fungi contribute to various sectors, including pharmaceuticals, cosmetics, bioremediation, and biofuel production. The extraction of bioactive compounds from fungi has opened new avenues for drug development and natural product innovation.

Given the dual importance of fungi, sustainable management and conservation strategies are crucial. It is essential to strike a balance between commercial exploitation and the preservation of fungal diversity and ecological functions. Practices such as responsible foraging, cultivation, and conservation of natural habitats are essential for ensuring the long-term availability of mycological resources and the continued functioning of ecosystems. Collaboration between scientists, conservationists, industry stakeholders, and local communities is necessary to develop sustainable frameworks and guidelines for the utilization of fungal resources.

Fungi ecosystems and marketable value of mycological resources

The objective of the learning unit is to provide learners with a solid understanding of the importance of fungi in ecosystems, including their role in organic matter decomposition, nutrient cycling, and symbiotic associations with plants. It is also intended that learners become familiar with the commercial and economic opportunities associated with mycological resources. This includes exploring the market for edible and medicinal mushrooms, as well as the potential for extracting bioactive compounds from fungi for various industries. The overall goal is to encourage responsible and sustainable use of mycological resources. This involves raising awareness about the importance of conserving fungal diversity.

Upon the completion of this learning unit learners will be able to:

Knowledge	<ul style="list-style-type: none"> Define the ecological function of fungi Identify the species of mushrooms with the highest gastronomic value List commercial applications of fungi Describe good practices in wild mushroom harvesting
Skills	<ul style="list-style-type: none"> Discuss definition of ecological function Identify examples of different types of fungal species, depending on the ecosystems in which they live Conduct benchmark for innovative companies in the mycology area Select from good practices in wild mushroom harvesting
Responsibility & Autonomy	<ul style="list-style-type: none"> Guide groups in identifying the best definition of ecological function Supervise the exercise of identifying different types of fresh mushrooms and their definitions Encourage a sense of responsibility towards the environment by incorporating fungi for their capacity to mitigate the effects of climate change Assess the economic impact of mycological resources on local communities and promote ethical business practices

Learning unit 5: Mycology for green skills development

Green skills development is a critical aspect of the European Commission's efforts to address environmental challenges and promote sustainable development. With the recognition that a transition to a greener and low-carbon economy is imperative, the European Commission has identified the need for individuals and professionals to possess specific skills, knowledge, and competencies to actively contribute to this transition.

Green skills can be defined as the expertise and capabilities required to understand, apply, and promote environmentally sustainable practices, technologies, and policies. These skills are essential for various sectors and industries to adapt to and mitigate the impacts of climate change, reduce greenhouse gas emissions, conserve natural resources, and promote ecological balance.

The development of green skills involves a multidimensional approach. It includes technical skills, such as expertise in renewable energy technologies, energy efficiency, waste management, sustainable agriculture, and eco-design.

In addition to technical skills, green skills development also encompasses social and personal competencies. These include the ability to understand and navigate environmental policies and regulations, communicate effectively about environmental issues, engage stakeholders, and foster collaboration across different sectors. Personal competencies such as critical thinking, problem-solving, adaptability, and leadership play a crucial role in driving sustainable practices and innovation.

The European Commission emphasizes the need for educational programs, vocational training, and lifelong learning opportunities to equip individuals with green skills. From the FUNGIPRENEURS perspective, the development of projects related to mycology holds immense potential for fostering the development of green skills, particularly among marginalized individuals. By engaging in activities such as mushroom cultivation, mycoremediation, and sustainable packaging production, individuals can acquire valuable knowledge and expertise in environmentally friendly practices. Cultivating mushrooms not only provides a sustainable source of food but also enhances skills in organic farming, composting, and waste management. Mycoremediation projects teach participants how to use fungi to clean up contaminated environments, improving their understanding of ecological restoration techniques. Additionally, involvement in sustainable packaging initiatives encourages individuals to explore innovative and eco-friendly alternatives to traditional packaging materials. These activities not only impart practical skills but also instill a deep sense of environmental stewardship, empowering marginalized communities to actively participate in green practices and contribute to a more sustainable future.

Mycology for green skills development

The learning unit aims to empower vulnerable groups in rural areas through mycology-based green skills development, with a strong focus on fostering environmental awareness. Participants will acquire knowledge and practical skills in sustainable mycological practices, such as mushroom cultivation and mycoremediation. The unit emphasizes the ecological importance of fungi and their applications in addressing local environmental challenges. By promoting environmental consciousness, participants will develop a deep understanding of their role in creating a more sustainable future. They will explore ways to reduce waste, conserve resources, and promote biodiversity conservation. The objective is to empower participants to become environmental stewards and agents of change within their communities.

Upon the completion of this learning unit learners will be able to:

Knowledge	<ul style="list-style-type: none"> List the role of fungi in organic waste recycling processes, including their ability to degrade complex organic materials and produce compost Describe bioremediation strategies using fungi to clean up contaminated environments and address environmental pollution List the essential resources required for implementing mycological practices in green projects Search for examples of successful mycological projects from around the world, showcasing their positive impact on environmental conservation
Skills	<ul style="list-style-type: none"> Engage in discussion and debates about the applications of mycology in green practices Evaluate the environmental challenges and make informed decisions in designing mycological solutions for green practices Explore additional resources to deepen the understanding of mycology and its applications
Responsibility & Autonomy	<ul style="list-style-type: none"> Embrace environmental stewardship and responsibility Maintain a growth-oriented attitude, continuously seeking knowledge and improving skills to adapt to changing environmental circumstances Manage resources responsibly, creating efficient and sustainable approaches in mycology for environmental solutions

Learning unit 6: Social entrepreneurship for sustainability and social impact

The concept of Social Entrepreneurship for Sustainability and Social Impact has gained in its socio-economic relevance and is relevant for adult education. In this learning unit we will explore the exciting world of social entrepreneurship and its potential for creating positive change in our society from a general perspective as well as also from the specific lens of its relevance in mycology.

Social entrepreneurship for sustainability is an innovative approach that combines business principles with a focus on social and environmental issues. It involves creating and implementing sustainable business models that address societal challenges, such as poverty, inequality, climate change, and more. By blending entrepreneurship and social impact, social entrepreneurs aim to create long-term solutions that benefit both people and the planet.

Social impact refers to the positive change that social entrepreneurs strive to achieve in their communities. It goes beyond traditional business measures like profit and revenue, focusing instead on the well-being and empowerment of individuals, groups, and the environment. Social impact can take many forms, such as improving access to markets for niche businesses like mycology, providing clean energy solutions, promoting fair trade practices, supporting marginalized communities, or conserving natural resources.

In project FUNGIPRENEURS, social entrepreneurship has an evident and apparent relevance in mycology. Mycology, the study of fungi, offers unique opportunities for social entrepreneurship and sustainable solutions. Fungi play crucial roles in various sectors, including agriculture, medicine, environmental conservation, and food production. By harnessing the power of fungi, social entrepreneurs can address pressing challenges, such as food security, waste management, alternative medicine, and sustainable farming practices.

Social entrepreneurship in mycology can involve initiatives like developing eco-friendly packaging materials made from mushroom, creating community-led mushroom farming projects to empower local communities, utilizing fungi to clean up polluted environments, or researching medicinal properties of mushrooms for affordable healthcare options. All these are potential domains for social entrepreneurship with a useful social impact.

By exploring social entrepreneurship for sustainability and social impact, we can discover how to blend business acumen, innovation, and a passion for making a difference. This learning unit aspires to equip the learners with the knowledge and skills needed to create impactful social ventures. Welcome to this journey to create a more sustainable and equitable world through social entrepreneurship!

Social entrepreneurship for sustainability and social impact

The objectives of this learning unit include understanding the basic principles of social entrepreneurship and its social impact. It aims to equip learners with the skills to create business plans that integrate social and environmental goals while driving positive change. By the end of the training, participants will have the fundamental knowledge about social entrepreneurship and application of tools to develop socially impactful ventures that contribute to a more sustainable future. Participants will also gain knowledge and skills to comprehend the challenges faced by communities, assess the social impact of their ventures, integrate sustainability into their operations, and promote responsible resource management. These competencies enable them to create businesses that address societal issues while promoting long-term sustainability.

Upon the completion of this learning unit learners will be able to:

<p>Knowledge</p>	<p>Define sustainability and social impact in the context of mycology in social entrepreneurship</p> <p>Recognise the key issues influencing social entrepreneurship that can drive positive societal and environmental change</p> <p>Identify relevant methodologies to measure social impact and evaluate environmental impact of social business dealing in mycology</p>
<p>Skills</p>	<p>Integrate sustainability principles into business operations, promoting eco-friendly practices and responsible resource management</p> <p>Create effective business plans that prioritize social and environmental goals, fostering mycology ventures with a meaningful societal impact.</p> <p>Assess and address social and environmental challenges, to craft innovative solutions for a more sustainable mycology business venture</p>
<p>Responsibility & Autonomy</p>	<p>Recognise social and environmental challenges, demonstrating empathy and awareness of socio-ecological needs.</p> <p>Evaluate the tangible and intangible positive effects of mycology ventures on communities and the environment.</p> <p>Integrate sustainability into their business strategies, ensuring long-term contributions to a more equitable and sustainable world</p>

Learning unit 7: Strengthening digital literacy skills and competences through mycology

Digital competences applied to adult education have become increasingly important in the rapidly evolving digital landscape. The European Commission recognizes the need for individuals to possess digital skills and knowledge to effectively participate in the digital society and economy. With the aim of empowering adults to thrive in the digital era, the European Commission has prioritized the development and promotion of digital competences in adult education.

Digital competences encompass a range of skills, knowledge, and attitudes that enable individuals to use digital technologies proficiently and critically. These competences go beyond technical skills and include areas such as information and data literacy, digital communication, digital content creation, problem-solving, and digital citizenship. Digital competences are essential for adults to navigate and engage with digital tools, platforms, and services, and to make informed decisions in the digital world.

In adult education, the integration of digital competences helps foster lifelong learning and empowers adults to acquire new skills, enhance employability, and actively participate in social and civic life. It enables adults to access online educational resources, engage in online collaboration and communication, and adapt to the changing demands of the digital workplace.

To support the development of digital competences in adult education, the European Commission has launched various initiatives and programs. The European Digital Competence Framework for Citizens (DigComp) provides a reference framework for the development and assessment of digital competences, serving as a guide for educators and trainers in adult education.

From the point of view of the FUNGIPRENEURS project, digital competences facilitate networking and collaboration, allowing individuals to connect with like-minded individuals, organizations, and potential customers or partners for their mycological enterprises.

Moreover, digital competences can help vulnerable groups promote their mycology-based initiatives through online marketing, e-commerce platforms, and social media channels. This enables them to reach a wider audience, raise awareness about environmental issues, and generate income for their communities. Through the combination of digital competences, mycology, environmental awareness, and social entrepreneurship, vulnerable groups in rural areas can overcome isolation, increase their participation in sustainable practices, and actively contribute to local and global efforts towards a greener and more inclusive future.



Strengthening digital literacy skills and competences through mycology

The objective of the learning unit is to develop digital literacy and foster technology integration in the context of mycology for sustainable development. Participants will acquire skills to access online resources, engage in virtual communities, and stay updated on mycology advancements. They will learn effective communication and collaboration techniques using technology. The unit will explore digital platforms for marketing and selling mycological products, empowering participants in entrepreneurship. Participants will also gain competence in data collection and analysis, optimizing mycological initiatives. By the end of the unit, learners will be equipped to leverage digital competences to drive environmental conservation, economic empowerment, and social inclusion through mycology.

Upon the completion of this learning unit learners will be able to:

<p>Knowledge</p>	<p>Define digital literacy and its components, including digital tools, information literacy, and critical thinking</p> <p>Explain the relevance of digital literacy in enhancing understanding and applications of mycology in diverse fields</p> <p>Describe how technology can facilitate collaboration and knowledge sharing within the mycology community</p> <p>Identify online platforms and communities dedicated to mycology research, education, and conservation efforts</p>
<p>Skills</p>	<p>Search for and retrieve information online, using various digital tools and resources to explore mycology-related topics</p> <p>Collaborate effectively with others on mycology-related projects using digital communication and collaboration tools</p> <p>Make use of digital resources to expand their understanding of mycology independently</p>
<p>Responsibility & Autonomy</p>	<p>Foster a curious mindset, engaging actively with digital resources related to mycology, and seeking to discover new insights and perspectives</p> <p>Act as responsible digital citizens, promoting online respect, empathy, and positive contributions to digital communities</p> <p>Supervise online behaviour, ensuring the positive contribution to digital communities and maintaining a safe and respectful online presence</p>

FUNGIPRENEURSHIP Good practices

Following it is presented a list of good practices, tested solutions, policies, initiatives, projects, and programmes used as a reference to develop the FUNGIPRENEURS Training Curriculum

Austria	
Good practice	<p>The Verified Social Enterprise (VSE)</p> <p>In Austria, Since December 1, 2022, social entrepreneurs can register their company as a "Verified Social Enterprise (VSE)". This is a giant step for the Austrian social entrepreneurship community. For the first time, social entrepreneurs can now officially call their company with a social orientation a social enterprise. This massively increases credibility towards customers, target groups, financiers and other supporters and facilitates communication. The VSE can finally make the social entrepreneurship sector tangible and addressable. The label is an important signal for building trust. Until now, every company could claim to be a social enterprise. Now there is an external body that checks whether the necessary criteria actually exist. Initiated by Social Entrepreneurship Network Austria (SENA) as a lobby for Austrian social entrepreneurs, this VSE label was implemented under the patronage of the Federal Ministry of Labor and Economics in cooperation with the Austrian Federal Economic Chamber (WKÖ). The VSE can be applied for via the submission portal of Austria Wirtschaftsservice Gesellschaft mbH (aws).</p> <p>Source: www.aws.at/verified-social-enterprise-label/</p>
Programme	<p>Promoting Entrepreneurship - The "Map of Actions"</p> <p>The Entrepreneurship Education Action Plan (2020 to 2025) resulted from a cooperation between the Federal Ministry of Labour and Economy and the Federal Ministry of Education, Science and Research with around 65 stakeholders, which developed a common vision for a sustainable Austria and bundled measures to achieve the goal. The "Map of Actions" presented at the Entrepreneurship Summit on November 10, 2020, impressively shows that promoting entrepreneurship is not just the goal of politics. The private and public initiatives listed in it stand for an entire ecosystem that only works optimally if all actors work together.</p> <p>Source: www.bmaw.gv.at/en/Topics/Business-Location/Small-and-medium-sized-Enterprises-SMEs/Promoting-Entrepreneurship-Map-of-Actions.html</p>
Project	<p>Austrian Social Enterprise Monitor 2021/2022</p> <p>The Austrian Social Enterprise Monitor represents Austria's country monitor and has been carried out by the Social Entrepreneurship Center of WU Vienna since 2021. The task of the Austrian Social Enterprise Monitor 2021/2022 and the subsequent iterations is to improve the data situation on social entrepreneurship in Austria. The results are intended to help decision-makers from politics, business and civil society to understand the sector and to support it with appropriate measures. The Austrian Social Enterprise Monitor 2021/2022 was the largest and first international study on social enterprises in Austria to date, presenting new findings and facts.</p> <p>Source: https://www.wu.ac.at/sec/aktivitaeten/forschung-und-beratung/european-social-enterprise-monitor-esem-oesterreich/</p>

Cyprus

Project

Modern professional development for the Green and Digital Transition

This national project aims to staff the labour market with modern professionals, for the development of the economy and the cohesion of society, and focuses on three main pillars:

- a) Development of modern professional culture
- b) Provision of socially targeted professional learning
- c) Promotion of professional specialisation and certification

With reference to the second pillar, the learning activities concern green, digital, safe, and quality professional skills and will be addressed to socially vulnerable groups, people not in education, training or work aged 15-29 (NEETs), people over 55, women out of regular work and people with disabilities.

Source: www.mlsi.gov.cy/mlsi/mlsi.nsf/All/8CCAD29B8DBF7CBEC22589C0003F1648?OpenDocument

Project

Free experiential workshops from the National Europass Cyprus Center

The Cyprus Productivity Center of the Ministry of Labor and Social Insurance, as the National Europass Center (EKE) of Cyprus, organizes free experiential workshops lasting four (4) hours, open to anyone interested. During the workshops, consultants, specialized in Human Resource Management, will give guidelines for:

- a) The creation of a remarkable Curriculum Vitae in the standards of the Europass European Curriculum Vitae
- b) Writing a complete Cover Letter
- c) The various ways of searching for job vacancies, and
- d) A successful Job Interview, through simulation exercises.

FUNGIPRENEURS project could therefore adopt the philosophy of workshops but adjusted to the needs of our target group.

Source: <https://europasscyprus.net/3-5ores/>

Initiative

forum for social innovation

The general purpose of the initiative for the creation of this forum is to cultivate a culture of social innovation among state agencies, social partners, local government authorities, the business community, as well as the general public.

In particular, the forum will keep its members informed of developments in the field, as well as to provide education and training and to participate in conferences, events and activities related to social innovation.

Moreover, forum members will have the opportunity to contact social innovators from all over Europe and exchange ideas as well as good practices.

Source: <https://cyprus-mail.com/2023/03/16/research-centre-to-launch-cyprus-forum-for-social-innovation/>

Ireland

Best practice

Sustainability Roadmap for the Irish Broadcasting Sector

The Sustainability Roadmap for the Irish Broadcasting Sector is a roadmap developed by the Broadcasting Authority of Ireland (BAI). The BAI is a voluntary sector-wide sustainability group of Irish broadcasters and representatives of their supply chains. It aims to foster best practice and to provide the support to make the Irish broadcasting sector a sustainability leader that uses its collective voice to create a greener, more inclusive, more resilient future for all. This roadmap provides a vision for a sustainable broadcasting sector in Ireland and offers a concrete plan for how to get there. It is intended as a guide for individual broadcasters to help them - as individuals - on becoming more sustainable and adopting more sustainable practices, with a view to simultaneously working collectively towards shared goals. Within the context of the FUNGIPRENEURS project, this has a wide of range of applicability, in particular in the intention of supporting widespread change in sustainability practice through individual actions and roadmapping. The roadmap has three pillars representing the three dimensions of sustainability: environment (green), social (inclusive) and economic (resilient). Each pillar contains three focus areas, which are accompanied by a set of recommended actions and key metrics to help to track and measure impact.

Source: www.mlsi.gov.cy/mlsi/mlsi.nsf/All/8CCAD29B8DBF7CBEC22589C0003F1648?OpenDocument

Best practice

Teaching and learning in Irish Higher Education: a roadmap for enhancement in a digital world 2015-2017

Developed in 2015, this is a roadmap aimed at supporting Irish higher education institutions and organisations in the development of local and national digital strategies and to ensure alignment, coherence, and a sense of common endeavour at a sectoral level. This document is designed to inform and guide senior managers, heads of department, schools or faculties and leaders within the higher education sector. It focuses also on systems-level higher education organisations, as well as representative organisations within the sector which together must take the lead in building digital capacity to enhance teaching and learning across the sector. The roadmap presents a series of key recommendations, with a range of priorities under each, as well as outlining system-led actions to be addressed, where and how supports might be offered and what might success look like (as well as associated KPIs). The roadmap identifies the key priorities for change and -- based on this -- provides an associated framework for supporting organisations in addressing these priorities.

Source: <https://hub.teachingandlearning.ie/wp-content/uploads/2021/06/NF-2015-Teaching-and-Learning-in-Irish-Higher-Education-A-Roadmap-for-Enhancement-in-a-Digital-World-2015-2017.pdf>

Spain

Policy

Social Economy Strategy 2023-2027 of the Government of Spain

National strategy that outlines the objectives and actions to promote the social economy sector in Spain. It aims to leverage social enterprises, cooperatives, and non-profit organizations to drive inclusive and sustainable economic growth, social inclusion, and tackle societal challenges. It focuses on areas like supporting entrepreneurship, innovation, and access to finance; increasing visibility and recognition of the sector; improving the legal framework; fostering international cooperation; and promoting the social economy's role in the green and digital transitions.

Source: www.cepes.es/files/docs/estrategia-espaola-de-economia-social-20232027.pdf

Initiative

Mycology Program of Castilla y León Region

The Mycology program of Castilla y León is an initiative promoted by the Regional Government, Provincial Councils and more than 320 municipalities in the region based on a progressive improvement of the governance of the entire sector to optimize the management and valorisation of the mycological resources. It is based on a solidarity system of regulation through collection permits, compatible with the mycotourism and myco-agrifood development of the participating rural forest territories and allows taking advantage of multiple financing and cooperation opportunities.

Source: www.cepes.es/files/docs/estrategia-espaola-de-economia-social-20232027.pdf

Initiative

MicoArangón: sustainable management and valuation of the mycological resource in Aragón.

Promotes the collaboration of all stakeholders interested in enhancing the sustainable management and the valorisation of myco-tourism related to the fungal resource in the forests of Aragon. Its objectives include the promotion of a voluntary, collaborative, and transparent management system that combines the perspectives of forest owners and managers, local collectors and mycotourists, scientists, and other mountain users to maximize the value generated by the fungal resource in rural production areas and ensure its conservation and adaptation to global change. Some results:

- a) Map of Aragon with weekly information on the state of surface soil moisture
- b) A table with disaggregated information by "mycological regions" on the fruiting of the main species of wild mushrooms collected in Aragon.
- c) App Interfungi
- d) News about mycological events or activities related to the fungal resource in Aragon
- e) Detailed information about the main edible species collected in Aragon (over 20 species or groups of species).

Source: www.micoaragon.es

Good practice	<p>MYCOTOUR: Vertebration, excellence, and internationalisation of mycotourism in the rural areas.</p>
<p>Initiative that contributes to structuring, improving, and internationalizing the mycotourism experience in rural areas in an orderly, sustainable, intelligent, and inclusive manner. It promotes a voluntary, supportive, and transparent management that brings together the interests of forest owners and managers, local collectors, hoteliers, scientists and other users of the forest, to make profitable the value generated by the mycological resource in rural production areas and ensure its survival and adaptation to change.</p> <p>Source: www.mycotour.es</p>	
Good practice	<p>Socio-labour insertion itineraries based on mycology aimed at stopping depopulation</p>
<p>Social and labour insertion itineraries offered by the Confederation of Rural Development Centres (COCEDER), one addressed to women and other two aimed at residents of specific regions within the Spanish territory.</p> <p>Source: www.cepes.es/files/docs/estrategia-espaola-de-economia-social-20232027.pdf</p>	
Project	<p>FungiGo</p>
<p>FungiGo is a Pilot Model of Mycological Intelligent Parks: a sustainable approach for social inclusion in rural areas in Castilla y León and Aragón. It is articulated around 5 specific objectives focused on the sustainable and inclusive use of wild mushrooms within an adequate legal framework.</p> <p>Source: www.fungio.es</p>	

Portugal

Best practice

Shimejito – Act local to solve global

Environmental and health-conscious people are still struggling to find reliable brands that they can count on, that's why Shimejito is building a trust-worthy community that supports Life on earth and other SDG's to makes humankind realize the full potential of mushrooms. Renaissance it's just in the beginning, ensuring their use as healthy and peaceful experience. Shimejito has developed micro precision system for agriculture. Their business model is based on an automated IoT system that enables decentralization of indoor mushroom cultivation.

Source: www.shimejito.com

Project

Truflavours

Truffles are increasingly a high value-added product, and their by-products are of growing importance in the gourmet sector. Through the Truflavours project, the consortium - Voz da Natureza, Associação BLC3 and Escola Superior Agrária - proposes to apply and develop new technologies for the agro-forestry, catering and food industries. With a view to creating products of superior quality and with an innovative and differentiating character, the Truflavours project aims to explore various business opportunities associated with two main products: (i) plants mycorrhized with Tuber and Terfezia; (ii) truffle aromas for application in the food industry. To this end, the project aims to carry out scientific research activities, particularly at the level of biotechnology of bioreactors to produce natural truffle aromas and truffle culture.

Source: www.micnatur.pt/index.php?lang=en

Project

Naturboscus

Natur Boscus operates in the sustainable exploitation of the mycological resource, being indispensable in the inventory of the existing potential in the field, as well as management measures to ensure a long-term perspective. Mycological resources and respective by-products being the essence of the project, the exploitation of these resources will be carried out in various fields: commerce; services and training; and tourism. The objective of Natur Boscus is the valorisation and correct management of mycological resources, in order to contribute to the region's focus on nature tourism and gastronomy.

Source: www.projectomateria.pt/en/produtores/natur-boscus_52

USA

Project

GITHUB Roadmap

GitHub is an Internet hosting service for software development and version control using Git. It is a hugely popular and widely used platform among software developers and other digital projects. As one of the most important tech platforms on the web, GitHub's is continually being worked on by the products' development teams. The Github roadmap is a publicly viewable roadmap which outlines the intended activities and steps to develop the product/ service over the coming 1-2 years. The roadmap is represented using the "Kanban" board format (<https://en.wikipedia.org/wiki/Kanban>), but this is simply how the process is represented visually. The roadmap process is no different than other roadmaps in terms of the clear structure, prioritisation of tasks, setting of milestones and key tasks, etc. The roadmap - regardless of how it is presented - is highly organized and easy to progress through. The cabana format also allows for interactive roadmap items which allow for additional information -- like a summary of the project, the intended outcome, milestones, etc -- to be viewed. Github represents a strong example of a roadmap for a product or service which is wide-ranging, well organised and clear in what it aims to achieve.

Source: <https://github.com/orgs/github/projects/4247>

Key concepts

Attitudes

The ability to develop tasks and solve problems of a higher or lower degree of complexity and different degrees of autonomy and responsibility.

Biodiversity conservation

It refers to the variety of life forms, including plants, animals, and microorganisms, found in a particular habitat or on Earth as a whole. It involves efforts to protect and preserve the natural diversity of species and ecosystems. It recognizes the intrinsic value of nature and the interconnectedness of all living organisms. Promoting biodiversity conservation is crucial for maintaining ecosystem balance, providing ecosystem services, and preserving the planet's natural heritage.

Business plan

A business plan is a document that sets out the future objectives of the business and the strategies needed to get there, a bit like a road map for the business. It can cover things like the finances needed, marketing plans and can be shared with investors or partner organisations. Business plans usually cover a period of time, like a 3 or 5 year plan.

Competence

Proven ability to use knowledge, skills and personal, social and/or methodological abilities in work or study situations and in professional and personal development.

Circular economy

Economic system designed to minimize waste and maximize resource efficiency. It involves reusing, repairing, and recycling materials and products, reducing resource consumption and pollution, and fostering sustainable production and consumption patterns.

Climate adaptation

Ability of individuals, communities, organizations, and systems to adjust and prepare for the impacts of climate change. It involves developing strategies, infrastructure, and policies to mitigate risks, enhance resilience, and protect natural resources and human livelihoods.

Ecological footprint

Is the measure of the impact of human activities on the environment. It quantifies the natural resources and land area required to sustain an individual, community, or population, considering factors such as energy consumption, waste generation, and carbon emissions. Understanding and reducing our ecological footprint is essential for promoting environmental awareness and sustainable living.

ECVET points

Numerical representation of the overall weight of learning outcomes in a qualification and of the relative weight of units in relation to the qualification.

Entrepreneurship

Is the competence to act upon opportunities and ideas that solve problems, influence change, and transform them into value for others by running a business to generate profit.

Environmental awareness

Being conscious of environmental issues, such as climate change, pollution, deforestation, and species extinction, and their potential consequences for ecosystems, biodiversity, and human well-being. It includes adopting environmentally friendly behaviours and making conscious choices to minimize environmental harm, conserve resources, reduce waste, and promote sustainability.

Environmental stewardship

It refers to the responsible and ethical management of natural resources and the environment. It involves adopting practices that minimize harm to ecosystems and promote their long-term health and sustainability. Environmental stewards are individuals, organizations, or communities that take actions to protect and restore ecosystems, reduce pollution, conserve resources, and raise awareness about environmental issues. Embracing environmental stewardship is key to fostering a collective sense of responsibility and ensuring a healthy planet for future generations.

Fungal silviculture

Practice of incorporating fungi into silvicultural systems to enhance forest health, productivity, and ecosystem functions. It involves intentional management and cultivation of symbiotic relationships between trees and fungi, particularly mycorrhizal fungi, which form mutualistic associations with tree roots.

Fungipreneurs

Term that combines two words "Fungi" + "Entrepreneur" and it is here used to refer to individuals who are involved in entrepreneurial activities related to mushrooms. These can include cultivation, production, processing, and marketing of fungi and fungal-based products.

Green skills

Specific knowledge, abilities, and competencies that are necessary for individuals to contribute to the transition towards a green and sustainable economy.

Knowledge

Outcome of the assimilation of information through learning: the body of facts, principles, theories, and practices that is related to a field of work or study. In the EQF context, is described as theoretical and/or factual.

Learning outcomes

Statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills, and attitudes.

Learning unit

Unit is a component of a qualification or competence profile, consisting of a coherent set of knowledge, skills and attitudes that can be assessed and validated. Units enable progressive achievement of qualifications through transfer and accumulation of learning outcomes. They are subject to assessment and validation which verify and record that the learner has achieved the learning outcomes expected.

Mycology

Science of study of fungal diversity, their ecological roles, interactions with other organisms, applications in medicine and industry, and cultivation techniques for various purposes.

Mycotourism

An important market niche where includes promoting environmental conservation, fostering appreciation for fungal biodiversity, supporting local communities through sustainable tourism practices, and encouraging responsible foraging and ethical harvesting of mushrooms.

Medicinal mushrooms

Mushrooms that contain bioactive compounds with therapeutic properties and benefits for human health and can be used for the creation of new business ventures.

Pitch

A pitch is a type of short presentation that informs the audience about the details of a business that has an aim or function. This could be to provide information that will help people decide. There is usually an action request as a result of a pitch.

Social entrepreneurship

Is an approach by individuals, groups, start-up companies or entrepreneurs, in which they develop, fund, and implement solutions to social, cultural, or environmental issues.

Social impact

The social impact can be defined as the difference that your organisation will make. This could be the improvement to your beneficiaries and/or environment beyond. An example of this could be an improvement in wellbeing, reducing isolation, building a sense of community, reducing pollution or people getting fitter.

Social inclusion

It refers to the process of ensuring that all individuals, regardless of their backgrounds, identities, or circumstances, have equal opportunities to participate in society. It aims to address and overcome social barriers, discrimination, and exclusionary practices that prevent certain groups from fully engaging in economic, political, cultural, and social activities.

Sustainability Literacy

Knowledge and understanding of sustainability principles, concepts, and practices. It involves awareness of the environmental, social, and economic dimensions of sustainability, as well as the ability to critically analyse and make informed decisions towards a more sustainable and equitable future.

Vulnerable groups

It refers to individuals or communities that are at a higher risk of experiencing social, economic, or physical disadvantages and are more susceptible to marginalization, discrimination, and exclusion.

References

Boddy, L., & Watkinson, S. (2019). *Fungi in a Changing World: Global Perspectives on Fungal Ecology and Conservation*. Cambridge University Press.

CEDEFOP (2021). Digital skills: Challenges and opportunities
Retrieved from <https://www.cedefop.europa.eu/en/data-insights/digital-skills-challenges-and-opportunities>

CEDEFOP (2023). Forecasting skills for a green future.
Retrieved from www.cedefop.europa.eu/en/news/forecasting-skills-green-future

Europe Union. Compare national qualifications frameworks across Europe. Information about national qualifications frameworks and qualification levels.
Retrieved from www.europa.eu/europass/en/compare-qualifications

Europe Union. Description of the eight EQF levels.
Retrieved from www.europa.eu/europass/en/description-eight-eqf-levels

EPALE (2020). OER: Digital Skills & Competences for Adult Learners.
Retrieved from <https://epale.ec.europa.eu/en/blog/oer-digital-skills-competences-adult-learners>

Gange, A. C., & Boddy, L. (Eds.). (2018). *The Fungal Community: Its Organization and Role in the Ecosystem* (4th ed.). CRC Press.

IPCC. (2018). Global Warming of 1.5°C. Retrieved from www.ipcc.ch/sr15/

Martinez de Arano, I., Maltoni, S., Picardo, A., Mutke, S., et al. (2021). Non-wood forest products for people, nature and the green economy. Recommendations for policy priorities in Europe. Recommendation for policy priorities in Europe. A white paper based on lesson learned from around the Mediterranean. EDDI and FAO, Barcelona.
DOI: <https://doi.org/10.36333/k2a05>

Niven, P. R., & Lamorte, B. (2016). *Objectives and key results: Driving focus, alignment, and engagement with OKRs*. John Wiley & Sons.

Oria de Rueda et al, 2007. Hongos y setas. Tesoro de nuestros montes. Editorial Calamo.

Punie, Y., editor(s), Redecker, C., European Framework for the Digital Competence of Educators: DigCompEdu. Publications Office of the European Union, Luxembourg, 2017,
Retrieved from: <https://publications.jrc.ec.europa.eu/repository/handle/JRC107466>

Schultz, P. W. (2014). Strategies for promoting proenvironmental behavior: Lots of tools but few instructions. *European Psychologist*, 19(2), 107–117
DOI: <https://doi.org/10.1027/1016-9040/a000163>

Sharpe, B., Hodgson, A., Leicester, G., Lyon, A., & Fazey, I. (2016). Three horizons: a pathways practice for transformation. *Ecology and Society*, 21(2).

Sparviero, S. (2019). The case for a socially oriented business model canvas: The social enterprise model canvas. *Journal of social entrepreneurship*, 10(2), 232-251.

Steg., L. A Review of Intervention Studies Aimed at Household Energy Conservation: *Journal of Environmental Psychology* 25(3):273-291
DOI: [10.1016/j.jenvp.2005.08.002](https://doi.org/10.1016/j.jenvp.2005.08.002)

Vandor, P., Millner, R., Hobodites, F., Matzawrakos, M., & Winkler, M. (2022). Austrian Social Enterprise Monitor 2021/2022: Status quo und Potentiale von Sozialunternehmen in Österreich. Kompetenzzentrum für Nonprofit-Organisationen und Social Entrepreneurship.

Wagenblatt, T., & Wagenblatt, T. (2019). Product Development: The Essential Part of Your Software Product Manager Role. *Software Product Management: Finding the Right Balance for YourProduct Inc.*, 227-314.

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