Recovery after Covid-19 and meeting the challenges of the European Green Deal for futureproofing tourism SMEs

European Report 2022

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CREDinGREEN

Responding to tourism market changes caused by Covid-19 and the EU Green Deal through micro-credential-certified upskilling of SME tourism managers

Project Number: 2021-1-DE02-KA220-000029979

European Report 2022

How C-19 and the EC's Green Deal policy are changing tourism behaviour in Europe and how services, knowledge, and skill sets of tourism managers need to adapt

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List of Abbreviations

C-19 - Covid

DMO - Destination Management Organisation

EADTU - European Association of Distance Teaching Universities

EGD - European Green Deal

EQF - European Qualifications Framework

ETC - European Travel Commission

ETS - Emission Trading System

EU - European Union

GHG - Greenhouse gases

HE - Higher Education

MCs - Micro-credentials

SDGs - Sustainable Development Goals

SMEs - Small and medium enterprises

TBL - Triple Bottom Line

TTT - Train the Trainer

VET - Vocational Education and Training

WTO - World Tourism Organisation

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Introduction

CREDinGREEN is a European partnership that integrates tourism expertise from industry and education, from six European countries, collaborating on an innovative and flexible training program that enables company managers and their staff to embrace the significant long-term challenges facing the tourism sector posed by climate action and the aftermath of the Corona pandemic. This 2-year cooperation project is co-funded by the EU Commission through the Erasmus+ programme.

The project aims to create a broad awareness regarding the massive changes that will occur in the tourism industry within the next few years, in the transition of economies to a more climate-friendly Europe. As well, the project explores so far, the tourism industry and saw C-19 as an opportunity, as a recovery period that was optimal for learning and reflection, on more innovative and sustainable concepts and solutions, for the future years. The developed tools are offering support to the tourism stakeholders, responding to their needs to adjust to the new EU goals, through new training sessions, based on innovative educational concepts, that will allow them to respond quickly to the recent market changes. The micro-credentials concept will be introduced to a broad professional audience, in national working groups with education experts (HE and VET level), business representatives, political stakeholders, and policymakers.

Additionally, the findings will be integrated into a green paper of recommendations for educational and training policymakers (CREDinGREEN Policy Paper), that will support a smoother integration of the micro-credentials in VET and the promotion of the EU Green Deal, through innovative training programs in tourism.

The connection of the micro-credentials with the real needs of the tourism industry is supported by the CREDinGREEN 3 in 1 Survey, research that has integrated different research tools and research sources, for a reliable result regarding the current needs in the EU tourism organisations.

1. Background and intention of the report

The report presents the results of the research that was undertaken in the framework of the first work package of the CREDinGREEN project. There were combined three different tools - desk research, online survey, and expert interviews - aiming to identify and understand the expected changes in customer behaviour, resulting from major challenges: Corona pandemic and the demands on the European tourism economy, postulated by the Commission in the Green Deal.

The survey searched for answers to the question of how Green Tourism will develop, what impact this will have on SMEs, what educational content can be derived from this and how it can be integrated in micro-credential-based education in individual countries. At the same time, the conducted survey and expert interviews looked closer to the derivations for the future strategic and operational orientations of SMEs in the tourism industry, in the partner countries.

The starting point was the desk research on relevant primary and secondary literature, that has created the foundation for the future developed tools. The survey was designed with three blocks. The first one has investigated the impact of the Coronavirus pandemic on tourism activities, focusing on the behavioural changes of the clients, and how these changes will influence/affect in the future the activity of tourism companies. The second block approached the green deal and sustainable tourism, as solutions for the future development of tourism. As well, the questions tried to identify if the sustainability principles are already being implemented in day-by-day activities of tourism organisations. In this section, we investigated as well if the companies are aware of the concept of “green deal”, if they have already undertaken some concrete actions in this direction and if they intend to make changes in their future actions to be more `green`. The last section deals with the professional training of the employees in tourism as a tool to implement the strategies and to reach the goals with economic and ecological benefits. In order to test the coherence and the consistence of the developed tool, a pilot test of the questionnaire was undertaken in all partner countries, as a quality check. EU-wide Survey of Tourism Sector was carried out in the first half of the year 2022, involving 339 tourism enterprises mainly from the project partner countries: Austria, Germany, Italy, Portugal, and Romania. The compiled responses have offered interesting perspectives on the industry ‘expectations and insecurities, as well on the expectations related to the implementation of the EU Green Deal.

The present report compiles in a structured form the results of the survey, but as well the outcomes of interviews undertaken with the experts from all partner countries, on both key-areas: EU Green Deal and Micro-credentials in tourism. The first chapter is clarifying the general framework of the European Green Deal, using the recent literature and the recent EU regulations. The findings of the survey are presented in the second chapter, the data and the statistical analysis being included in the Annex 2a and 2b. The topics of the EU Green Deal and Micro-credentials are approached in the third and fourth chapter, bringing to light the results of the interviews realised on both topics, with experts from all five partner countries. In the final chapter (number six), a series of recommendations are formulated, to underline the future call of action and the topics that should be approached in the training that will be developed in the project activities.

2. Overview of literature research

2.1. General framework of the European Green Deal

Faced with climate change, in 2019 the EU launched the European Green Deal (EGD) to transform the EU into a modern, resource-efficient, and competitive economy. All 27 EU Member States have committed to climate action and achieving a climate-neutral continent by the year 2050, and have pledged to reduce emissions by at least 55% by 2030. The Green Deal is described as "an integral part of the Commission's Strategy to implement the United Nations 2030 Agenda and the sustainable development goals" (European Commission. 2019). The European Green Deal is one of the main priorities for the period 2019-2024, together with 5 other important aims: "A Europe fit for the digital age", "An economy that works for people", "A stronger Europe in the world", "Promoting our European way of life", "A new push for European democracy". A dedicated web page for European Green Deal (A European Green Deal | European Commission (europa.eu)), is presenting the benefits, the action, the timeline, being in the same time an invitation for active involvement in the achievement of these ambitions goal, "no net emissions of greenhouse gases by 2050". The benefits of the European Green Deal are presented, together with the actions and the timeline aimed by the Commission for the implementation. The actions are structured in the sectors relevant to the EU Green Deal implementation, such as REPowerEU, Energy, Agriculture, Industry, Environment and oceans, Climate, Transport, Finance and Regional Development, Research and Innovation, explaining how each sector will be connected to the implementation of the European Green Deal objectives. Each link is leading to dedicated web pages that are offering relevant information for each action field.

Nevertheless, a call to action, with concrete steps that could be done by all citizens, is presented in the section "Delivering the European Green Deal". Under the page content, the main chapters are: "Transforming our economy and societies", "Making transport sustainable for all", "Leading the third industrial revolution", "Cleaning our energy system", "Renovating buildings for greener lifestyles", "Working with nature to protect our planet and health", "Boosting global climate action" and "Key steps". Included in each point are additional explanations on the importance of the key principles as well the steps that will be undertaken by the EU Commission, for reaching each objective.

The most important document is the "Communication from the Commission to the European Parliament, the European Council, The Council, The European Economic and Social Committee and the Committee of the Regions. The European Green Deal", issued on 11.12.2019. The guidelines issued by European Commission are general recommendations for the implementation of the general strategic directions. The "Factsheets on the European Green Deal" were developed starting in 2019 and presented synthetically, the most important information on this highly important subject is:

- The European Green Deal in a nutshell;
- What's in it for me?
- What if we do not act?
- The EU's track record on climate action;
- The EU as a global leader.

As well, a list of thematic factsheets is displayed, as a handy support for the broad information of stakeholders of all kinds:

- The Just Transition Mechanism: making sure no one is left behind;
- Investing in a climate-neutral and circular economy;
- EU-funded projects for green the economy;
- A European Climate Law;
- A Climate Pact;
- Circular Economy action plan;
- EU Biodiversity Strategy for 2030;
- From Farm to Fork;

- European year of rail 2021;
- Factsheet: Renovation wave;
- Methane Strategy;
- Chemicals strategy for sustainability;
- A new European Bauhaus;
- Offshore renewable energy.

Some of the most relevant documents issued are presented below:

Table 1 The synthesis of the main political documents and policies regarding the European Green Deal

Year of publication	Issuing organisation	Title and description
2019.12.11	European Commission	Communication from the Commission to the European Parliament, the European Council, the European economic and social committee, and committee of the regions. The European Green Deal describes the various elements of EGD C-19 and explain the urgency of the application of the Green Deal principles. Presents "an initial roadmap of the key policies and measures needed to achieve the European Green Deal" (p.2). It stipulates that "all EU actions and policies will have to contribute to the European Green Deal objectives". (https://sustainabledevelopment.un.org/post2015/transformingourworld, p.3).
2019.12.11	European Commission	Annex to the "Communication from the Commission to the European Parliament, the European Council, the European economic and social committee, and the committee of the regions. The European Green Deal" Describes steps and milestones that should be achieved by the Commission and the member states, for the transformation of the economy with the aim of climate neutrality. The actions are structured on the main pillars of EGD: "Climate action; Clean, affordable, and secure energy; Industrial strategy for a clean and circular economy; Sustainable and smart mobility"; Greening the Common Agricultural Policy/ "Farm to Fork" Strategy; Preserving and protecting Biodiversity; Toward a zero-pollution ambition for a toxic free environment; "Mainstreaming sustainability in all EU policies", The EU as a global leader; Working together – a European Climate Pact.
2019.12.	European Commission	What if we do not act? The European Green Deal The fact sheet explains the "cost of non-action" and it is a call to action. The negative effects that could occur in the future are pollution, heat and drought, flooding, and a negative impact on the economy. The indicators presented are describing severe changes, that could be stopped by the EGD interventions: - 400.000 premature deaths/year due to air pollution;

Year of publication	Issuing organisation	Title and description
		- 90.000 annual deaths as a result of heatwaves - 660.000 additional asylum applications per year in the EU at a 5°C temperature increase; - 16% of species at risk of extinction at 4.3°C temperature increase; - 40% less available water in southern regions of the EU; - 2,2 million people exposed to coastal inundation each year; half a million people are exposed to river flooding each year; - 190 billion EURO annual losses projected for a 3°C increase in global average temperature; - climate change could lead to a 20% food price rise in 2050; - potential increase in the number of people at risk of being forced from their homes by river flooding, to 50 million a year; - potential increase of 20% in the food price in 2050; - economic costs of heat-related mortality could amount to more than 40 billion EURO per year. (European Commission, Directorate General for Communication, 2019)
2019.12	European Commission	What is the European Green Deal A leaflet that presents the main advantages of the implementation of the EGD. The information relates the future actions as well, structured in the fields of climate, energy, buildings, and industry. The ambitious vision of the EU is presented as well, as follows: - Become climate-neutral by 2050; - Protect human life, animals, and plants by cutting pollution; - Help companies become world leaders in clean products and technologies; - Help ensure a just and inclusive transition. (European Commission, Directorate General for Communication, 2019)
2020.01.14	European Commission, January 2020	Investing in a climate-neutral and circular economy. The European Green Deal A factsheet that explains the source of investment, for the EU to become “the first climate-neutral continent by 2050”. The European investment plan will combine: “-capital from EU and national budgets; -public and private investments; -additional measures to facilitate and boost green public and private investment; -attractive investment conditions; -technical assistance to help investors in selecting sustainable projects”. (https://ec.europa.eu/commission/presscorner/detail/en/fs_20_40)
2021.07.14	European Commission	Architecture Factsheet The document is presenting the “architecture” of all pillars that are comprised of the EGD. It articulates the vision: “The EU will reduce its net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels, as agreed in the EU Climate Law. On 14 July 2021, the Commission presented proposals to deliver their targets and make the European Green Deal a reality”.

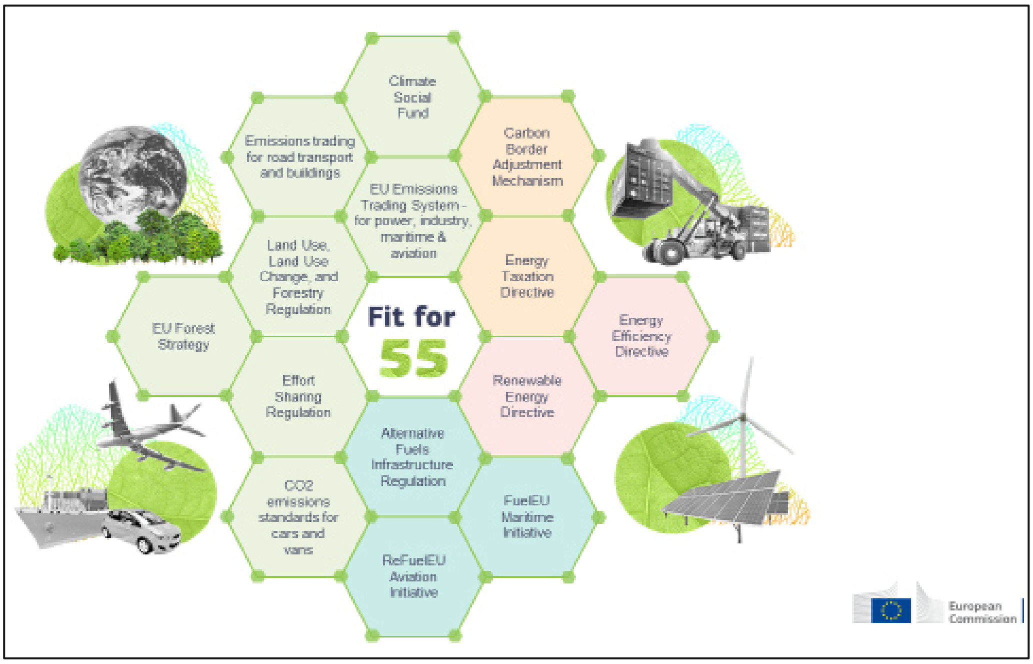
Source: own elaboration.

The full commitment of the EC is expressed as well by the inclusion of special funding of research projects that will address the topic of the European Green Deal (European Green Deal funding call). Under the "Research and Innovation" web page it is a dedicated strategic action, called "Research and innovation for the European Green Deal", coordinated by the Green Deal Projects Support Office. The Office was established "to support the projects funded under the Green Deal Call and to help facilitate collaboration, share best practices and increase their impact". Until July 2022, there were financed 73 research and innovation projects, relevant to the acceleration of just and sustainable transitions to a climate-neutral Europe by 2050. Five working groups were constituted as well, to raise awareness of the projects and facilitate collaboration and knowledge sharing: Climate Change and Biodiversity (1), Clean Energy (2), Urban Environment and Mobility (3), Food and Health (4), Knowledge and Citizens (5).(https://ec.europa.eu/research-and-innovation/en/strategy/strategy-2020-2024/environment-and-climate/european-green-deal/green-deal-projects-support).

The formulation of the main objectives was followed in 2021 (July 14) by the adoption by the EC of a package of legislative proposals "Fit for 55", in the frame of the Europe Green Deal, to strengthen the EU's position as a global climate leader. The aim of the package was "to modernize existing legislation in line with the EU's 2030 climate target and introduce new policy measures to help bring about the transformative changes needed in the economy, society and industry to achieve climate neutrality by 2050 and to support it, reduce net emissions by at least 55% (compared to 1990) by 2030." (European Commission, 2021b).
The FIT for 55 package comprises a 'set of inter-connected' proposals, meant to drive all the efforts to the goal of "ensuring a fair, competitive and green transition by 2030 and beyond." The package is consolidating eight existing chapters of legislation and presents five new initiatives, across a collection of policy areas and economic sectors: climate, energy and fuels, buildings, land use, and forestry. According to the EC

document, "the chosen policy mix is, therefore, a careful balance between pricing, targets, standards, and support measures". The picture below (Figure no.1) is presenting the proposed key intervention areas, that will change the economic environment of the EU in the coming years.

Fig. no. 1 Key intervention areas



Source: European Commission, 2021. Communication from the Commission to the European Parliament, the Council, the European Economic, and Social Committee, and the Committee of the Regions. "Fit for 55": delivering the EU's 2030 Climate Target on the Way to Climate Neutrality), p. 14. Retrieved from https://ec.europa.eu/info/sites/default/files/chapeau_communication.pdf

According to KPMG (KPMG International. 2022), "The green transition is now sealed into EU policy; which calls for many measures designed to green the EU; these include banning the production of new internal combustion engine cars by 2035, more types of fuel being covered by a carbon tax and an enlarge emissions trading scheme that plans to impose a carbon price on additional carbon intensive sectors such as road transport and maritime".

The ‘Fit for 55’ package includes regulations, strategies, and funding sources for all nine major policy areas of the European Green Deal. Subordinated with the overall target and sectoral approach, the objectives of this policy plan include (KPMG. 2022, p. 7):

- application of emissions trading to new sectors such as road transport and a tightening of the existing EU ETS;
- increased use of renewable energy;
- a faster roll-out of low-emission transport modes and the infrastructure and fuels to support them;
- alignment of taxation policies with the European Green Deal;
- measures to prevent carbon leakage;
- decarbonization with a social dimension with the Social Climate Fund.

In the table below (Table 2) there are the main regulations and restrictions, structured on the main major policies, with the impact played, according to the description realized by KPMG (2022, p.8):

- EU Emission Trading System (EU ETS);
- Carbon Border Adjustment Mechanism (CBAM);
- Energy Taxation Directive (ETD);
- Renewable Energy Directive (RED);
- Energy Efficiency Directive (EED);
- Third Energy Package for Gas;
- European Climate Law;
- Regulation on reducing CO2 emissions from vehicles;
- Directive on the deployment of alternative fuels infrastructure;
- Regulation on batteries and waste batteries;
- Regulation on Guidelines for trans-European energy infrastructure;
- Regulation on the trans-European transport network;
- Directive on the energy performance of buildings;
- Effort Sharing Regulation (ESR);
- Revision of the regulation on the Inclusion of GHG Emissions and Removals from land use, land use change, and forestry (LULUCF).

Table 2 Main regulations and restrictions associated with the implementation of the European Green Deal

Regulation	Restrictions associated with the implementation of the European Green Deal
EU Emission Trading System (EU ETS)	— Designed to trigger a shift from conventional fuels' energy; generation, polluting transport and industry, to a climate-neutral future; — Companies receive (free allocation) or buy (auctioning) emission allowances that they can trade with each other; — Limited number of allowances; — Trading brings flexibility that can help ensure emissions are cut where it costs least to do so; — Robust carbon price promotes investment in clean and low-carbon technologies.
Carbon Border Adjustment Mechanism (CBAM)	The price of imports needs to reflect embedded emissions. — Requirement that certain covered goods imported into the EU will need to surrender CBAM emission certificates for the embedded emissions in the imported goods — mirroring the existing ETS for such goods produced in the EU; — Designed to complement the withdrawal of free permits for the covered goods being produced within the EU; — Intended to provide an ongoing even playing field between EU and non-EU high-emission products, while striving to ensure emissions are priced consistently across the economy; — Designed to comply with WTO rules and other international obligations of the EU to help minimize trade disputes and legal uncertainty.
Energy Taxation Directive (ETD)	— The directive lays down the EU's common framework for the taxation of electricity and energy products used as motor fuel or heating fuel; — Revision is meant to align with the 2030–2050 climate targets. The July 2021 revision of the directive promises to: — Address the harmful effects of tax competition by allowing member states to secure revenues by shifting from taxes that are detrimental to growth (such as those on labour) to green taxes that are aligned with the EU's climate and energy policies; — Remove national exemptions and reductions for fossil fuels; — Set minimum tax rates that are linked to the energy content and environmental impact of fuels; — Correct incentives by bringing the aviation and maritime sectors into the scope of energy taxation; — Deliver targeted exemptions and other support mechanisms for vulnerable households; — In summary, the tax base will be broadened and a new structure of tax rates that applies the highest rates of tax to the most polluting fuels will be put in place.

Regulation	Restrictions associated with the implementation of the European Green Deal
Renewable Energy Directive (RED)	Interconnection of gas market and energy and climate goals: — Part of the Clean energy for all Europeans package; — Sets binding renewable energy target for the EU for 2030 of at least 32%; — Lays down measures for different sectors to achieve it; — Provisions for enabling self-consumption of renewable energy — Increased 14% target for the share of renewable fuels in transport by 2030; — Strengthened criteria for helping to ensure bioenergy sustainability; — Member states are to draft national energy and climate plans that outline the measures that will be taken to meet the 2030 renewable energy targets.
Energy Efficiency Directive (EED)	— Part of the Clean energy for all Europeans package; — Sets binding measures to reach energy efficiency at all stages of the energy chain, including energy generation, transmission, distribution, and end-use consumption; — Sets binding energy efficiency target for 2030 of at least 32.5%, relative to 2007 modelling projects for 2030; — EU countries would have to achieve new energy savings of 0.8% each year for the 2021–2030 period, except Cyprus and Malta, which will have to achieve 0.24% per year.
Third Energy Package for Gas	Interconnection of gas market and energy and climate goals. — In light of the increased reduction targets of 55% by 2030, it is essential to align the gas market regulatory framework with the 2030–2050 energy and climate goals; — Revision of the legislation is expected to include new rules on the market entry of renewable and low-carbon gases and integrate actions across the Energy System Integration Strategy and Hydrogen Strategy; — Changes to Directive 2009/73/EC concern common rules in the market for natural gas; — Regulation 715/2009/EC concerns conditions for access to the natural gas transmission networks.
European Climate Law	Binding emissions targets. — The European Climate Law enshrines the 2050 climate neutrality into legally binding targets of net zero GHG emissions by 20502030 targets: 55% cut compared to 1990s; — 2050 targets: climate neutral.
Regulation on reducing CO emissions from vehicles	The automotive industry facing new emissions requirements. — At least 30 million zero-emission cars plan to be in operation on European roads by 2030; — Only zero-emission cars are to be registered from 2035; — Road transport to be covered by EU ETS from 2026; — It sets an EU fleet-wide target of 95 g CO_2/km for the average emission of new passenger cars and a target of 147 g CO_2/km for

Regulation	Restrictions associated with the implementation of the European Green Deal
	new light commercial vehicles registered in the EU; — Regulation is binding in its entirety and directly applicable in all member states.
Directive on the deployment of alternative fuels infrastructure	National Policy Frameworks (NPFs). — Countries to develop NPFs for developing publicly available refuelling and recharging points for alternative fuel vehicles and vessels; — Improve coordination of alternative fuel infrastructure development; — Set out minimum requirements for building-up alternative fuel infrastructure, including recharging points for electric vehicles.
Regulation on batteries and waste batteries	By replacing the Batteries Directive (last amended in 2018), the new regulation will: — Strengthen the functioning of the internal market for batteries (including products, processes, and waste batteries); — Help ensure a level playing field through a common set of rules; — Promote the circular economy by closing the materials loop; — Help reduce the environmental and social impacts of batteries throughout their life cycle.
Regulation on guidelines for trans-European energy infrastructure	— The regulation establishes a cross-border energy infrastructure planning; — Brings stakeholders together to implement PCIs; — Helps integrate renewable energy; — Contributes to sustainability; — Aims to give member states access to at least three gas supply; sources or the global liquefied natural gas market.
Regulation on the trans-European transport network	— Regulation addresses the implementation and development of open-wide network or railway lines, roads, inland waterways, maritime shipping, routes, ports, airports, and railroad terminals; — Supports the application of innovation and new technologies to modes of transport; — Identifies PCIs; — Specifies requirements to be complied with for the management of the infrastructure of the TEN-T network; — Provides measures for implementation.
Directive on the energy performance of buildings	Regulatory and financing measures for building renovation. — Revision is part of the Clean energy for all Europeans package; — General framework for a methodology for calculating the integrated energy performance of buildings; — Application of minimum requirements to the energy performance of new buildings and units; — Plans for increasing the number of nearly zero-energy buildings; — Energy certification; — Inspection of heating and air-conditioning systems; — Independent control systems.
Effort Sharing Regulation (ESR)	Emissions from various sources. — Regulates emissions from non-ETS, non-LULUCF sectors — industry,

Regulation	Restrictions associated with the implementation of the European Green Deal
	transport, buildings, agriculture, and waste, which account for 60 percent of total domestic EU emissions; — Excludes: aviation, international maritime shopping, LULUCF; — ESR establishes binding annual GHG emission reduction targets for member states for the 2013–2020 and 2021–2030 periods; — The EC will be empowered to adopt implementing acts setting out emission allocations for the 2021–2030 period in terms of tonnes of CO_2.
Revision of the regulation on the Inclusion of GHG Emissions and Removals from LULUCF	Binding targets for member states to remove GHG from the atmosphere. — Carbon removals by natural sinks equal to 310 million tonnes of CO_2 emissions by 2030; — Member states have to care for and expand carbon sinks to meet national targets; — By 2035 the EU shall reach climate neutrality in the land use, forestry, and agriculture sectors, including non-CO_2 agricultural emissions (e.g., livestock).

Source: own elaboration with information from KPMG International. (2022). European Green Deal Policy Guide. Focus on the 'Fit for 55 package'.
Retrieved from https://home.kpmg/xx/en/home/insights/2021/08/delivering-the-european-green-deal-and-fit-for-55-package.html

Amendments of the two major directives that are governing the Energy system, with potentially significant impacts on the tourism sector and connected industries, are presented below:

Table 3 The two amendments to the European Energy system

Amendment	Explanation
Renewable Energy Directive	Under the new directive, RED II, innovative measures will be introduced to exploit all possible renewable energy development opportunities. These include: — Specific targets proposed for renewable energy use in transport, heating and cooling, buildings, and industry. Increasing focus away from classic renewable energy sources (e.g., solar and wind) to new types of energy (e.g., hydrogen, biofuels, and other renewable fuels); — Convert into EU law some of the concepts outlined in the energy system integration and hydrogen strategies (e.g., integrated energy system); — Biomass, especially the use of wood, will no longer be supported by the EC. Instead, it will be included in specific prohibitions in national incentives; — To support renewables deployment, member states will remove barriers to permitting procedures and Power Purchase Agreements (PPAs) and further develop work on guarantees of origin.
Energy Efficiency Directive	The EED revision includes the following: — Stepping up actions and addressing gaps for energy efficiency; — Reviewing the adequacy of the directive and accounting for the higher climate target and recent Commission initiatives, such as the Energy System Integration Strategy; — Implementing the energy savings obligation for the 2021–2030 period; — Revising metering and billing provisions for thermal energy; — Improving efficiency in heating and cooling.

Source: own elaboration with information from KPMG International. (2022). European Green Deal Policy Guide. Focus on the 'Fit for 55 package'. Retrieved from https://home.kpmg/xx/en/home/insights/2021/08/delivering-the-european-green-deal-and-fit-for-55-package.html

The package 'Fit for 55' will impact in different ways the future decade all economic sectors, in the implementation of the activities for the environmental transition. The citizens and stakeholders should be informed about the major changes that will occur and impact the different industries, including tourism.

The CREDinGREEN project aim is to facilitate to tourism industry planned changes and to offer support in the adjustment process, through training and marketing intelligence for a clear overview of which policies may affect tourism businesses, we have selected the relevant fields from a more extensive chart developed by KPMG, based upon the Impact Assessments realized by the EC with each policy change (KPMG. 2022, p. 23).

Table 4 Areas of intervention for the Fit for 55' package

Areas of Intervention	Revision of the EU Emissions Trading System (EU ETS), including maritime, aviation, and CORSIA as well as a proposal	Carbon Border Adjustment Mechanism (CBAM) and a proposal for CBAM as its own resource	Effort Sharing Regulation (ESR)	Revision of the Energy Tax Directive (ETD)	Amendment to the Renewable Energy Directive (RED) to implement the ambition of the new 2030 climate target	Amendment of the Energy Efficiency Directive (EED) to implement the ambition of the new 2030 climate target	Revision of the Regulation on the inclusion of GHG emissions and removals from land use, land use change, and forestry (LULUCF)	Revision of the Directive on the deployment of alternative fuels infrastructure	Revision of the Regulation setting CO_2 emission performance standards for new passenger cars and new light commercial	Revision of the Energy Performance of Buildings Directive (EPBD)	Revision of the Third Energy Package for Gas (Directive 2009/73/EU and Regulation 715/2009/EU) to regulate competitive	Regulation on Batteries and Waste Batteries	Regulation on Guidelines for Trans-European Energy Infrastructure	Regulation on the Trans-European Transport Network
Energy	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓		
Government and Public Sector					✓	✓	✓	✓	✓	✓			✓	✓
Agriculture							✓	✓	✓					
Life Sciences	✓			✓	✓	✓	✓	✓	✓		✓			
Infrastructure	✓	✓		✓	✓	✓		✓	✓	✓			✓	✓
Real Estate	✓	✓			✓	✓				✓				
Transport and Logistics	✓				✓			✓	✓		✓	✓	✓	✓
Global Industries (Healthcare, Infrastructure, Government, Life Sciences)	✓	✓		✓	✓	✓				✓		✓	✓	✓

Source: KPMG International. (2022). European Green Deal Policy Guide. Focus on the 'Fit for 55 package'. p. 23. Retrieved from https://home.kpmg/xx/en/home/insights/2021/08/delivering-the-european-green-deal-and-fit-for-55-package.html

To overcome the challenges that will stand in front of the companies, and to help ease the financial pressure on member states, extraordinary financial support was planned, through the Recovery and Resilience Facility and the Just Transition Mechanism (https://www2.deloitte.com/lt/en/pages/consulting/topics/Fit-for-55-package.html).

2.2. Sustainable tourism - general approach

We are living in a post-pandemic time and can now look back on this unexpected and unpleasant experience with objectivity and criticism. Tourism was one of the most affected economic activities with a real collapse of 82% in 2020 compared with 2019 (European Travel Commission [ETC], 2021). After the restrictions were released step by step, there was a big wish to travel, but not in the same conditions and with the same rules as before C-19. The world changed and with it, tourism changed, the process being ongoing and not completely managed at macro and microeconomic levels.

According to the studies and research made until 2019, tourism activities, including the basic and the connected ones were an important source of pollution, contributing to 8% of total CO_2 emissions. If the tourism industry will continue to grow, it will exceed other industries and become a major actor in global pollution (Cheng et al, 2018). The global C-19 pandemic, with all its negative impact, represents the starting point for a new era in tourism development, shifting to a more sustainable approach, and giving more value to local initiatives.

The last 30 – 40 years were characterized by the publication of an impressive number of books, scientific papers, studies, proceedings, and other categories of information having as subjects the environment and the sustainability concept. The essence of the concept is the fact that we have to take care of the environment not only due to its intrinsic value but to preserve resources for future generations. The solution is a rethinking of the whole process of economic development on two pillars - economic performance and the forecast of its impact on the environment. Bearing in mind this dual manner of thinking, environmental issues are not the final problem that needs a solution but is an integral part of the whole process (Albu, 2017).

While the global concern for the environment developed and the tourism sector expanded, it became clear that there was a need to create a concept with the aim of characterization of the specific actions, measures, initiatives, and strategies adopted for decreasing the negative impact of this economic area to the environment. The definition proposed by WTO for sustainable tourism specifies:

> *`sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems* (WTO, 2001).

The definition highlights that there is a strong connection between the present and the future and we are responsible for our actions for future generations. Tourism depends on the environment's quality, representing tourists' primary attraction. More and more people are aware of environmental pollution and avoid tourist destinations affected by socio-economic activities. In the same line with the definition issued by the WTO, the majority of scientists agree that sustainable tourism development refers to an economic, environmental, and economic manner of development that aims at the continuous improvement of tourists' experience balanced with protecting the environment and respecting cultural and social integrity of local communities (Sharpley, 2000; Verbeek et al, 2011; Yustisia &Theodosia, 2017; Hall, 2011).

Sustainable tourism, also called eco-tourism or green tourism, develops the idea of satisfying current tourists and the tourism industry, and at the same time, protecting the environment and opportunities for the future. Accordingly, sustainable tourism has three dimensions that cover the whole concept (Blamey, 2001):

- it is nature-based
- it is environmentally educated
- it is sustainably managed.

Nature-based is the more obvious characteristic of sustainable tourism, considering that without nature we cannot have any type of tourism. More than that, for sustainable tourism, nature represents the main resource and exactly the preservation of this resource assures a long-time perspective of existence and development.

A special mention we shall make of the educational dimension of sustainable tourism. Direct contact with nature is always a source of education and represents what will often be the primary motivation for undertaking an ecotourism experience. After periods of hard work, a holiday in nature is a source of relaxation, combined with learning new things, enjoying new experiences, admiring beautiful landscapes, and others, all of them representing an added value to the personal knowledge cumulation.

A second function of the educational dimension of sustainable tourism is changing the behaviour of tourists in a pro-environmental way aiming to minimize the negative effects and producing a more environmentally and culturally aware. The scientific literature abounds in studies about tourist behaviour during their holidays, attitudes, motivations, and reactions to different norms and regulations (Ibnou-Laaroussi et al, 2020), (Cheng et al, 2018), (Wang, 2019). Tourists can be educated on how to minimize their impacts while visiting a place based on a code of ethics for tourist conduct. Practically, the tourist will be more careful about what is done during the tourist trips, and what are the alternative routes, sites, or activities with less impact on the environment. We can talk about a shift to more sustainable consumption patterns in tourism services and other additional ones, like transport, purchasing different products and souvenirs, entertainment activities, and others (Purcarea et al, 2022). In addition, the educational dimension of sustainable tourism also involves local communities and tourism service providers. Local communities can be educated on how to preserve their natural resources, use them for local development, including tourism, and how to address the local requirements regarding sustainability with the requirements for high-quality tourism services. By using appropriate strategies, based on the dual approach specific to sustainability, local communities can reach economic and ecological goals for sustainable tourism (Butler, 2000).

The business environment involved in tourism represents another stakeholder targeted by the educational dimension of ecotourism. It includes different sectors which contribute to the tourism service such as: tourism facilities, tour operators, consumers, tourism agents, different industries connected to tourism, local, regional, and national bodies, trainers, and the media (Blamey, 2001). If the network formed by these actors has a proper strategy, based on sustainability principles, there is a big chance to educate all the participants in respecting the environment, and to create an ecosystem with positive effects, both from economic and ecological perspectives. For our project, the educational dimension is very important, especially for the tourism services providers and their specific knowledge about sustainable tourism.

The third dimension of sustainable tourism refers to the management model for sustainably developing tourism. The concept is included in a wider one - sustainable development which covers under a big umbrella the ideal of reconciling different and sometimes opposing values and goals toward a new model of development (Kates et al, 2005). The management model is a holistic one due to the big number of actors involved and their multidirectional connections and influence. The particular features of sustainable tourism refer to (Backman et al, 2001):

- sustainable tourism aims to preserve the environment and the essential ecological processes;
- sustainable tourism is oriented toward the protection of both human heritage and biodiversity;
- this development ensures that productivity can be sustained over the long term for future generations;

- sustainable tourism develops and implements sound environmental policies in all areas of tourism;
- respect the needs and rights of local people;
- carry out practices responsibly and ethically.

Sustainable management in tourism leads to a sum of benefits covering a wide range of areas, as presented in Table 5.

Table 5 Sustainable tourism benefits

Directions	Effect Description
Ecological sustainability of tourism	▪ creates conditions for the decision-making participation of all sectors of society in tourism development, adapted to the carrying capacity of ecosystems; ▪ promotes the importance of natural and cultural resources for the economic and social well-being of the community and contributes to the preservation of these resources; ▪ oversees, evaluates, and manages its effects, thus determining those responsible for the environment; ▪ can promote and ensure environmental protection and responsible travel, and can educate people about environmental sustainability practices; ▪ can help prolong the sustainability of natural resources, in time, so that future generations could enjoy tourism.
Economic sustainability of tourism	▪ creates new jobs directly, in the tourism sector, as well as in other auxiliary sectors; ▪ stimulates profitable national activities: hotels and other accommodation units, restaurants and other food services, transport networks, handicrafts, and guide services; ▪ is a source of foreign exchange earnings for countries, injecting capital and money into the local economies; ▪ diversifies the local economy and, in particular, rural areas, where jobs in the agricultural sector are insufficient.
Social and cultural sustainability of tourism	▪ creates "leisure" facilities that the locals can also benefit from; ▪ carries a spirit of own dignity for the local community and contributes to a better understanding and cultural exchange between peoples; ▪ preserves the identity of the communities, their values, and traditions, keeping them as original destinations; ▪ promotes the cultural values of the world by cherishing them; ▪ reduces the negative social impacts characteristic of over-tourism.

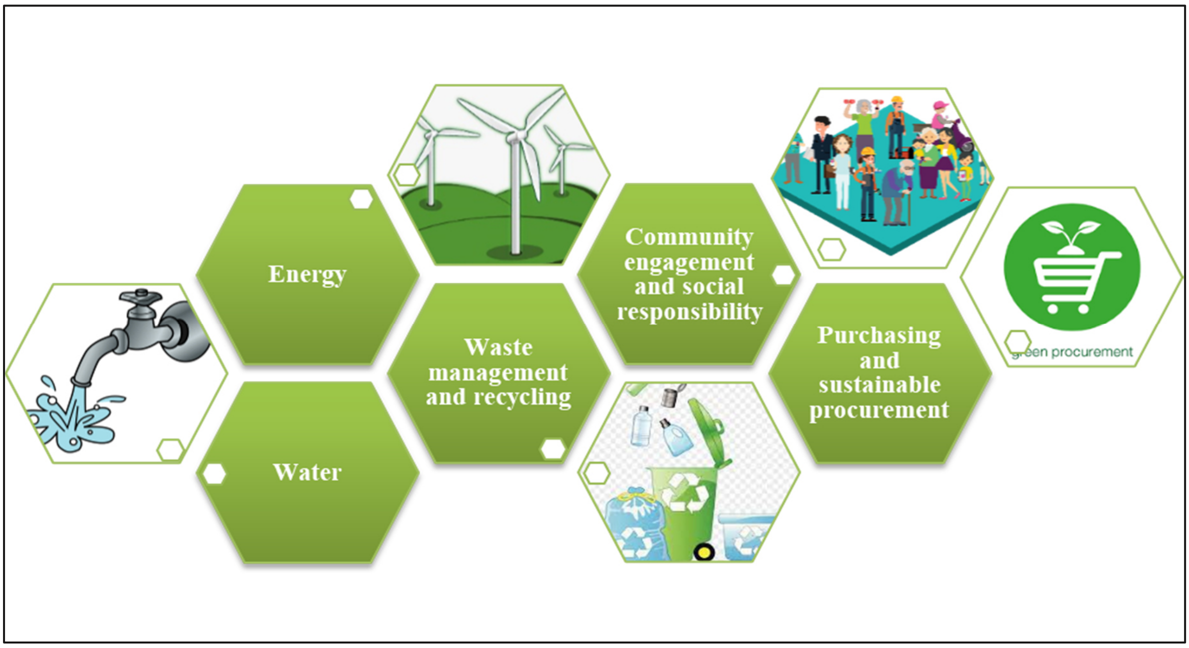
Source: Own elaboration with information from International Finance Corporation. (2017). Twenty Reasons Sustainable Tourism Counts for Development, Tourism for Development Knowledge Series, World Bank, Washington DC. Retrieved from https://openknowledge.worldbank.org/handle/10986/28388; Noordeloos, T. (2018). Sustainable

tourism development in Amsterdam Oud-west. Research in Hospitality Management, 8(2), 133-141. Retrieved from https://www.ajol.info/index.php/rhm/article/view/181482

Of course, there are also barriers and problems associated with sustainable tourism development. One of the most important refers to the additional expenses needed to replace products with ecological ones (e.g., detergents, bleach products, plastic items, and others), shift to more sustainable forms of energy, use local materials for buildings, change the old cars with fewer pollutant ones or with electric cars, and the list goes on. Usually, these are investment expenses and not always are possible for a little tourism facility. Another problem is connected also with money and regards the profits of sustainable tourism; as this type is not mass tourism, the profits are smaller and sometimes are limited in a certain period of the year. Innovative tourism packages focused on the environmental values of the destinations can prolong the tourist season and increase profits.

Concrete implementation of sustainable tourism in a destination or a location needs solutions to concrete and practical problems. Figure no. 2 represents the main factors for the sustainable development of tourism.

Fig. no. 2 Main factors considered in developing sustainable tourism



Source: Own elaboration with information from Destination BC Corp. (2013). Sustainable Tourism. The Essential Guide to Operating an Environmentally Sustainable Tourism Business in BC. Retrieved from https://www.destinationbc.ca/content/uploads/2018/08/TBE-Guide-Green-Sustainable-Tourism-July2013.pdf

Sustainable tourism through its complex activities and interconnected factors is the best example of practical implementation of the concept of the Triple Bottom Line (TBL). Coined for the first time by John Elkington, the concept suggests that companies should measure their performance in three directions: economic, social, and environmental, meaning the 3Ps: profit, people, and planet (Jackson, 2011). The first measurement refers to the traditional way with the profit and loss balance sheet, the second includes the social responsibility assessment, and the third is the measurement of the environmental impact. Only a company that manages its activity in the frame of the TBL concept is taking account of the full cost involved in doing business.

TBL concept is fully integrated into the specific of sustainable tourism. Table 6 summarizes the main features of sustainable tourism in line with the TBL approach.

Table 6 Triple Bottom Line concept applied to sustainable tourism

Economic	Social	Environmental
- Tourism is a product used where it is made; this peculiarity creates direct opportunities for the local development of tourism, but at the same time, creates indirect opportunities for other economic fields connected with tourism. - Sustainable tourism fits very well with small and medium enterprises specifically; the start-up doesn't involve very high costs and the barriers to entry on the market are accessible. - Sustainable tourism is still a labour-intensive activity, although the ITC is adopted and included in almost all activities. It provides a wide range of jobs from high-skilled to unskilled persons, being an opportunity for young people (to get experience, to win money during the tourist season) or for women (to find a job not far away from home). - Sustainable tourism needs different infrastructure facilities such as transport, water supply, energy supply, sanitation, health services, information services, public security, communication, and others. Their development contributes to the improvement of the tourism services quality and the general living standard of locals. - The involvement of managers in supporting sustainable tourism is a key economic feature. Each	- In general, tourism connects travellers with communities. This feature is more evident in sustainable tourism where cultural, historical, religious, folk, and other attractions are the core elements of the tourism packages. - Sustainable tourism provides not only material benefits but also cultural pride. It has the potential to create greater awareness for locals and tourists and to educate them in terms of environmental, cultural, and social items. - Sustainable tourism allows tourists to interact with locals and to be part of their life for a short period. The unique and unrepeatable experience that gives added value to this type of tourism. - Sustainable tourism has a great potential to educate tourists of all ages. It can represent the beginning of a more complex process of changing habits and behaviour not only during the holidays but also in current day-by-day life. - A positive social effect of sustainable tourism is the reduction of crowding specific to the season's peak and the reduction of	- The core resource of tourism is the environment. In traditional tourism, as the activity becomes more intense, the environment deteriorates and the main reason for attracting clients disappears. In sustainable tourism, the decisions and actions are carried out considering the minimizing of their environmental impact. - Tourism is included in the list of economic areas which contribute to climate change, especially through the energy needed for all processes and transport activities. Sustainable tourism offers alternative means of transport less or not polluting, organizes shorter trips, minimizes the use of cars or plains, suggests the use of local, natural materials for buildings and tries to support the use of several sources of energy, especially the green ones. - Water is a scarce resource. Tourism is deeply dependent on water resources and, at the same time, is an important pollutant. One of the most important preoccupations of sustainable tourism is

Economic	Social	Environmental
accommodation unit must create its own proactive environmental protection policies (a business model), regardless of whether it is part of a powerful company or a small family business.	seasonality. Offering services all year round, not only in a short period is better and can lead to a big number of tourists, but more evenly distributed in time.	water resource preservation, both for current use and tourist activities and entertainment. - Waste management represents another challenge for tourism due to the big volume and wide variety of waste resulting from different stages and activities specific to tourism. The sustainable approach aims to reduce the waste quantity, integrate tourism in circular loops of reuse and recycling, and promote sustainable consumption.

Source: own elaboration with information from Destination BC Corp. (2013). Sustainable Tourism. The Essential Guide to Operating an Environmentally Sustainable Tourism Business in BC. Retrieved from https://www.destinationbc.ca/content/uploads/2018/08/TBE-Guide-Green-Sustainable-Tourism-July2013.pdf; Postma, A., Cavagnaro, E., Spruyt, E. (2017). Sustainable tourism 2040. *Journal of Tourism Futures*. 3(1). 13-22. Retrieved from https://www.emerald.com/insight/content/doi/10.1108/JTF-10-2015-0046/full/html

Nowadays, the orientation of tourism toward sustainability is out of the question; the problem is how will be adopted and implemented the principles of sustainability in each tourist location or destination. We need well-trained personnel, both from management and direct working areas, with a minimum knowledge of sustainable tourism, practical and accessible methods and techniques for reducing the environmental impact, and for putting a value on local resources and traditions.

One of the goals of our project is in line with this problem and aims to provide specific knowledge, according to local conditions and resources.

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2.3. European Green Deal - the pathway to sustainability

European Green Deal is a political document presented by the European Commission to the EU institutions and the public on the 11th of December 2019 and approved by the European Parliament in January 2020. It covers under a big umbrella several strategies in eight key areas which aim to offer solutions for Europe's many environmental, economic and social challenges. The eight key areas that make up the EU Green Deal are:

1) Increasing the EU's climate ambition for 2030 and 2050. For 2030, the main goal is the reduction of 50% of the greenhouse gas emissions compared with 1990; for 2050 EU's ambition is the reduction of 90% of the greenhouse emissions from the transport field.
2) Supplying clean, affordable, secure energy. In this direction, it is forecasted a gradual reduction of non-renewable energy and its replacement with green energy. It will support the transition to domestic energy consumption from sustainable sources.
3) Mobilising industry for a clean and circular economy. In this direction, in 2020 the Industrial strategy was adopted based on the principles of circular economy and green economy.
4) Building and renovating in an energy and resource-efficient way. This key area addresses private and public buildings and is directly connected with the clean energy key area. The EU Commission adopted in 2020 the Renovation Wave Strategy to support the process of building renovation and insulation.
5) A zero-pollution ambition for a toxic-free environment. The key area refers to the restoration of the natural functions of the ground and the surface water and the reduction of industrial air pollution. It will be coherent with Farm to Fork strategy and with other EU strategies.

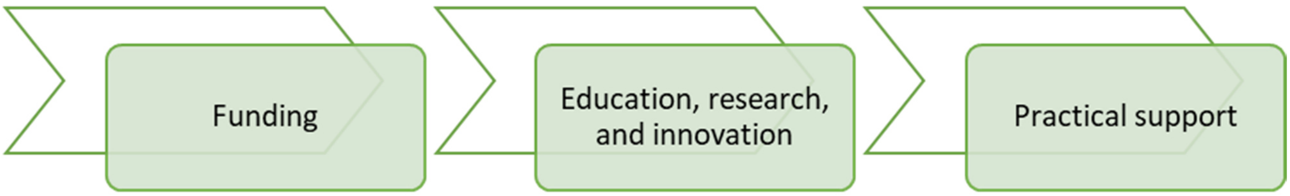
6) Preserving and restoring ecosystems and biodiversity. Land and sea use are identified as the main complex activities which drive the loss of biodiversity. The Biodiversity Strategy is focused on the measures to be taken to stop the loss of biodiversity and to improve the biotopes. This key area is directly linked to almost all other key areas, considering the fact that all the initiatives and actions must take into account biodiversity preservation.
7) Farm to Fork: a fair, healthy, and environmentally friendly food system. This is one of the most complex key areas considering that food production interferes with all environmental components. There are specifications about the financial support of future actions, in the frame of the Common Agricultural Policy and Common Fisheries Policy.
8) Accelerating the shift to sustainable and smart mobility. The goal of this key area is a significant reduction of emissions from transport activities and implementation of smart mobility, adapted to the specific of each location, promoting intermodal transport, the reduction of fossil fuels use, and building a sustainable infrastructure. (Fetting, 2020)

EGD has a pronounced practical character, being in essence a growth strategy to promote a green transformation. Compared with other previous growth strategies, the European Green Deal has a strong socio-economic principle - *Leave no one behind (Just transition)* that will offer customized support for each country, according to its needs. The Just Transition Mechanism was established especially for regions' needs in the fields of transition to low-carbon activities, re-skilling of workers, and providing easy access to loans and financial support for these activities.

Although it is a political document, it has strong connections with research and innovation, especially through the targets, intentions, and objectives that will be implemented over the next ten years. The eight key areas cover all the sectors with significant negative impacts on the environment but at the same time, the sectors with the biggest potential for development in the future. Also, the document was elaborated considering the 17 Sustainable Development Goals (SDGs) and the EU's contribution to their achievement.

The EGD will mobilize European funds and create the prerequisites for a public and private investment framework to support an effective transition to a green, competitive and inclusive economy. The three supporting dimensions of the EU Green Deal are.

Fig. no. 3 Supporting dimensions of the European Green Deal



Source: own elaboration with information from European Commission. (2019). COMMUNICATION FROM THE COMMISSION. The European Green Deal. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019DC0640

Funding support represents the core pillar of the successful implementation of the EGD. The investments will be big and need a significant financial effort both from public and private funds. The aim is to stimulate the unlocking and redirection of public and private funds toward encouraging sustainable investments. Only to reach the goals regarding energy and climate change will be necessary €260 billion of additional annual investment (European Commission, 2019). €500 billion will come directly from the EU Budget, while the majority of the remaining funds will be mobilised through the investment programme InvestEU (Fetting, 2020).

The second supporting dimension consists of the contribution of education, scientific research, and innovation to achieving the EU Green Deal goals. The accent will be put on eco-innovation, the innovation economically feasible and with positive environmental impact, capable to assure green and smart transition. A wide range of economic fields will benefit from the implementation of eco-innovation, including tourism. The Horizon Europe programme will support innovation and research, the local communities' efforts, and the educational systems with funds and with scientific skills and programmes as well.

Schools, universities, and training institutions will have a central role in the implementation of the EU Green Deal by offering the appropriate knowledge, skills, and attitude to the young generation consistent with sustainable development principles. Also, these institutions have a complex and important role in re-skilling and upskilling the workforce for the ecological transition, and adaptation to the new processes (European Commission, 2021a).

The third pillar refers to the practical support offered by the EU institutions and bodies for the implementation of the European Green Deal in all member countries. In particular, we there is to be mentioned the concept of resilience adopted and used by EC in the document. Resilience, as defined by the European Commission, is *"the ability not only to withstand and cope with challenges, but also to undergo transitions in a sustainable, fair, and democratic manner"* (European Commission, 2020). To increase resilience to future shocks, such as the Covid-19 pandemic, the European Commission has started the Strategic Foresight Initiative.

A resilient EU will be able to better implement the SDGs in general. The analysis of the relationship between sustainable development policy in the EU and the adoption of the SDGs reveals that for a successful transition to a sustainable economy, the 17 SDGs have three levels of importance.

The basic level, mandatory for all future actions is the implementation of SDGs 6, 13, 14, and 15. These goals refer to biosphere protection; without the protection and remediation of the natural environment, we can't talk about other measures or actions. The environment offers support for all our activities and its preservation is vital for the future.

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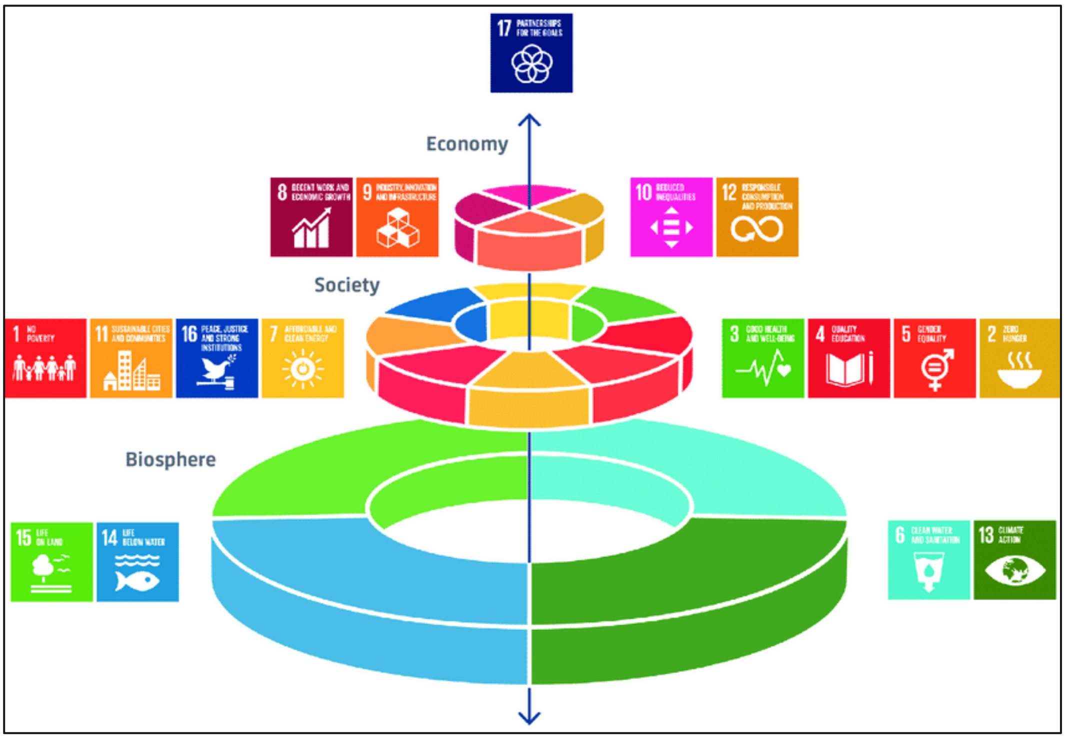
The second level involves SDGs connected with the sustainable development of society (SGDs 1, 2, 3, 4, 5, 7, 11, and 16). The goals of addressing societal issues are based on a healthy environment and represent the foundation for sustainable economic development.

The third level consists of SDGs 8, 9, 10, and 12 and refers to the actions and measures taken in industry, innovation, infrastructure, responsible consumption and production, decent work, and decoupling economic growth from environmental degradation. These actions can be successfully carried on only in a naturally balanced environment (SDGs from the first level) and with the contribution of all people (SDGs from the second level). This systematization of the 17 SDGs is represented in Figure no. 4.

Fig. no. 4 The stratification of the SDGs - `the wedding cake of SDGs



Source:
https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.researchgate.net%2Ffigure%2FThe-SDG-Wedding-cake-shows-the-biosphere-as-the-foundation-of-economies-and-societies_fig1_349110621&psig=AOvVaw1tM5HURG14HmfUw2SmAcK6&ust=1669196468575000&source=images&cd=vfe&ved=0CA8QjRxqFwoTCJiStMa_wfsCFQAAAAAdAAAAABAE

The ideas, directions, and goals of the EGD were integrated into numerous research projects shortly after the document was issued. Tourism activities are not directly addressed in European For tourism, European Commission's Directorate-General for Internal Market, Industry, Entrepreneurship, and SMEs issued in 2022 a guide for the transition process through sustainable tourism. The document analysis tourism as an industrial ecosystem, the impact of Covid-19 on tourism activities, and proposes a new concept for the transition pathway of tourism to sustainability - the co-creation process.

The guidance summarized information about the regulation and public governance, resilience aspects of tourism, connections with other economic activities for the green and digital transition, and the future perspective of investing and founding in tourism.

Special mentions are made for the SMEs, as they are the main form of organisation the tourist activity across Europe.

The co-creation process aims to accelerate the twin transition (economic and ecologic) and promote more resilience in the tourism ecosystem. In this direction, several measures were designed to yield positive economic and ecological effects (European Commission, 2022).

Although tourism doesn't represent one of the eight key areas of interest included in EGD, it is directly connected with at least six. For reducing greenhouse gas emissions and boosting the transition to smart mobility, the European Agenda for Tourism 2050 was elaborated and the document "Tourism and Transport in 2020 and beyond" was issued in 2020. Here is included a set of coherent measures to relaunch tourism after the severe restrictions during the Covid-19 pandemic aiming to arrive at the old levels of activity before March 2020, but in a different form and with different rules, according to the changes in the behaviour and pattern consumption (European Economic and Social Committee, 2020).

3. Findings from the comprehensive analysis of the results of the online survey

In setting up a strategy for human resources development in the tourism industry, it is vital to have access to information related to the needs of the companies, in a highly competitive and dynamic market. Dealing with such important key areas, as the EU Green Deal and Covid 19, the CREDinGREEN project used two different tools to access the market needs: interviews with experts and an online survey, as a research technique that allows data collection from a predefined group of respondents (in our case different categories of employees from tourism, from EU countries). The survey was designed with three blocks. In the first (Covid-19 Section), one we investigated the impact of the Coronavirus pandemic on tourism activities, focusing on the behavioural changes of the clients, and how these changes will influence/affect the future organisation of the activities. The second block (Green Deal Section) deals with sustainable tourism seen as the best solution for the future development of tourism and the implementation of its principles in day-by-day activities in a tourism entity. In this block, we investigated if the companies are aware of the concept of sustainable tourism, if they have already undertaken some concrete actions in this direction and if they intend to make changes in their future actions to be “greener”. The last block (Micro credentials Section) deals with the professional preparation of the employees in tourism as a tool to implement the strategies and to reach the goals with economic and ecological benefits. The need for more information in different fields is the starting point for the organisation of training and courses in narrow areas of interest, recognized by national/ European bodies, which are completing the employee's personal file and professional profile. The data from this section of the survey will help us develop the micro-credentials concept and propose innovative ideas for using it in practice in tourism.

3.1. Results of the survey

3.1.1. Demographic section

The study was carried out on a sample of 339 people, of which 50.4% were female and 49% male, 0.6% declared their gender as non-binary (Figure D1 from Annex 2.a). By age range, the distribution is as follows: 17.1% are between 30-39 years old, 26.3% are between 40-49 years old, and 27.1% are between 50-59 years old. The participants from the 20-29 and 60-67 age ranges are almost equally weighted. The categories under 19 years old and 68 years and over are represented by relative percentages close to 5%. The participants with ages between 40-49 years and 50-59 are the most numerous which is a big plus for our project because are persons with big experience in tourism, in key positions, and can have a positive influence in the implementation of future strategies (Figure D2 from Annex 2.a).

Almost half of the participants work in tourist accommodation (48.7%), followed by restaurants (10.6%) and catering (7.7%). Other areas of activity represented are tour operator (6.2%), destination management (5.9%), event manager (3.2%), local guide (2.9%), and tourist retailing (2.1%) (Figure D3 from Annex 2.a). According to seniority in the organisation, a quarter of the participants (25.4%) have over 20 years of experience, followed by those who have between 1 and 5 years of experience (18.9%) and then by those who have between 10-15 years seniority (18.3%). Those who have seniority between 5-10 years represent 15% of the participants, while those who are between 15-20 years old have 11.5% of the total participants. The figures confirm the previous observation, that the participants in our survey are persons with long- term vision and experience in tourism (Figure D4 from Annex 2.a).

More than half (57.2%) of the participants have management positions, being the director of a company, while almost a quarter (23.3%) of the participants are employed in a private company in the field of tourism. Approximately 10% of the respondents are self-employed, and 4.4% are employed in the public sector. More than 5% work in other positions in tourism companies (Figure D5 from Annex 2.a).

Most respondents work in small companies that have up to 9 employees (44.2%), followed by those from companies that have between 10-49 employees (36.6%) and then those from companies that have between 50-249 employees (14.2%). Responses from large companies with over 250 employees represent 5% of the responses included in the study. The figures are in line with the reality of to the tourism field where a major part of active companies are SMEs (Figure D6 from Annex 2.a).

Most participants have bachelor's degree (28.9%), master's degree (3.3%), and Ph.D. or higher (4.4%). But the other categories are also represented in the sample as follows: 0.6% of the participants only have a primary school, 6.8% secondary school, 19.8% have a high school diploma and 16.2% have a professional school (Figure D7 from Annex 2.a).

The participants in the survey are mainly from 5 countries of the European Union distributed as follows: 24.8% from Germany, 20.4% from Austria, 20.9% from Portugal, 16.2% from Romania, and 15.9% from Italy. The share of participants from other EU countries is 1.8% (Figure D8 from Annex 2.a). The participants from other EU countries are from the Czech Republic (2 respondents), Greece (2 respondents) and Ireland (2 respondents).

3.1.2. Covid-19 section

The Covid-19 pandemic has greatly affected tourism businesses, 66% of the respondents confirmed this, values that is line with other European and international statistics about the impact of the restrictions on the tourism sector (Fig. no.5). Furthermore, 44% of the respondents noticed important changes in how customers spend their vacations (Fig. no.6).

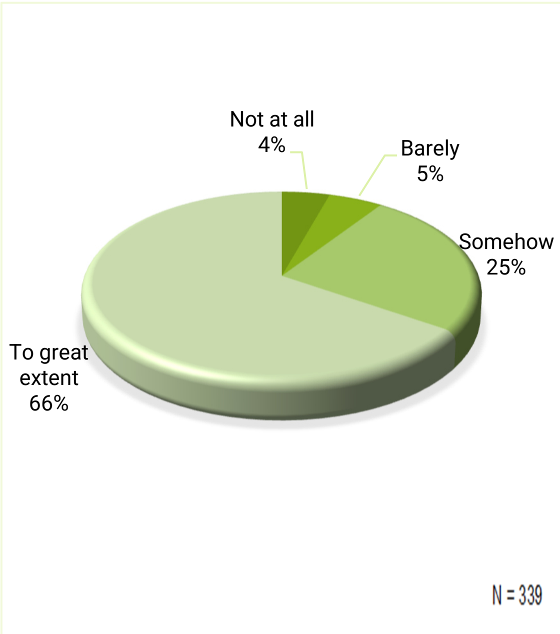


Fig. no. 5 Was your business affected by the Covid-19 pandemic?

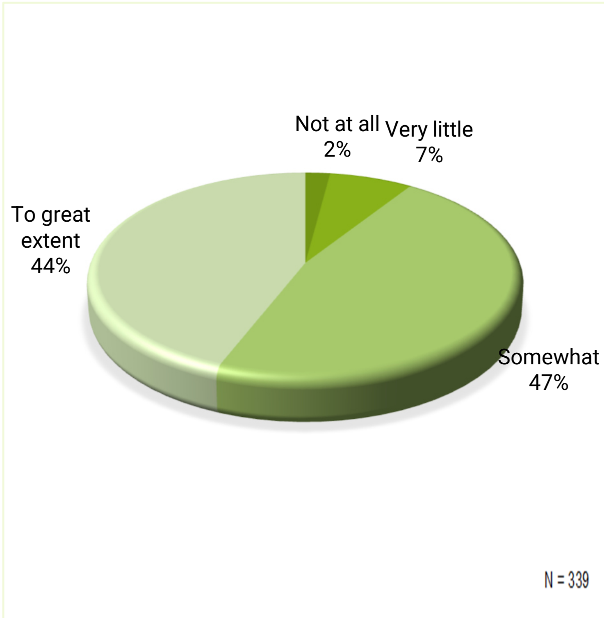


Fig. no. 6 Have you noticed some changes in the way your clients spend their holidays?

A tendency to decrease in the duration of stays in accommodation units, with reduced participation in social activities or events organized with the participation of a large number of people can be observed in many cases.

Approximately 30% of the study participants noticed that tourists' stays are often shorter, while more than 50% of the participants noticed that the tourist is paying more attention to health, well-being, and safety. The reduction of socialization and low participation in collective activities was often observed by approximately 30% of the respondents (Fig. no. 7).

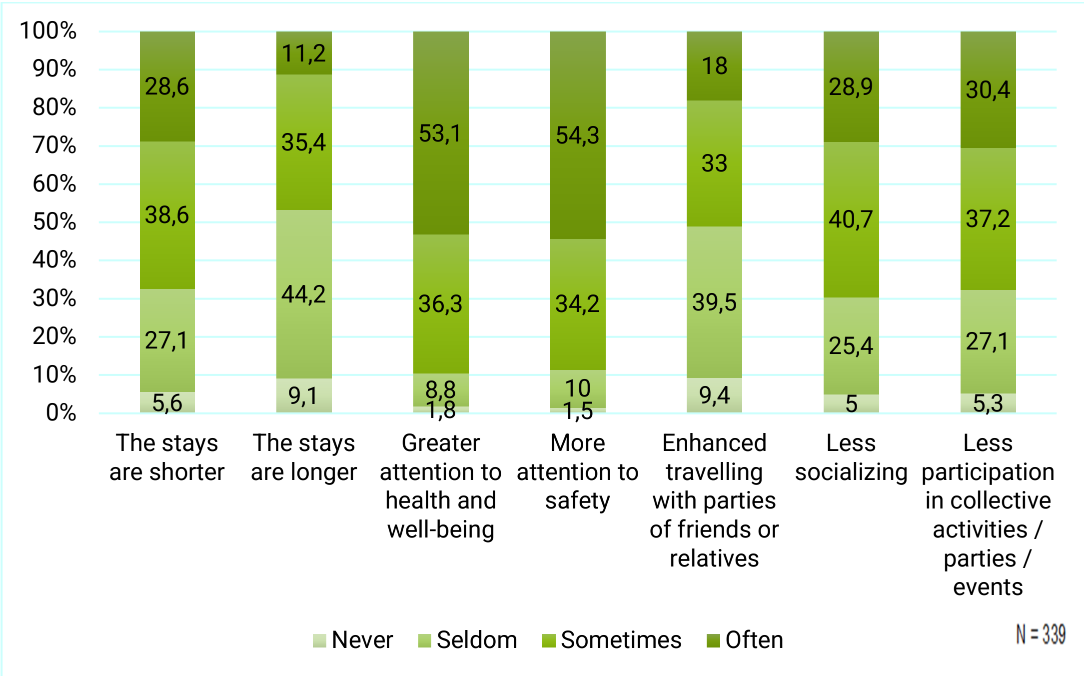


Fig. no. 7 Please tell us if you have noticed one or more of the following customer behaviours.

More than 25% of the participants believe that the reduction in the length of stay had a high impact on business. Approximately 30% appreciated that the increased attention to well-being had a high impact, while almost 35% appreciated that the increased concern for being safe, strongly affected the companies (Fig. no.8).

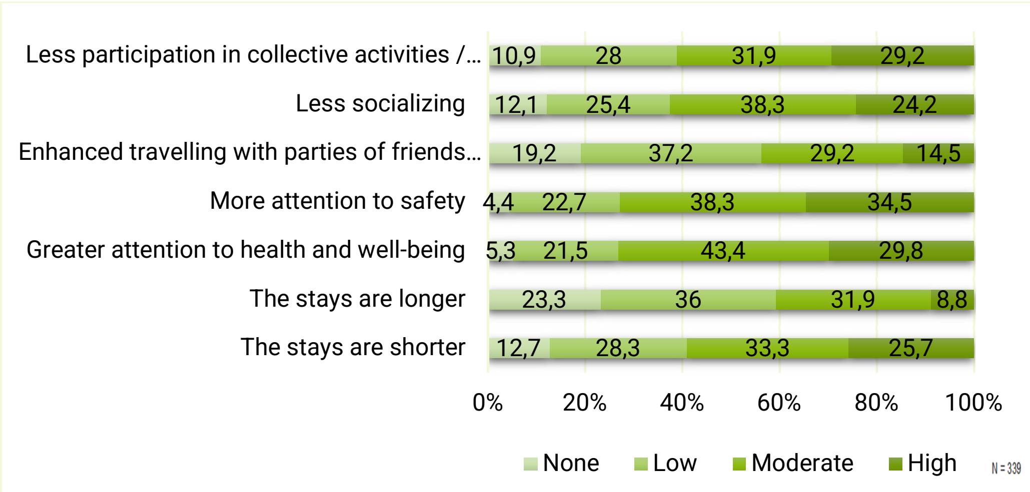


Fig. no. 8 Which of the next changes in customer behaviour has most affected your company?

The changes in tourists' behaviour because of the health crisis triggered by the Covid-19 pandemic will be present in the future period. The respondents believe that the behaviour of tourists will be different in the future period compared to the period before the pandemic.

More than 60% of the participants believe that in some way the changes in the behaviour of tourists determined by the pandemic will be maintained in the next period, generating a different tourist behaviour compared to the previous period (Figure C5 from Annex 2.a).

The changes highlighted in the behaviour of tourists that will remain in the long term include the increased attention to health and well-being, as well as the increased attention to safety.

More than 35% of the respondents believe that increased attention to health, well-being, and safety will greatly affect the behaviour of tourists in the long term, even after the removal of all the restrictions imposed by the pandemic. Reducing the length of stay, socializing, and participating in collective activities will also leave their mark in a way on the behaviour of tourists in the long term. More than 40% of the respondents appreciate that the habit of traveling with groups of friends or relatives will be a long-term characteristic encountered to some extent in the behaviour of tourists (Figure C6 from Annex 2.a).

Approximately 20% of the participants are convinced that tourists expect a Covid-19 strategy from the companies operating in the field of tourism, while approximately 50% of the study participants believe that there is a fairly high probability that tourists expect Covid strategies in the companies which operate in the field of tourism (Figure C7 from Annex 2.a).

3.1.3. Sustainability and green tourism section

The role of green tourism in improving knowledge about resource conservation is very important for approximately 60% of respondents. Approximately 67% of the respondents strongly agreed with the statement that green tourism can ensure the quality of the environment, while over 60% strongly agree with the fact that green tourism can promote the local tourism industry. More than 56% of the respondents strongly agree with the statement that tourism has an educational significance, while 50% appreciate that tourism can improve the tourist experience (Figure S1 from Annex 2a).

Regarding the adoption of an environmental label, the centralized answers show that only 18.3% of the participants stated that the company already has an environmental label, while approximately 13% stated that the company is in the process of adopting a label.

A third of the participants declared that the company does not have an environmental label and does not intend to adopt one in the future. However, we can see that 36% of the participants declared that although the company has not yet adopted any label, it intends to adopt one in the next 2 years (Fig.no.9).

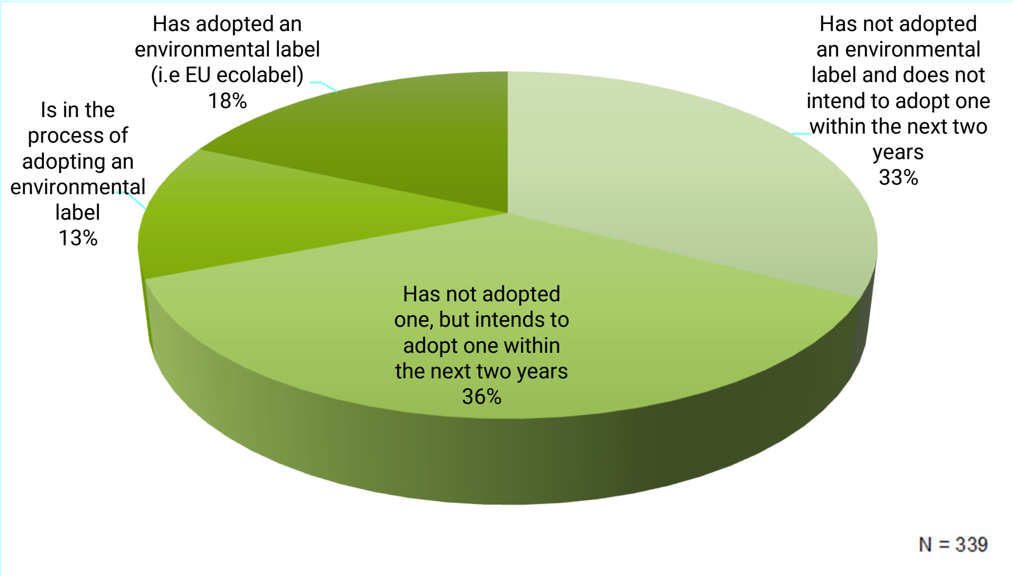


Fig. no. 9 In the process of environmental labelling, has your company done the following actions?

Almost half of the study participants stated that to some extent their company can be considered to be green, while a quarter stated that their company can be considered to a large extent to be green (Fig. no 11). The green label is considered by 40% of the study participants to play a moderate role in tourists' travel/accommodation decisions, 15% appreciate that this label even plays a decisive role in tourists' decisions (Fig.no. 10).

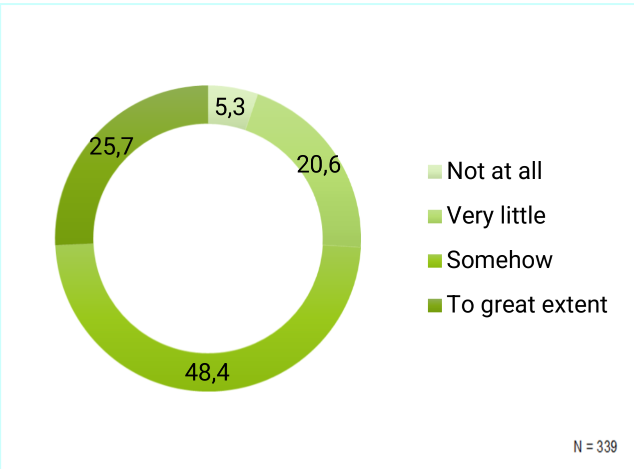


Fig. no. 11 Can your company be considered a green company?

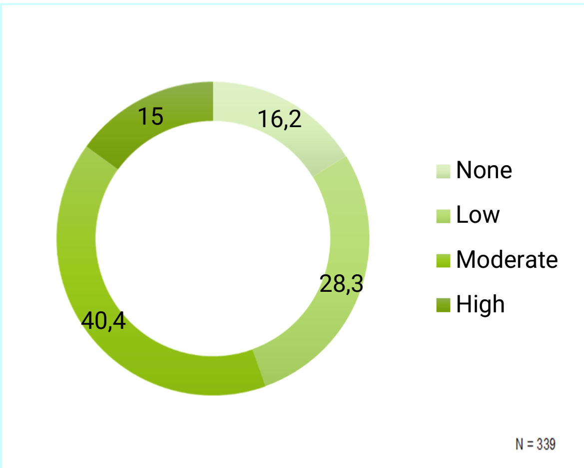


Fig. no. 10 What role plays "the green label" in your customers' booking decision/travel choice?

Regarding the adoption of energy efficiency measures, over 30% of the participants declared that their company had adopted many initiatives to reduce the energy used, while over 45% confirmed only the adoption of a few initiatives to reduce the consumption of energy (Fig. no.12).

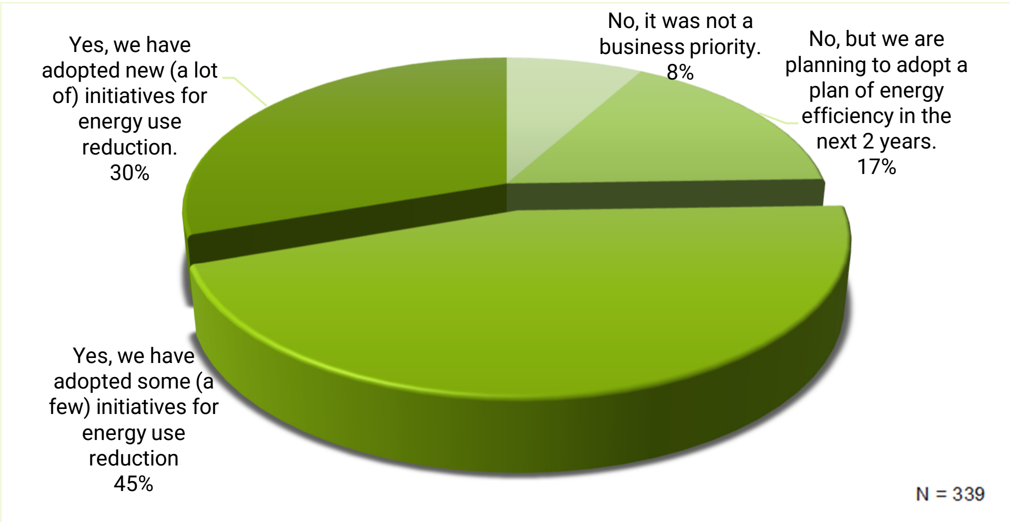


Fig. no. 12 In the past 5 years, has your company adopted measures for better energy efficiency?

The use of clean energy in the company was not a priority for over 18% of the respondents, while 32.2% of the respondents declare that it is a priority in the next 2 years. Almost 30% stated that there is a contract with a clean energy supplier, or the company owns its own installations to produce clean energy (Figure S6 from Annex 2a).

The aspects of sustainability were considered in a special way, regardless of the costs involved in the companies in which 30% of the study participants work. More than 56% of the participants declared that the companies they work in use sustainable materials and technologies, but only if the costs are similar to the less sustainable ones. In the case of some companies (13.6%), the focus is on using the most convenient materials and technologies without paying particular attention to sustainability or energy reduction (Fig. no. 13).

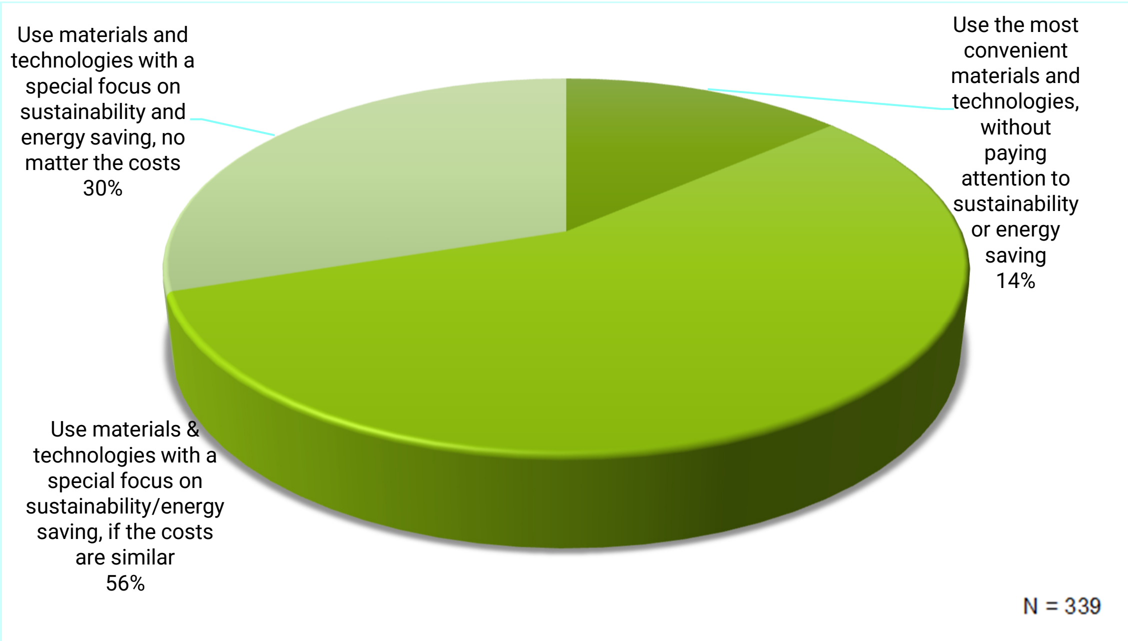


Fig. no. 13 In the last 5 years, have you taken into consideration the sustainability aspect of the construction works?

Regarding the implementation of solutions to achieve sustainable objectives, it can be observed in Figure no. 14 that more than 60% of the respondents declared that the companies in which they work have already adopted solutions aimed at reducing the energy used, while more than 30% intend in the next 2 years to adopt such solutions.

The reduction of water waste was implemented by the companies in which more than 40% of the respondents' work, as a solution to achieve the sustainability objectives, and 38.6% declare that they will implement such a solution in the next 2 years.

More than half of the participants declared that the companies in which they work have already implemented solutions aimed at reducing the use of non-biodegradable detergents, and in another approximately 33% of the companies' such solutions will be implemented.

The reduction of packaging is another solution that has already been adopted in the companies in which almost 60% of the participants work, with over 35% declaring that solutions aimed at reducing packaging will be implemented in the next 2 years.

More than 40% of the respondents say that companies already use electric vehicles, bicycles, or e-bikes for customers, while another 30% of the respondents say that only in the next 2 years, they intend to use such vehicles for transport (Fig. no.14).

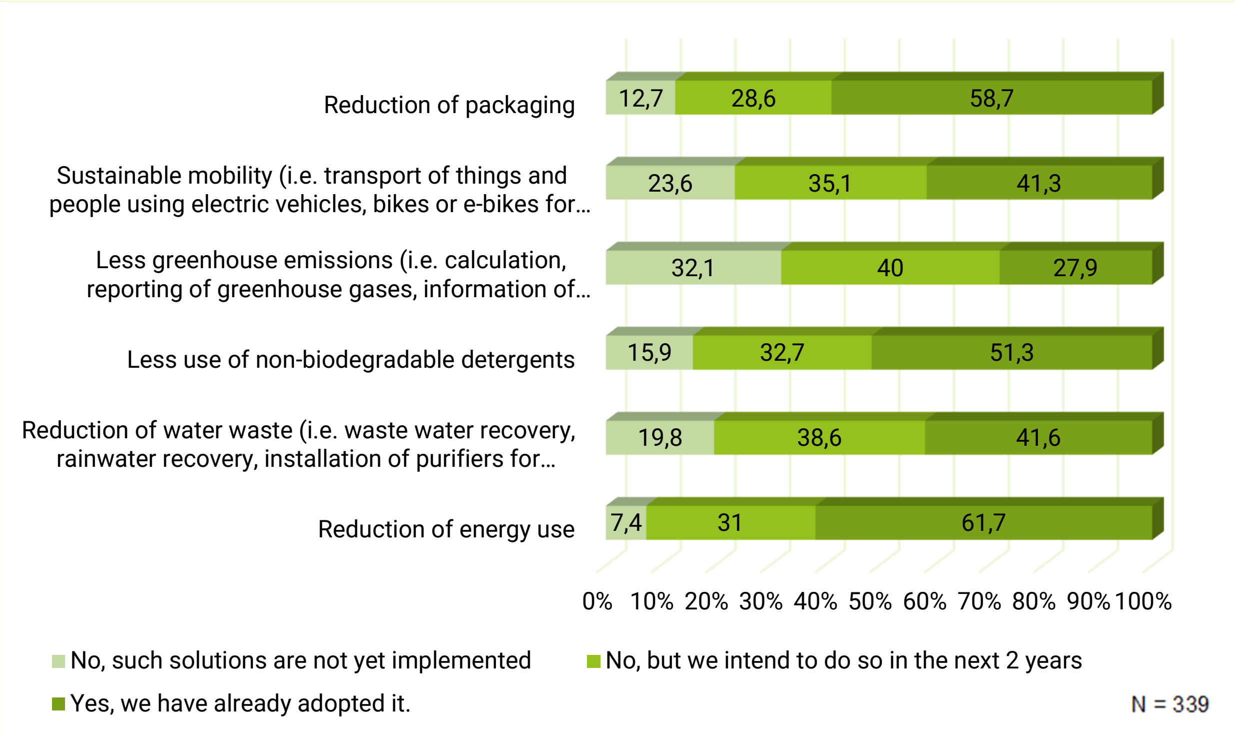


Fig. no. 14 Are there implemented solutions in your company, for the objectives mentioned below?

A series of measures were adopted to reduce packaging: the use of biodegradable packaging (35.7%); stimulating the reuse of packaging by users (46%); reducing the consistency of the packaging (45.1%); elimination of cleaning kits for guests (31.9%), as well as other measures (25.4%) (Figure S9 from Annex 2a).

The practices related to waste management are applied quite differently in companies, as the results from the answers confirmed. Regarding food and organic waste, 36% said that they apply as a measure, the reduction of the amount of waste generated, 70% chose the separation of waste by category and approximately 17% reusing. Approximately 10% of the respondents stated that no waste management method is applied in the company, while 3.2% would like to separate but there is no separate collection at the public level (Figure S10.1 from Annex 2a). Regarding the management of paper waste, most of the respondents (79.1%) said that they apply separation, but also other practices such as reduction (27.1%) and reuse (23.3%). A very small percentage (3.8%) admitted that they do not apply any method, while 1.2% stated that they would like to separate but there is no publicly implemented method (Figure S10.2 from Annex 2a).

The management of plastic waste is implemented through different practices, the most often used being separation (76.4%), followed by reduction (37.8%), and reuse (16.2%). More than 4% of respondents said that no method is used in the company to manage plastic waste, and 1.5% would like to separate, but there is no selective separation of plastic waste implemented at the public level (Figure S10.3 from Annex 2a).

The management of glass waste is achieved by mainly using waste separation (79.6%), but also practices such as: reducing the amount of waste (23.6%) and reusing (27.1%). However, there were also participants who declared that no method of managing glass waste is used, and 1.5% of the participants would like to separate, but there is no separation at the public level (Figure S10.4 from Annex 2a).

The purchasing policies of the companies are different, but they also have common elements. Approximately half of the participants in the study (49.6%) said that they prefer local suppliers for raw materials only if the costs are convenient compared to other sources. Regarding the procurement of ingredients for food, it can be observed a large share of those who stated that they use local suppliers, regardless of the costs (45.4%). A rather large share of respondents (40.1%) declared that they only contract local suppliers if the costs are favourable compared to other sources.

Regarding the procurement of other products, more than half of the respondents stated that they opt for local suppliers only if the costs are convenient (Figure S11 from Annex 2a).

The actual climate challenges could bring changes within companies as a result of the introduction of legal restrictions. More than half (52.8%) of the participants believe that there is a high probability that in the future climate changes in the EU will affect dramatically through legal restrictions, with 16.2% of the participants convinced that there will be dramatic restrictions in companies. (Figure S12 from Annex 2a).

3.1.4. Micro-credentials section

Adopting the best measures to ensure the sustainability of the company often involves knowing the best practices. The discussion within the company has already been carried out to a certain extent in the case of over 43% of the participants, with 23% of the participants declared that they have extensively discussed the best practices on sustainability (Figure M1 from Annex 2a).

The companies seem quite well prepared to implement the best practices in sustainability. Relatively equal shares of participants considered that companies are very well prepared to implement the best practices (28%), while others consider that they are moderately prepared, having to adapt quickly to meet these requirements. A fairly significant share of participants (20.9%) states that companies are poorly prepared, with some sectors needing to adapt further (Figure no.15).

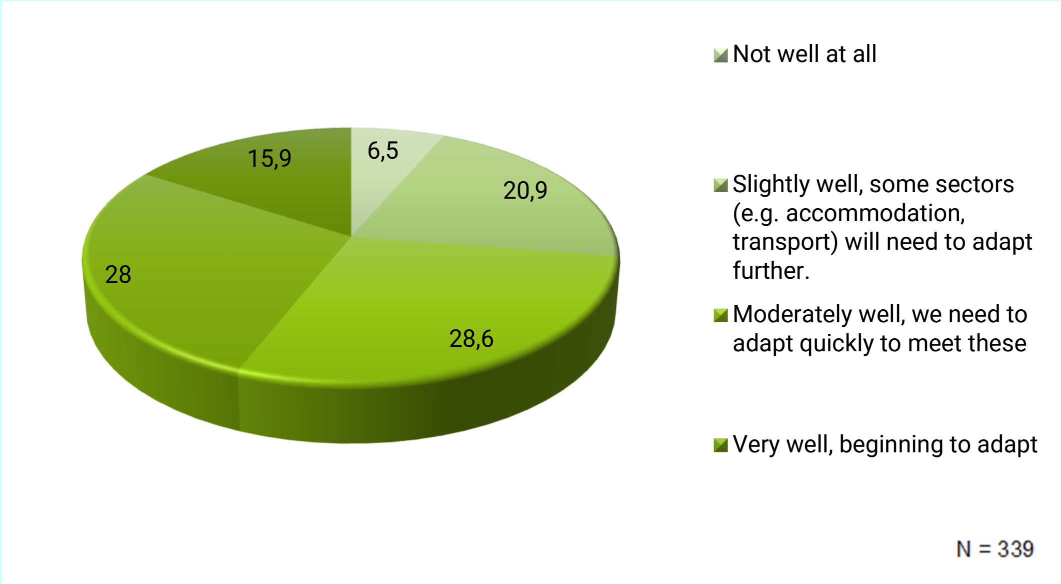


Fig. no. 15 How well do you think your company is prepared for implementing best practices in sustainability?

Companies have started to take initiatives to make customers aware of issues related to sustainability, resource conservation, or environmental issues. The extent to which companies place awareness messages differs from one company to another, but it can be observed that more than 45% of the respondents declared that written messages about sustainability were placed to some extent in the organisation. Messages about the conservation of resources are even more often placed in the organisation, with over 48% of respondents declaring that they use such written messages for customer awareness. The placement of written messages in the organisation regarding the importance of ensuring compatibility with the environment is carried out to a certain extent in organisations, with 46.9% of respondents confirming this (Figure M3 from Annex 2a).

A series of actions have already been implemented in organisations to achieve the transition to green tourism. More than 25% of respondents stated that there is already a green action plan for organisations, while 41.6% said that the organisation intends to adopt a plan in the next 2 years. The situation is relatively similar in terms of staff participation in training actions regarding green aspects, 29.2% of the respondents stated that the staff already participates in training on green topics, while 40.4% said that they intend to in the next 2 years.

As confirmed by the answers, that in 26.3% of cases there is already a team that is responsible for green actions, and 18.9% of respondents declared that there are also performance targets related to green actions in the company (Figure M4 from Annex 2a).

A relatively low degree of knowledge of the European Green Deal can be observed. A little over half of the participants have heard about this pact, with 45.7% not knowing anything (Figure M5 from Annex 2a).

The participants in the study have little or no knowledge about the EU Green Deal, over 45% declaring that their preparation does not include any knowledge about the EU Green Deal. The share of those who do not know about sustainability or circular economy is much lower compared to those who do not know the term Green Deal (Figure M6 from Annex 2a). The knowledge of the participants about the concept of the European Green Deal is poor (36% of the participants), while in the case of the terms of sustainability or circular economy, the knowledge held by the participants seems more solid (Figure M7 from Annex 2a).

The notions of sustainability and circular economy are relatively better known compared to the term Green Deal, the averages obtained being significantly higher in the case of the first 2 evaluated notions.

According to the answers, tourism employees participate in trainings occasionally (33.9%), at least once a year (31.3%), or even more than twice a year (23.9%). However, 10.9% stated that the staff never participate in tourism and hospitality training. Following the answers, it can be argued that there is a great need to participate in courses or training in the field of the environment, over 57% of the participants expressing their agreement and a quarter of the participants even a strong agreement

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with the participation in courses or trainings about aspects that concern environmental (Fig. no. 16).

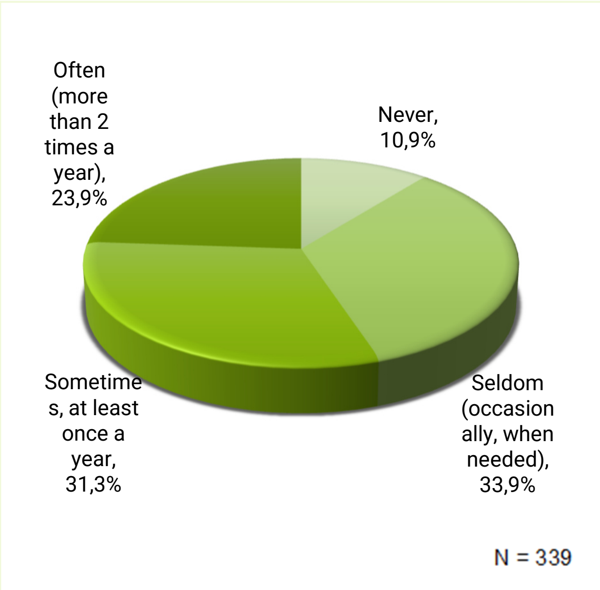

Fig. no. 17 Do your staff/colleagues undertake professional training in tourism and hospitality?

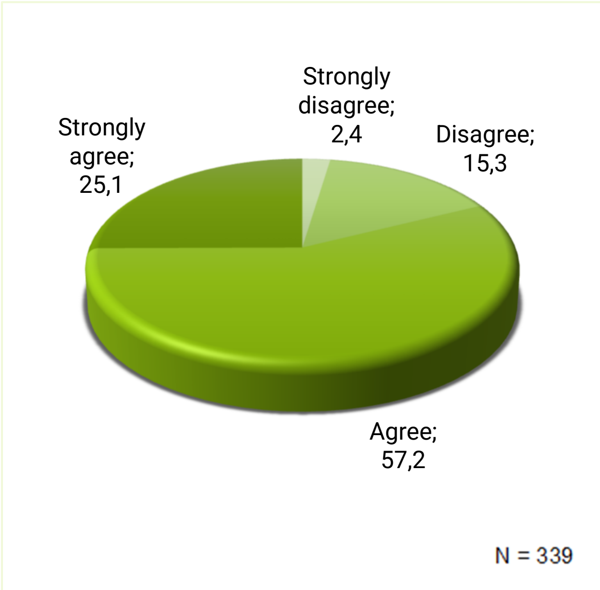

Fig. no. 16 Do you consider you need training/courses about environmental issues?

The evaluation of the knowledge held by colleagues in fields related to sustainability, the EU Green Deal, and the circular economy led to the obtaining of lower averages than in the case of the self-evaluation of the own knowledge held by the study participants. The knowledge about the European Green Deal is considered by several study participants to be poor among colleagues (36.3%) compared to the other knowledge about sustainability (9.1%), and circular economy (19.2%) (Fig. no. 19). Regarding the participation of colleagues in courses on environmental topics, more than 75% of the respondents expressed their agreement (Fig. no.18).

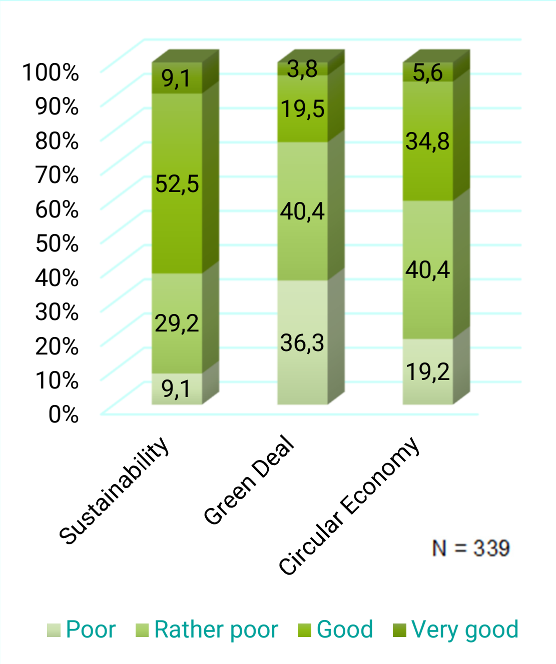

Fig. no. 19 How do you rate the knowledge of your work colleagues in the following fields?

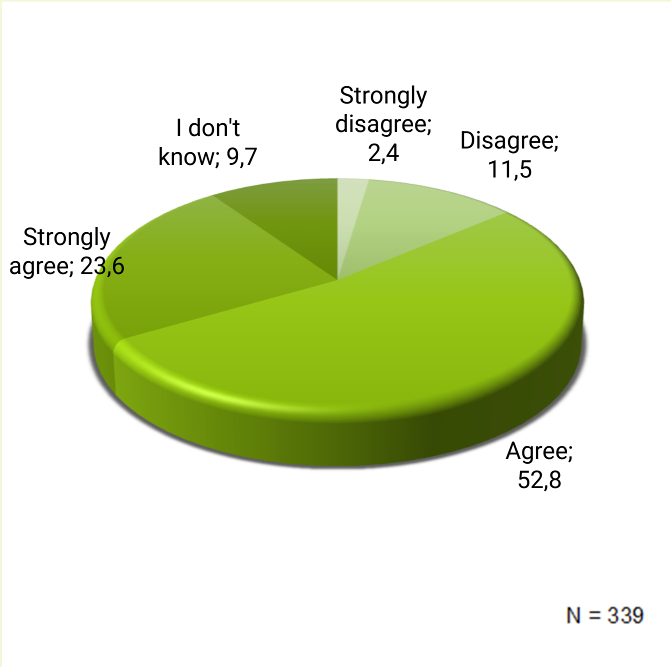

Fig. no. 18 Do you consider your staff/colleagues need training/courses about environmental issue?

The subject of sustainability is directly connected with the businesses in which they are involved for about 75% of the respondents (Figure M12 from Annex 2a).

It can be seen from the answers that approximately 40% of the participants appreciate that a certificate from a state institution organizing training shows a high degree of trust, while the certificate issued by a leading organisation in the private sector is valued with a degree trusted by 31% of the participants (Figure M13 from Annex 2a).

A high interest in accessing information raises especially the themes: Supplying clean, affordable, and secure energy (61.7%), From "Farm to Fork" (56%), and for Preserving and restoring ecosystem and biodiversity (54.6%) (Fig. no. 20.)

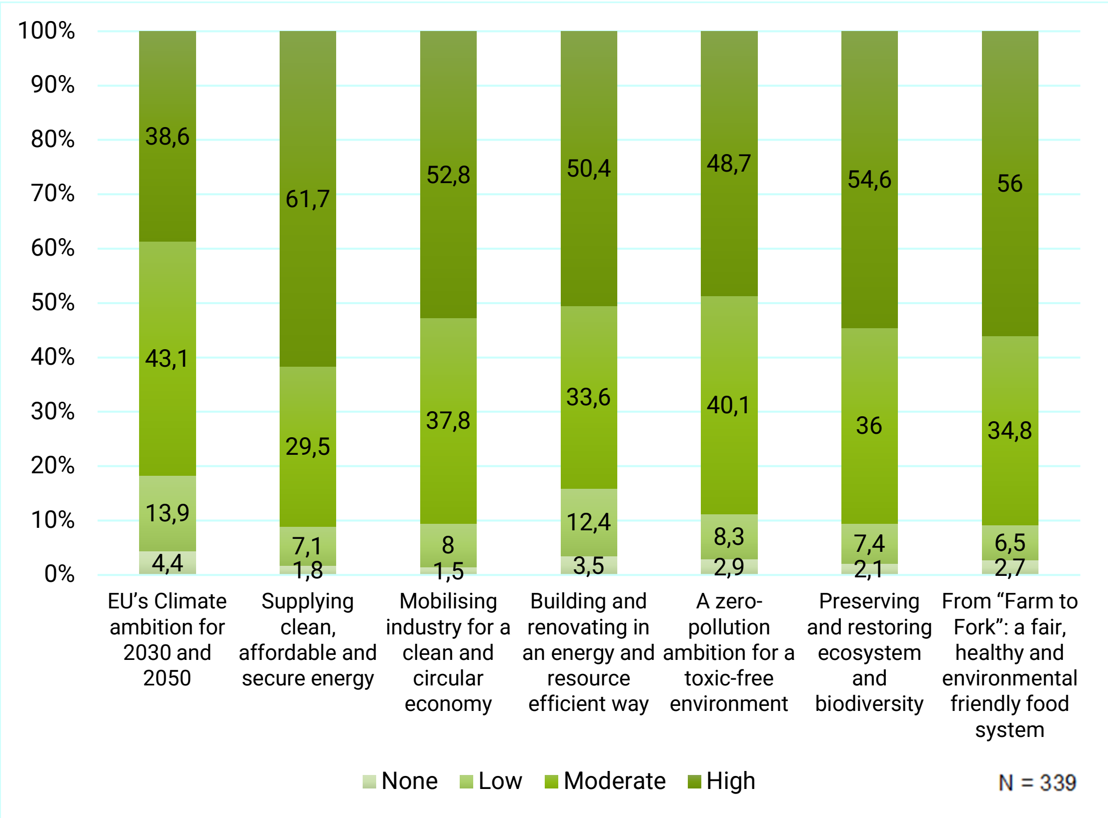

Fig. no. 20 "I have an interest to learn more about how I could improve my business, in line with the objectives of EU's economy for a sustainable future, by accessing the information on the following topics:"

Most of the respondents would definitely like to know more about Energy use reduction (62.2%), Water waste reduction (59%), Healthy and environmentally friendly food system (56%) (Figure M15 from Annex 2a).

3.2. Analysis by countries

3.2.1. Covid-19 Section

The analysis carried out by the country highlights significant differences in how businesses have been affected by the pandemic. More than 80% of the respondents from Germany (83.3%) and Austria (82.6%) declared that business was affected to a great extent, while the percentage of respondents from the other countries included in the study is much lower: Italy (44.4%), Romania (49.1%) and Portugal (66.7%) (Figure C1 from Annex 2b).

Half of the respondents in Germany stated that they have noticed changes to a large extent in terms of the way customers spend their vacations, while in Austria approximately 60% of respondents noted important changes. Some changes in the way customers spend their vacations were also observed in Italy (25.9%), Portugal (33.8%), and Romania (41.8%) (Figure C2 from Annex 2b).

The changes in customer behavior will remain to a certain extent in the future, their behavior being relatively different from that before the covid 19 pandemic. More than 65% of respondents from Germany (65.5%) and Portugal (67.6%) are convinced that customer behavior will be different in some way in the future compared to the one before the pandemic. The changes in customer behavior will somehow leave their mark on their decisions in the future (Figure C5 from Annex 2b).

Apart from the rules imposed by governments, customers expect tourism companies to come up with strategies to satisfy their increased need for safety, health, and well-being. More than 65% of the respondents from Portugal believe that there is a high probability that customers expect the companies operating in the field of tourism to come up with a Covid-19 strategy (Figure C6 from Annex 2b).

3.2.2. EU Green Deal Section

The role of green tourism in ensuring the quality of the environment is obvious for the respondents from the 5 countries participating in the research. The highest value was obtained in Germany (3.77) and the lowest in Romania (3.55). Respondents from Austria also strongly agree (3.64) with the statement that green tourism can ensure the quality of the environment. Agreement with the statement Green tourism can also promote the local tourism industry, with the average calculated at the group level in Germany being the highest (3.77). In the case of respondents from Romania, a high value (3.67) is noted for the statement that green tourism has an educational meaning (Figure S1 from Annex 2b).

Companies have started to take measures toward the adoption of an environmental label. Almost 40% of respondents from Germany stated that the companies they work in, have already adopted an environmental label. Significant shares of respondents from the 5 countries participating in the study stated that although the companies have not yet adopted, they intend to adopt an environmental label in the next 2 years. However, almost half of the respondents from Italy (48.19%) and Austria (49.3%) admitted that the company has not yet adopted any environmental label and does not intend to in the next 2 years (Figure S2 from Annex 2b).

Companies can be considered green to a certain extent. Half of the respondents from Germany say that the companies they work in can be considered green in some way, while 34.5% say that the companies can be considered green even to a great extent. More than 50% of the respondents from Austria (52.2%) and Romania (54.5%) believe that the companies in which they work could also be considered green in some way (Figure S3 from Annex 2b).

The green label plays a role in tourists' travel decisions, over 25% of respondents from Romania (25.5%) and Portugal (25.4%), consider that this role is very important in tourists' decisions. However, more than 20% of respondents from Italy (22.2%) and Austria (20.3%) believe that the green label does not play any role in tourists' travel decisions (Figure S4 from Annex 2b).

In the last 5 years, companies have adopted some initiatives to increase energy efficiency according to what the respondents declared: 52.2% in Austria, 49.3% in Portugal, 44% in Germany, 42,6% in Italy, and 34,5% in Romania. Over 45% of the respondents from Germany and over 30% of the respondents from Austria (34.8%), respectively Romania (32.7%) declared that the companies in which they work have adopted a lot of initiatives to reduce energy consumption. Although more than 10% of Italian respondents stated that reducing energy consumption was not a business priority, more than 20% stated that they intend to adopt a plan to reduce energy consumption in the next 2 years (Figure S5 from Annex 2b).

The use of clean energy is starting to become a priority for many companies for the next 2 years, even if it was not a priority until now. Although almost 30% of Portuguese respondents stated that using clean energy was not a priority until now, 40% said they intend to use clean energy in the next 2 years, while more than 20% of them said they already have a contract with a clean energy supplier and 7% declared that they use their own devices to produce clean energy (Fig. no.21).

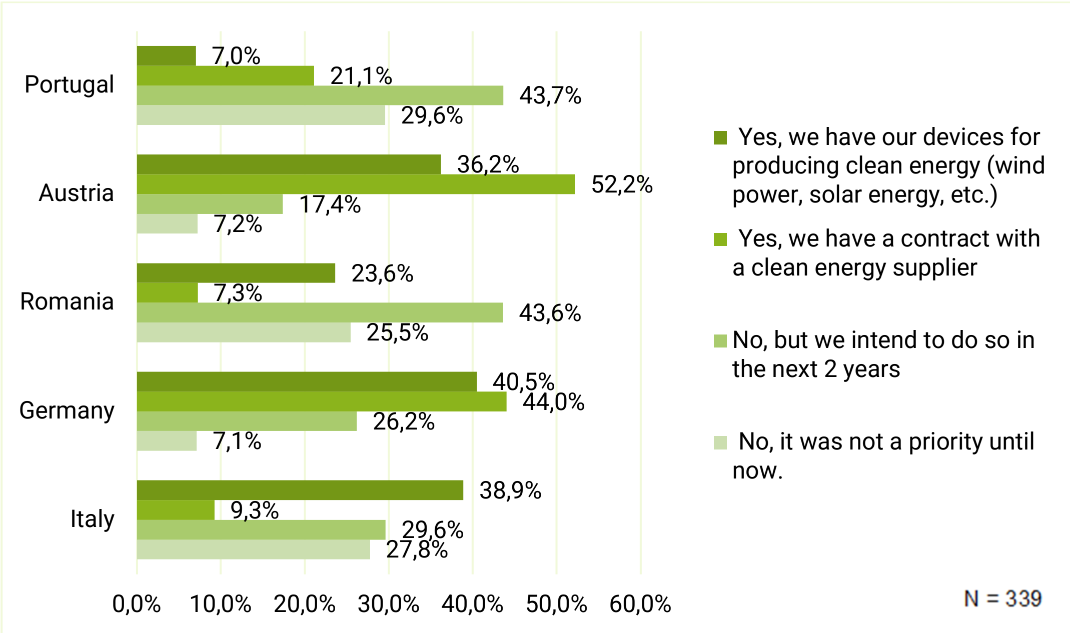

Fig. no. 21 Does your company use clean energy?

More than half of the respondents from Austria (52.2.%) declared that they already have a contract with a green energy supplier, while 36.2% have their own devices to produce clean energy. A relatively similar situation is also in Germany, where 44% of the respondents said that there is a contract with a clean energy supplier, while 40.5% of the respondents declared that they even use their own devices to produce clean energy.

In the last 5 years, the companies have considered the aspects of sustainability in the construction works in conditions where the costs were generally similar, with over 70% of the respondents from Austria (71%), over half of those in Germany (52,4%) and almost 50% in Romania stating this. More than 35% of the respondents from Italy (37%), Germany (38.1%), and Romania (36.4%) stated that sustainable materials and technologies were used in the construction works regardless of the costs (Figure S7 from Annex 2b).

Companies have implemented solutions to reduce the consumption of energy, water, non-biodegradable detergent or packaging as well as to ensure sustainable mobility. In order to reduce packaging, over 70% of respondents from Austria and over 60% of those from Germany declared that they had already implemented solutions in this direction. Regarding the reduction of energy consumption, 70.4% of respondents from Italy declared that they have already adopted solutions in this regard. One of the priorities was the reduction of water consumption, so that 57.45% of respondents from Italy declared that they had already implemented solutions in this direction (Fig. no. 22).

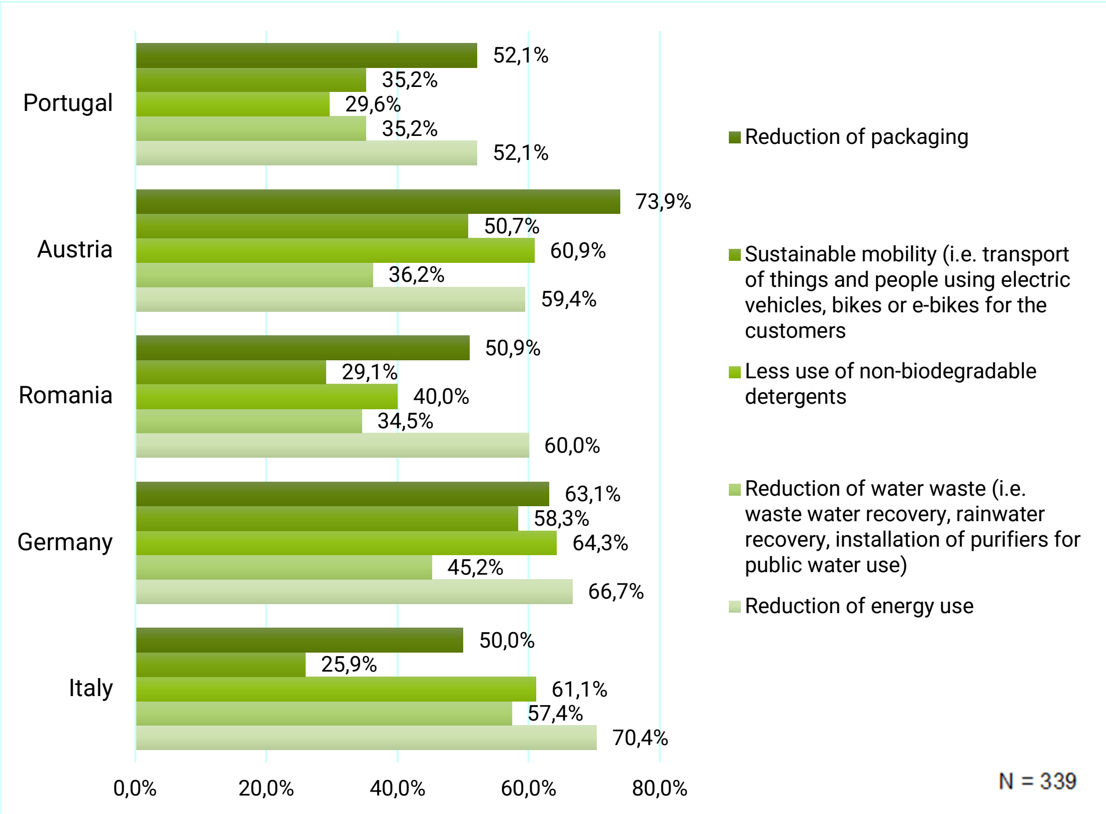

Fig. no. 22 Are there implemented solutions in your company? Yes, we have already adopted.

In Romania, although half of the participants stated that no solutions have been implemented to reduce water consumption or ensure sustainable mobility, it is intended to implement some solutions in the next 2 years. In Portugal, approximately 40% of the participants stated that no solutions have been implemented to reduce water consumption or the use of non-biodegradable detergents, but there is an intention to implement such solutions in the next period (Fig. no. 23)

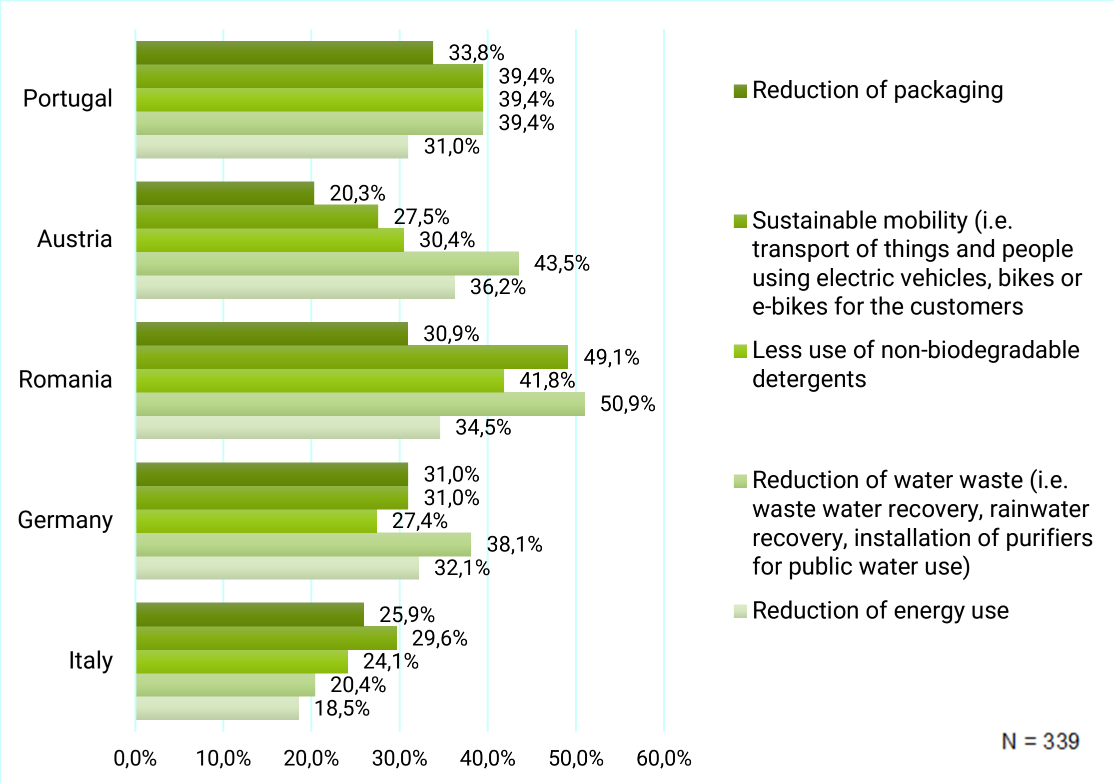

Fig. no. 23 Are there implemented solutions in your company? No, but we intend to do so in the next 2 years

To reduce packaging, several initiatives were adopted, such as reducing the consistency of the packaging, over 70% of respondents from Austria and over 65% of those from Germany declaring that they applied this measure. In Germany, another measure applied was that of stimulating the reuse of containers by customers (50%) as well as the elimination of cleaning kits for guests (50%). In Portugal, the measure that was applied more often (50.7%) was that of reusing the containers, while in Romania biodegradable packaging was used (43.6%) and customers were encouraged to reuse the containers (41,8%) (Fig. no. 24).

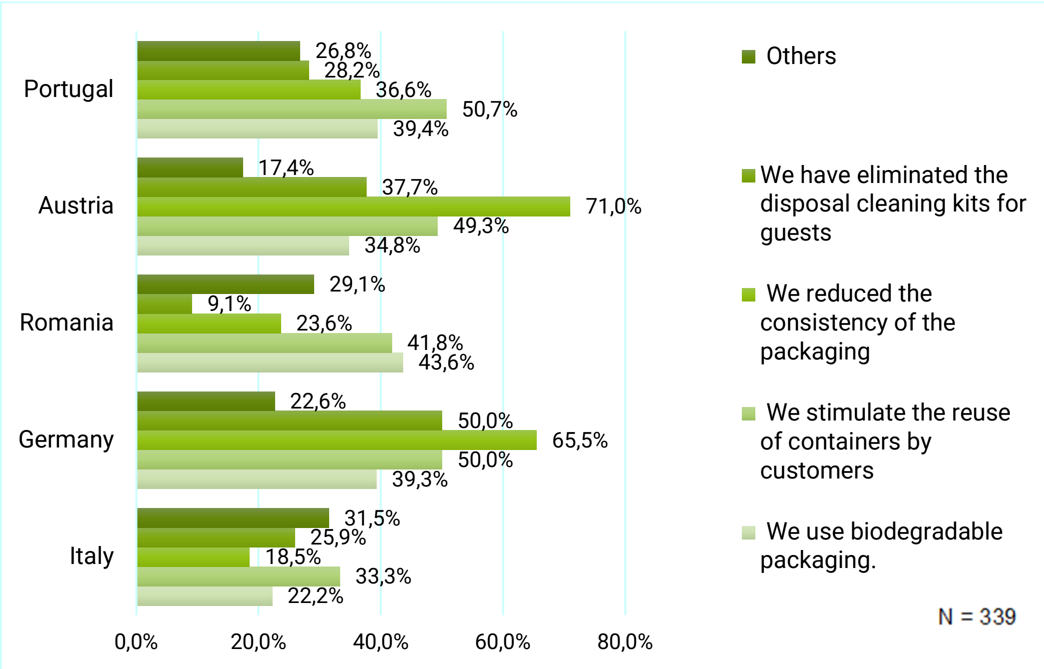

Fig. no. 24 Please indicate if you have adopted (in your business) some initiatives to reduce packaging.

The management of food and organic waste is carried out relatively similarly in the countries included in the research, the practices aiming in particular at separation and reduction. More than 80% of respondents from Italy declared that they separate food and organic waste. In Germany, almost 80% said that they resort to separation but also to reduction (59.5%). In Austria, the most frequently used practices are reduction and separation (63.8%). Most respondents from Portugal (64.8%) and Romania (58.2%) chose the option of separation (Figure S10.1 from Annex 2b).

Paper waste management is generally based on separation, as shown by the centralized data at the level of the 5 countries participating in the study: Italy (90.7%), Austria (87.0%), Germany (77.4%), Romania (70.9%) and Portugal (70.4%) (Figure S10.2 from Annex 2b).

Plastic waste management is quite similar to paper waste management: Italy (88.9%), Austria (81.2%), Germany (76.2%), Portugal (71.8%) and Romania (67 ,3%). Another

more common practice is the reduction in Germany (56%), Austria (49.3%) and Portugal (36.6%) (Figure S10.3 from Annex 2b).
The most common practice in glass waste management is separation: Italy (87%), Austria (82.6%), Portugal (80.3%), Germany (79.8%), and Romania (70.9%) (Figure S10.4 from Annex 2b).

In raw material procurement policies, companies tend to choose local suppliers if they have favourable costs compared to other suppliers. However, more than half of the Italian (53,7%) respondents chose the option of local suppliers regardless of costs while most respondents from Portugal (56.3%), Austria (55.1%), Germany (50%), and Romania (49.1%) chose the option of local suppliers only if they have convenient costs compared to other suppliers (Figure S11.1 from Annex 2b).

Regarding the suppliers of food ingredients, we can observe a tendency to choose local suppliers regardless of cost: Austria (62.3%), Italy (57.4%), Romania (52.7%). However, most respondents from Portugal (54.9%) and Germany (47.6%) opted for local suppliers only if the costs are favorable compared to other sources. In Germany, a fairly close proportion of the respondents who opted for the 2 options can be observed (Figure S11.2 from Annex 2b).
In the case of suppliers for other products, the tendency is quite clear to opt for local suppliers only if the costs are reasonable compared to other sources (Figure S11.3 from Annex 2b).

Climate change will cause certain legal restrictions for companies in Europe. More than half of the respondents from Portugal (62%), Germany (61.9%), Romania (54.5%) and Austria (52.2%) are convinced that there is a probability that these legal restrictions will affect dramatically the company's activity in the future. Respondents from Italy are more optimistic and only a quarter of them believe that there will be dramatic changes for companies, while almost 60% of respondents believe that such a thing is not likely to happen (Figure S12 from Annex 2b).

3.3.3. Microcredentials

Although they did not have the opportunity to discuss to a great extent and compare the best sustainability practices with their colleagues, the companies in which they work seem relatively well prepared to implement the best practices in the field. More than 40% of the participants from Austria (42%), Romania (43.6%) and Germany (47.6%) discussed in some way with their colleagues about good sustainability practices (Figure M1 from Annex 2b).

Approximately 30% of the respondents from Austria (29%), Romania (29.1%), and Germany (31%) stated that they had the opportunity to discuss extensively with their colleagues the best sustainability practices. Although in Italy only 16.7% of the respondents discussed sustainability practices with their colleagues, 44.4% declared that the companies they work in are extremely well prepared to implement the best sustainability practices. Almost half of the participants from Germany (47,6%) declared that the company is very well prepared to implement the best sustainability practices, already starting to adapt (Figure M2 from Annex 2b).

Companies have begun to make customers aware of issues of sustainability, resource conservation, and compatibility with the environment through messages placed in the organisation. The highest average was obtained for compatibility with the environment among respondents from Italy (3.09), followed by those obtained for sustainability among respondents from Germany (3.05) and Austria (2.96). The lowest averages were recorded among the participants from Portugal: 2.61 for sustainability and 2.49 for compatibility with the environment (Fig. no.25).

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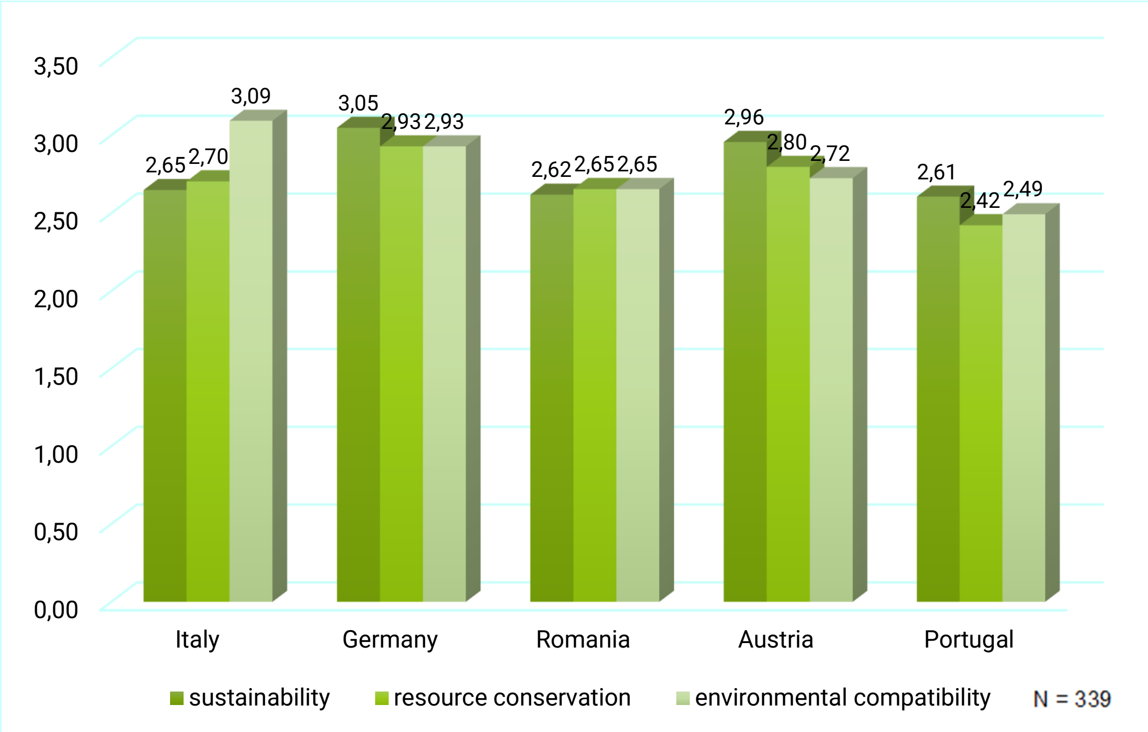


Fig. no. 25 Have you taken initiative to make your customers aware, through written messages placed in the organisation, on the subjects of:

Some actions were implemented in the field of green tourism. In Germany, there is already a green team in many companies or people responsible for green actions have been nominated (42.9%), and the staff has been sent to training on green aspects (42.9%) (Fig. no.26).

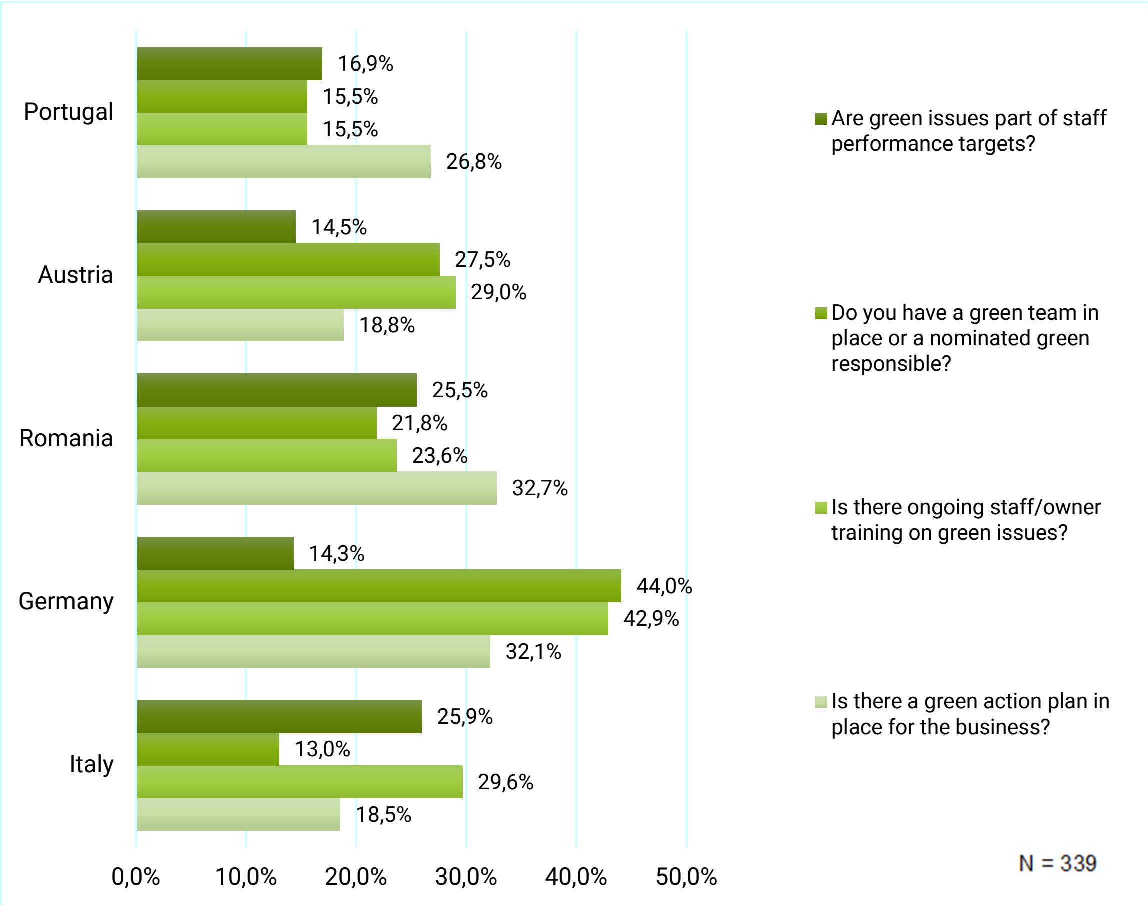


Fig. no. 26 Please mention what actions are you implementing in the field of the green tourism (how your company is supporting the green issues): Yes, we have already adopted

In Portugal, although more than 50% of the participants declared that there is still no green team within the company (50,7%), nor was the staff sent to training on green aspects (52,1%), however, in the next 2 years there are clear intentions in this regard. Also in Romania, in the coming years, it is intended that the staff be sent to training on green aspects (47.3%). Almost half of the respondents from Germany declared that a plan of green actions in business will be implemented in the next 2 years (Fig. no 27).

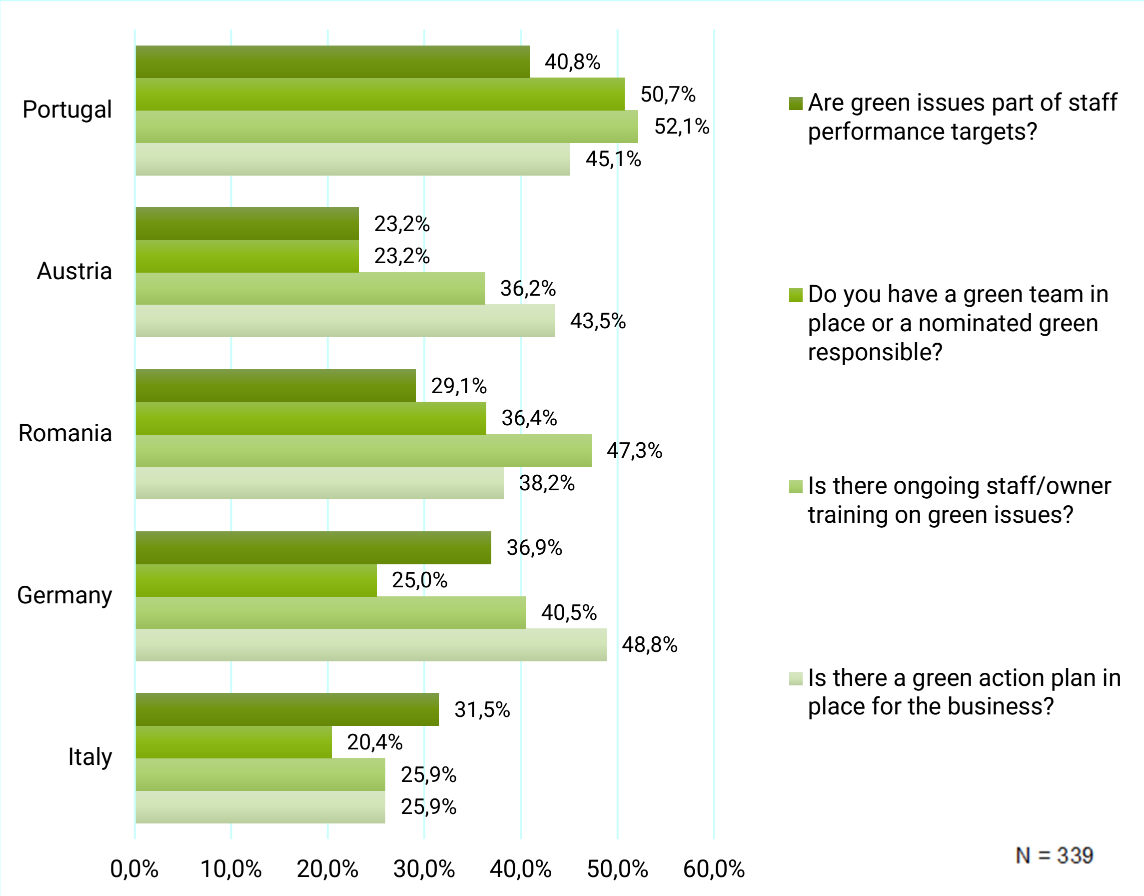


Fig. no. 27 Please mention what actions are you implementing in the field of the green tourism (how your company is supporting the green issues): No, but we intend to do so in the next 2 years.

The concept of the European Green Deal is known differently in the countries participating in the research. About half of the participants have heard about the European Green Deal: Italy (46%), Austria (46.4%), Germany (53.6%) and Portugal (53.5%). In Romania, although over 72.7% of the respondents declared that they had heard of the European Green Deal, it is necessary to investigate what is the degree of knowledge or effective understanding of this term (Fig. no 28).

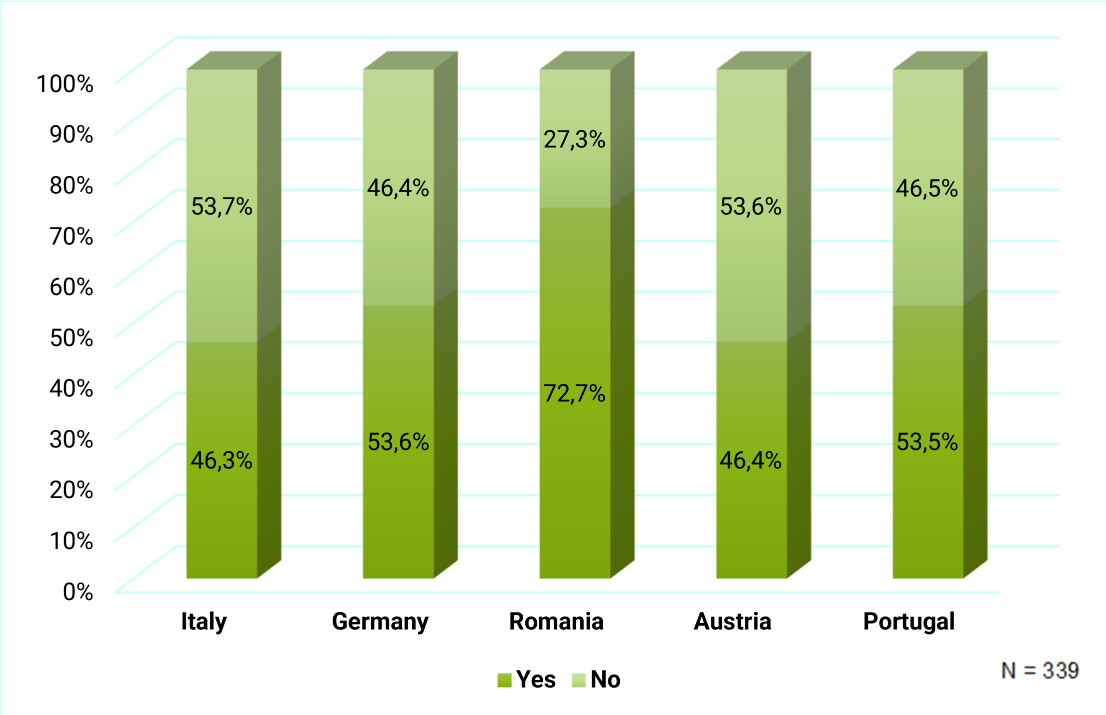


Fig. no. 28 Have you ever heard of the "European Green Deal"?

Some knowledge of sustainability, the EU Green Deal and circular economy can be found in the respondents' answers. It seems that the term sustainability is better known compared to the terms EU Green Deal and circular economy among participants from Romania (3.09), Italy (3.00), Germany (2.88) and Austria (2.71). Participants from Portugal seem to know better the term circular economy (2.37) compared to that of sustainability (1.30). Although half of the participants declared that they had heard of the term the EU Green Deal, the level of knowledge on this topic is not very high. On a scale from 1 (not at all) to 4 (to a great extent), the average obtained in Germany was only 1.63, in Austria 1.64 and in Italy 1.89. These aspects show a low level of knowledge in the field of the European Green Deal (Fig. no 29).

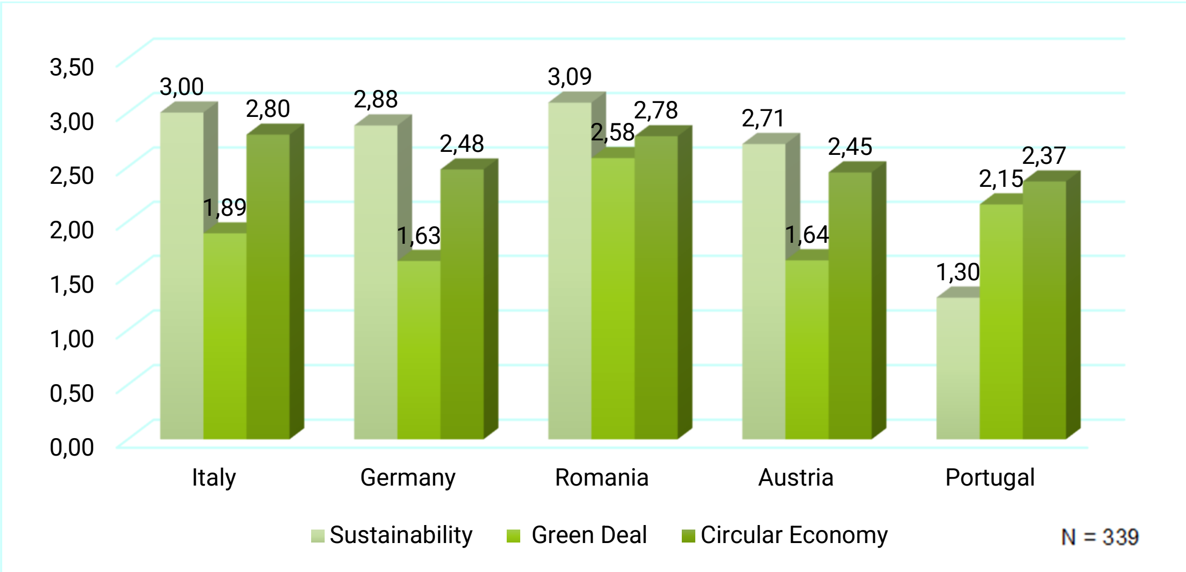


Fig. no. 29 Does your actual professional/academic education and training include knowledge about the following issues?

The level of knowledge was evaluated on a scale from 1 (poor) to 4 (very good). The highest average was obtained for sustainability in the case of participants from Germany (3.40), followed by Austria (3.14), which indicates a good level of knowledge. The average obtained in the case of the EU Green Deal knowledge is generally below 2 (rather poor). The knowledge of the participants is quantified a little better in terms of circular economy knowledge: 2.80 in Germany, 2.77 in Austria and 2.59 in Italy (Fig. no. 30).

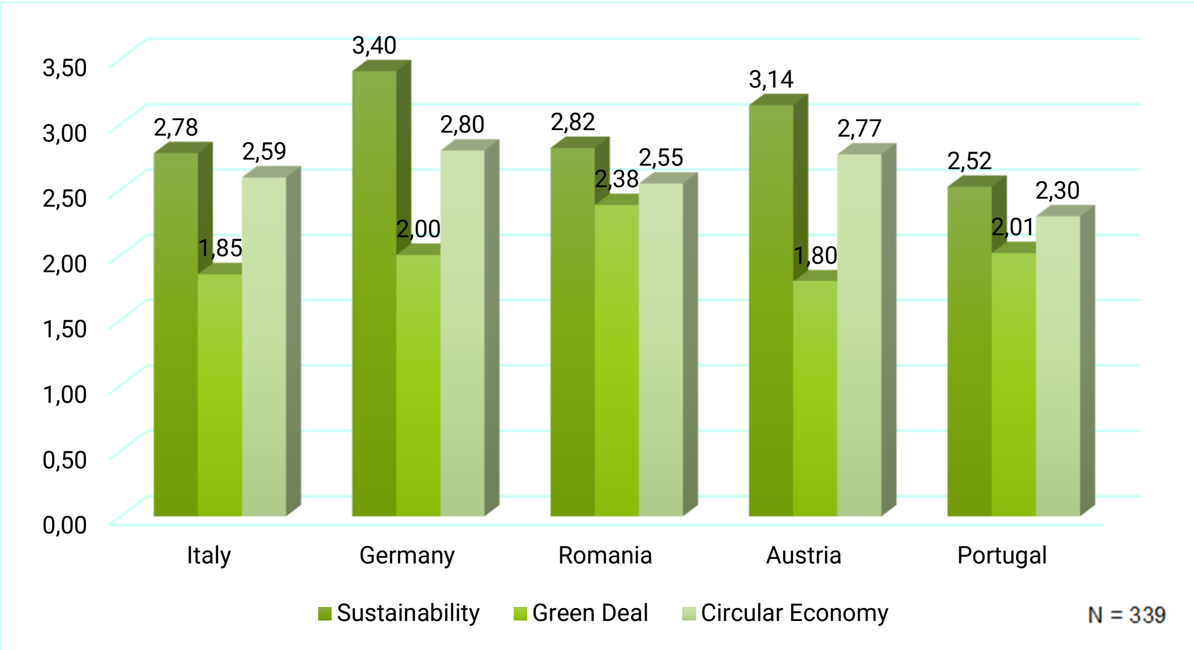


Fig. no. 30 How do you rate your knowledge in the following fields?

The frequency of training courses in the field of tourism or hospitality in the countries participating in the study is different. More than 40% of the participants in Italy said that the staff participates in training courses quite often, even more than 2 times a year, while in other countries the participation in the courses takes place only occasionally when needed (Fig. no 31).

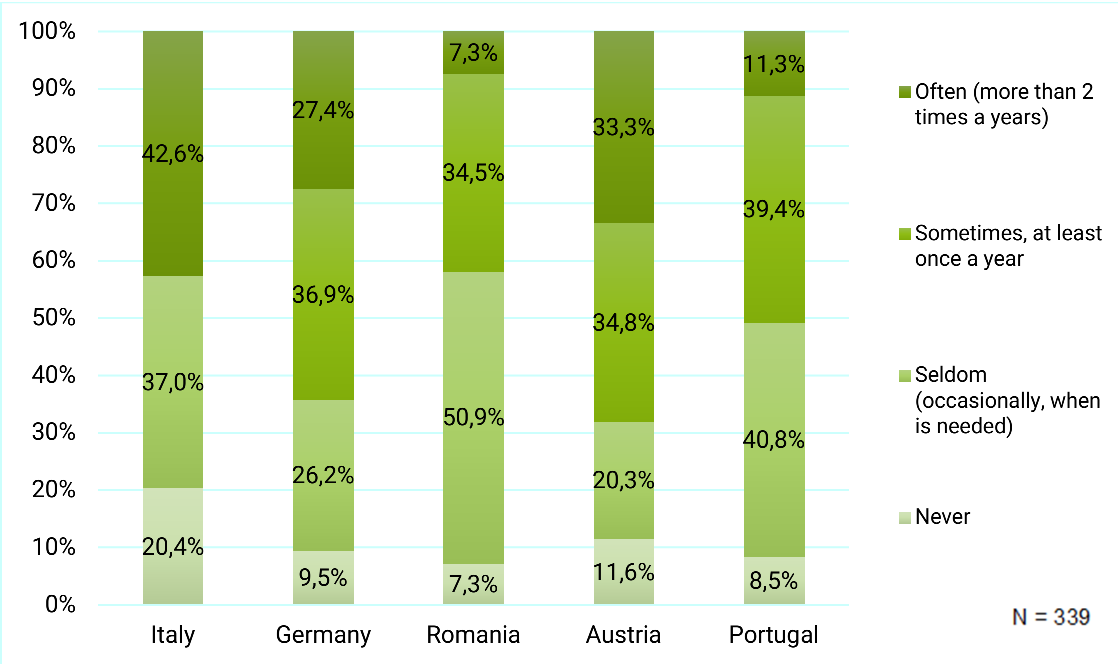


Fig. no. 31 Does your staff/colleagues undertake professional training in tourism and hospitality?

More than 45% of the participants from Portugal expressed their strong agreement related to the participation in training or courses on the topic of the environment, but the participants from other countries also agreed that they need trainings or courses on the topic (Figure M9 from Annex 2b).

The evaluation of the knowledge of the work colleagues on a scale from 1 (poor) to 4 (very good) in the 5 countries included in the study led to obtaining higher averages in the case of aspects related to sustainability compared to those of the European Green Deal and economy circular. The highest averages for sustainability were obtained in Germany (2.69) and Austria (2.68), which indicates a relatively good level compared to the level of Green Deal knowledge, which is rather poor: 1.63 in Germany and 1.72 Austria. The level of knowledge of sustainability, circular economy and Green Deal is relatively similar in the other countries included in the study (Fig. no. 32).

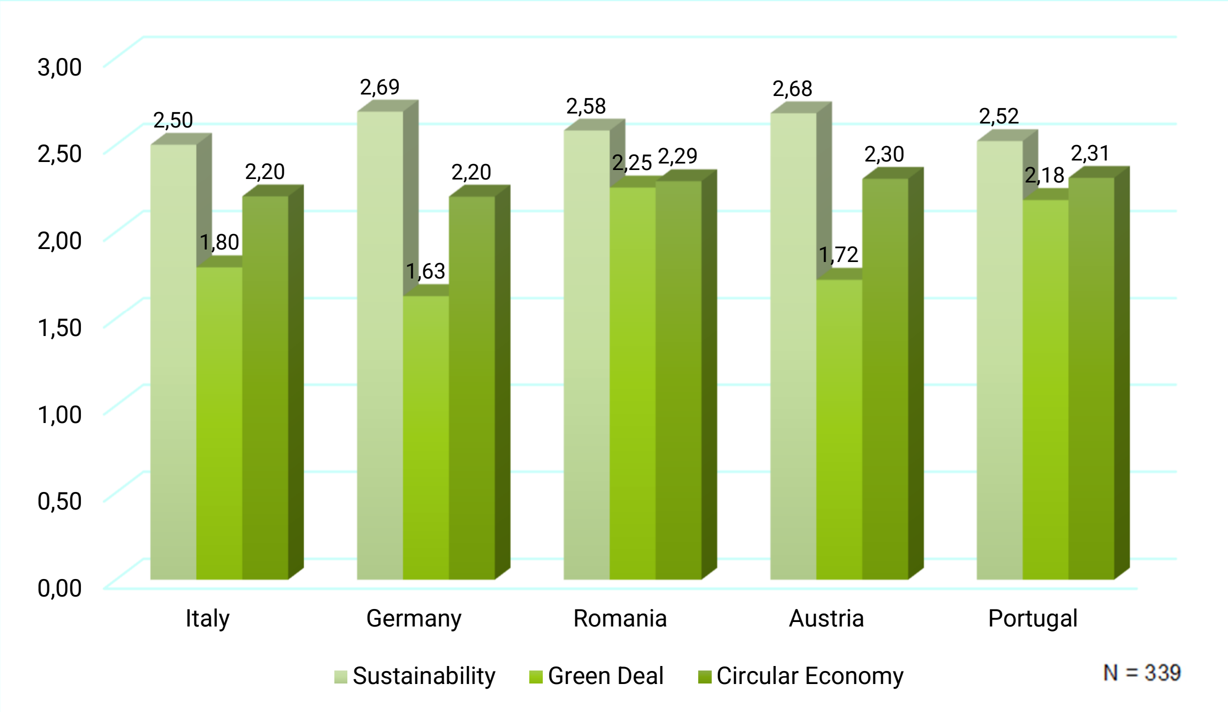


Fig. no. 32 How do you rate the knowledge of your work colleagues in the following fields?

Staff participation in courses on environmental topics is very important, over 30% of the participants from Portugal and approximately 30% of the respondents from Romania (29.1%) and Portugal (29.6%) showing a strong agreement related to the need for colleagues to participate in the training. Smaller percentages of respondents from Germany (19%) and Austria (11.6%) expressed their agreement in this regard (Figure M11 from Annex 2b).

The aspects of sustainability are connected with business but to a relatively different extent in the countries participating in the study, according to the centralized answers. The highest percentage of respondents who expressed a very strong agreement regarding the connection between sustainability and business can be found in Portugal (38%), followed by Germany (26.2%) and Romania (20%) (Figure M12 from Annex 2b).

The decision to participate in the courses is made depending on the organizing institution and the type of certificate offered. Although, in general, there is a preference for certificates issued by a training organisation in the public domain, the Romanian respondents rather expressed their preference for certificates issued by organisations in the private sector (Fig. no. 33).

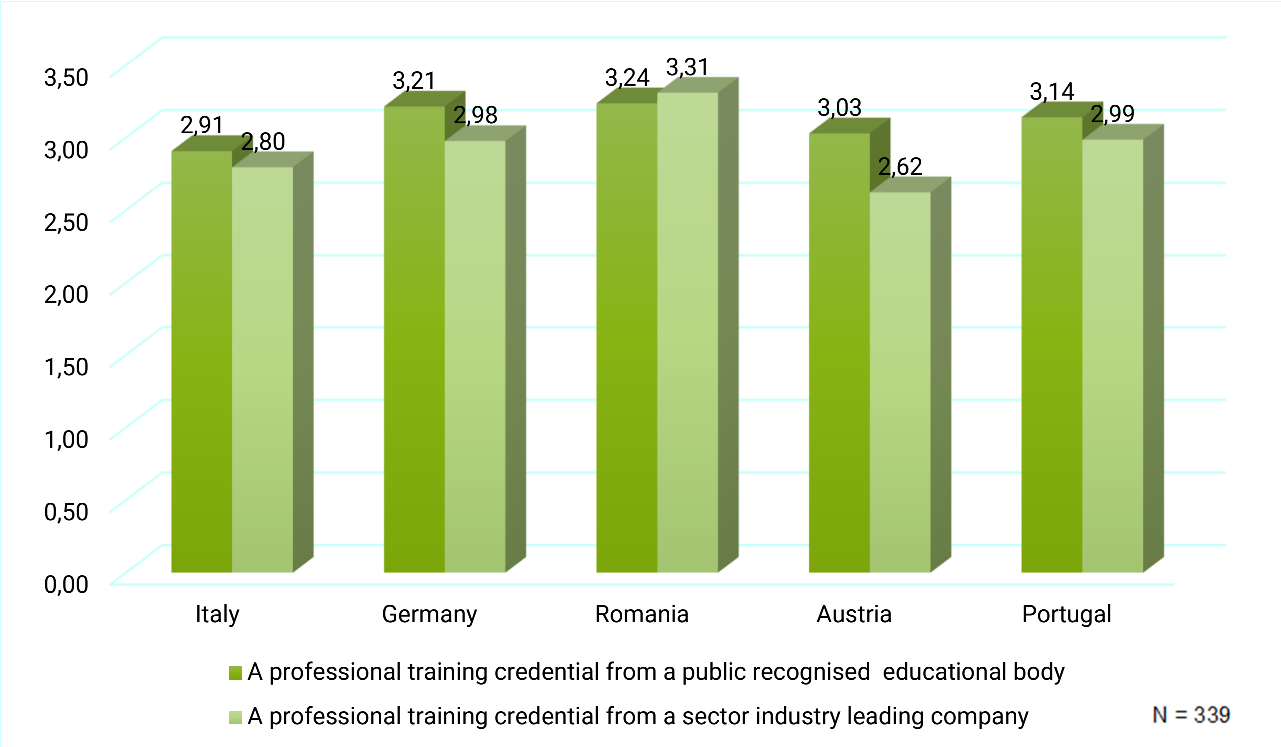


Fig. no. 33 After training, the participants receive a certificate. Please let us know how serious and trustable the certificate is, according to the training organizer (based by mean)

There is interest among the participants from the 5 countries participating in the study to know how to improve their activity to fulfill the sustainable objectives. The topic that obtained the highest score was "Supplying clean, affordable and secure energy", followed by "Farm to fork": a fair, healthy and environments (Fig. no. 35).

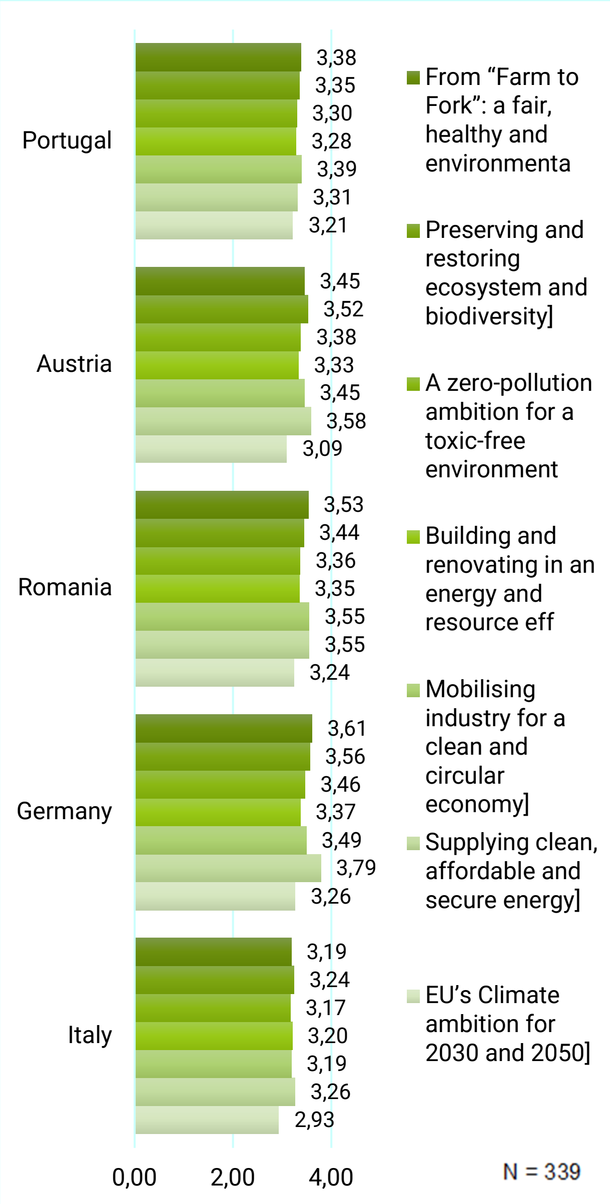


Fig. no. 35 "I have the interest to learn more about how I could improve my business, in line with the objectives of EU's economy for a sustainable future, by accessing the information on the following topics..."

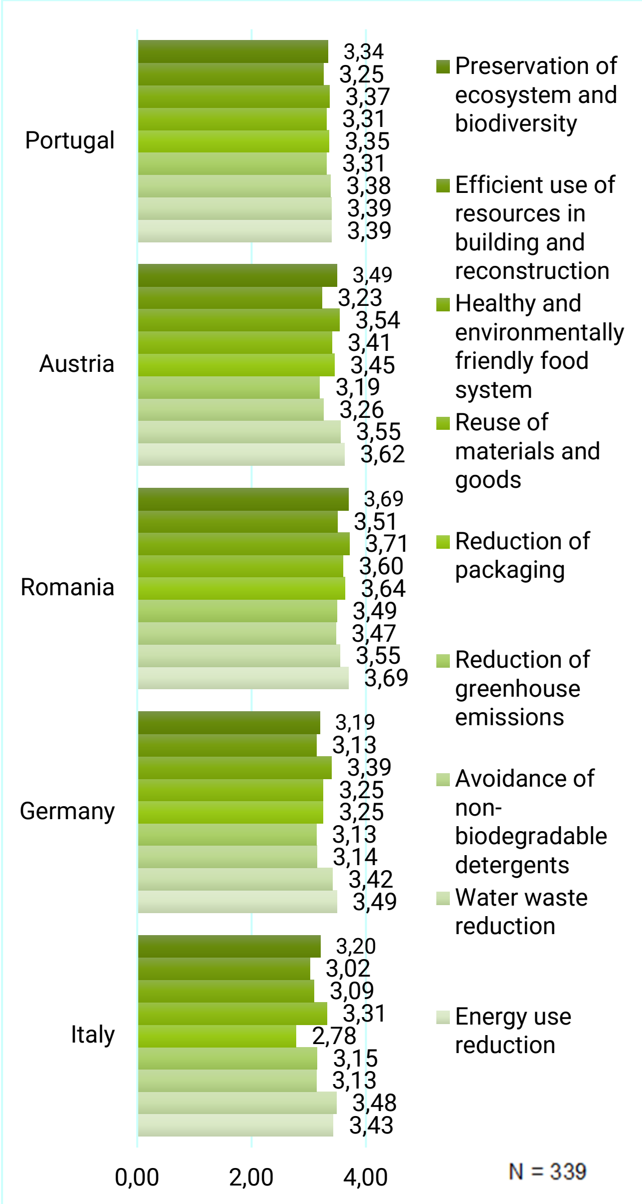


Fig. no. 34 Please complete the following sentence "I would like to know more information about:"

The participants want to know additional information especially about how they can reduce energy or water consumption. High scores were obtained in Austria, Romania and Germany and for the healthy and environmentally friendly food system (Fig. no.34).

4. Findings regarding the impact of the European Green Deal on SMEs and the future development of Green Tourism in Europe

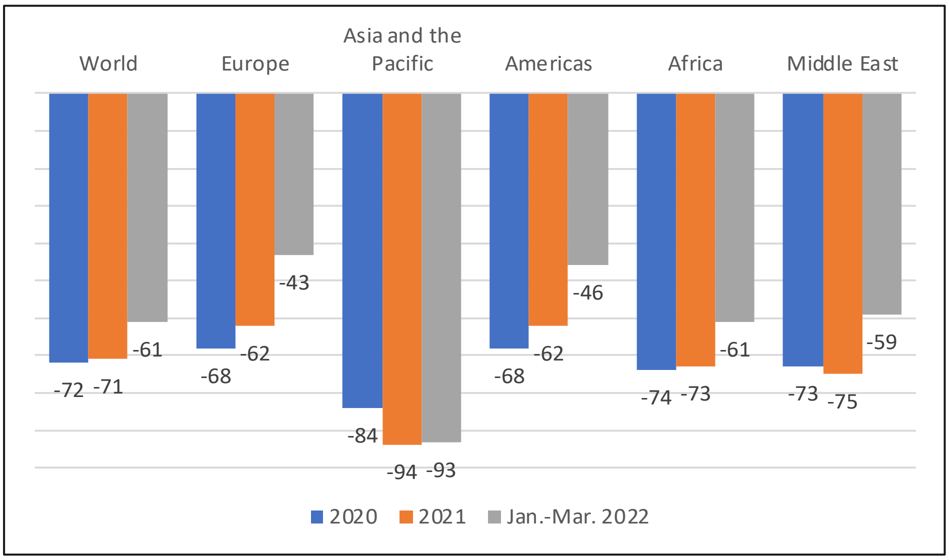
4.1. Post-Covid tourism scenarios and preview for spring 2022

4.1.1. Introduction

With the reduction of restrictions, tourism shows signs of recovery thanks to the greater possibilities for people to move. At the same time, consumer-tourist confidence is growing in all countries.

The UNWTO indicated an increase in international arrivals of 182%, corresponding to 76 million (+47 million in the month of March alone). Almost tripled compared with the same period of 2021. Europe leads (+280%), thanks to the strong boost of the domestic demand. A positive performance was detected also for the Americas (+117%). Despite this progress, arrivals to Europe and the Americas are expected to be lower than in 2019 by -43% and -46% (Fig. no. 36).

Fig. no. 36 Arrivals change per world area: Y 2020, 2021; 2022 Jan. Mar



Source: UNWTO. (2022b). World Tourism Barometer. Volume 20 – Issue 2. Retrieved from https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2022-03/UNWTO_Barom22_02_March_excerpt-1.pdf?U1d1hw2v5Ga4TSmloKQRNbFKpr6mNygA

The trends are also positive in the other areas, which however suffer from an even higher negative gap with 2019. Asia and the Pacific saw a 64% increase over 2021, but the pre - pandemic differential is -93% as many destinations remained closed to non-essential travel. Mediterranean Europe, along with the Caribbean, has shown the fastest recovery rates, with some destinations reaching or exceeding pre -pandemic levels.

4.1.2. The provisions for 2022 globally

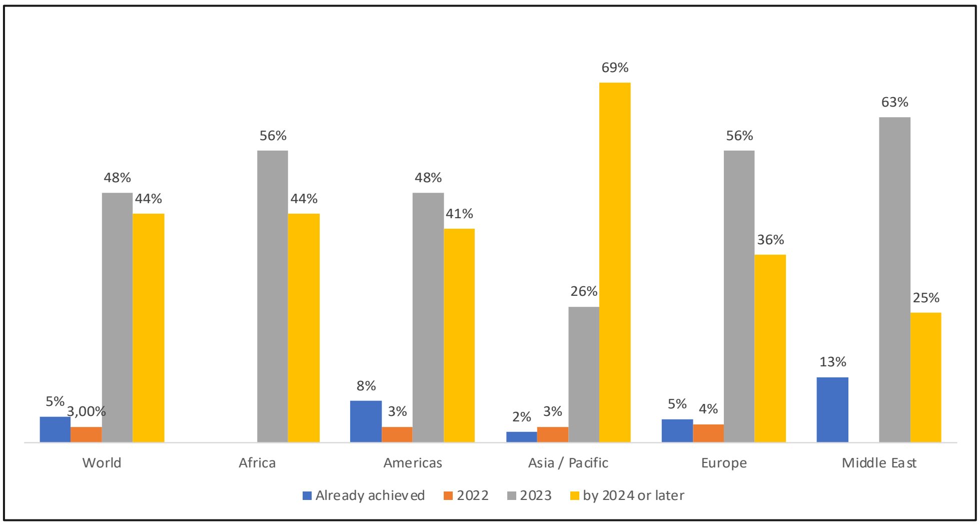
According to the UNWTO, the gradual recovery is expected to continue throughout 2022, because of the easing of travel restrictions. Despite these prospects, the particularly difficult economic context and the Russia-Ukraine conflict represent a risk for the consolidation of the recovery of international tourism. The war seems to have had a limited impact on the overall results so far, although it is interrupting or affecting travel to and from Eastern Europe. The conflict is having important economic repercussions due to the cost of energetic resources which has driven inflation throughout the world and increased the risk of supply interruption. The costs for the provision of services, especially the basic ones for the sector (accommodation and catering), have increased significantly. Russia and Ukraine accounted for about 3% of global spending on international tourism in 2020, and at least $14 billion in global tourism revenues could be lost if the conflict continues. The importance of both markets is significant for neighbouring countries, but also for European destinations in the Mediterranean area.

The UNWTO signals the growth of the Confidence Indicator which has returned to the levels of 2019. Optimism is quite widespread among experts from all over the world and confidence is based on the enormous potential of a "suppressed" demand, which at the moment, is expressed primarily for intra-European and for trans-Atlantic travel and signalized by a significant growth in flight bookings.

According to UNWTO's survey, an overwhelming majority of tourism professionals (83%) saw growing perspective for 2022 spring than for 2021, insofar as the corona virus is contained and destinations continue to ease or lift travel restrictions. However, the closure of some important outbound markets, mainly in Asia and in the Pacific, as well as the uncertainty resulting from the Russia-Ukraine conflict, could delay the effective recovery of international tourism.

Looking to the future, 48% of experts are convinced that international arrivals will return to 2019 levels only in 2023 (the figure was 32% in the January survey), while 44% judges it possible only in 2024 (down from 64% in the January survey) (UNWTO, 2022a).

Fig. no. 37 Timing to return to pre -pandemic levels



Source: UNWTO. (2022b). World Tourism Barometer. Volume 20 – Issue 2. Retrieved from https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2022-03/UNWTO_Barom22_02_March_excerpt-1.pdf?U1d1hw2v5Ga4TSmloKQRNbFKpr6mNygA

Forecasts also confirmed by the European Travel Commission, which indicates that the tendency to travel is particularly high throughout Europe (Table no. 7).

Table 7 Tourism travel forecast economics (in %)

Region	Inbound					Outbound				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
World	-72,4	7,3	98,2	36,9	20,8	-72,1	4,8	101,9	37,1	20,8
Americas	-68,4	7,9	91	29,3	16,4	-71	8,4	101,8	30	16,7
North America	-68,4	1,8	102,5	31,6	17,3	-71,1	9,7	105,4	29,9	16,6
Caribbean	-68,5	78,9	30,6	19,4	10,5	-68,1	39,3	43,4	21,5	15,6
Central & South America	-68,4	13,4	119,4	28,5	17	-71,1	0,2	95	31,3	17,1
Europe	-68,1	22	79,3	23	15,6	-67,1	17,1	83,1	23,6	15,6
ETC + 2	-67,2	17,5	92,1	20,9	13,9	-66,1	13	98,3	21,9	13,6
Europe	-66,6	10,8	100,6	21,8	13,6	-66,2	13,3	98,3	21,8	13,5
Non-EU	-73,6	74,1	16,1	29,5	25,4	-70,9	35,5	23,2	35,3	27,8
Northern	-69,9	-18,4	153,6	36,5	15,6	-72,8	-8	206,6	24,5	14,7
Western	-57,9	-5,7	92,9	18,8	12,6	-61,3	17	74,9	20,3	12,4
Southern/Mediterranean	-71,5	58,3	74,7	16,5	13,5	-68,6	23,8	87	21,6	13,4
Central/Eastern	-73,3	33,3	37,5	40,7	25,4	-69,8	35	24,3	31,9	24,5
Central & Baltic	-72,2	13,1	102,3	27,8	16,7	-65,5	22,6	57,5	22,4	16,1
Aisa & the Pacific	-84,1	-58,3	394,3	194,9	36,3	-83,5	-52,1	331,1	99,7	35,9
North East	-88	-36,7	322,9	114	38,1	-85	-46,8	301,3	107,7	38,7
South East	-81,4	-86,4	1080	109,5	37,3	-83,1	-73,9	631,8	102	31,7
South	-75,8	-30,6	167,3	53,3	23,9	-72,7	-23,6	121,3	49,6	23
Oceania	-76,3	-43,6	210,4	79,9	28,6	-82,2	-67,7	779,2	95,6	38,7
Africa	-74,4	21,6	43,9	53,3	30	-70	-2,2	50,7	55,4	30,4
Middle East	-67,5	7,6	105,8	27,1	18,2	-68,8	28	61,6	31,9	21,8

Source: European Travel Commission. (2022). Trends & prospects - quarterly report (q1/2022). Retrieved from https://www.slovenia.info/uploads/dokumenti/raziskave/etc_reports/Quarterly-Report-Q1-2022_Public.pdf

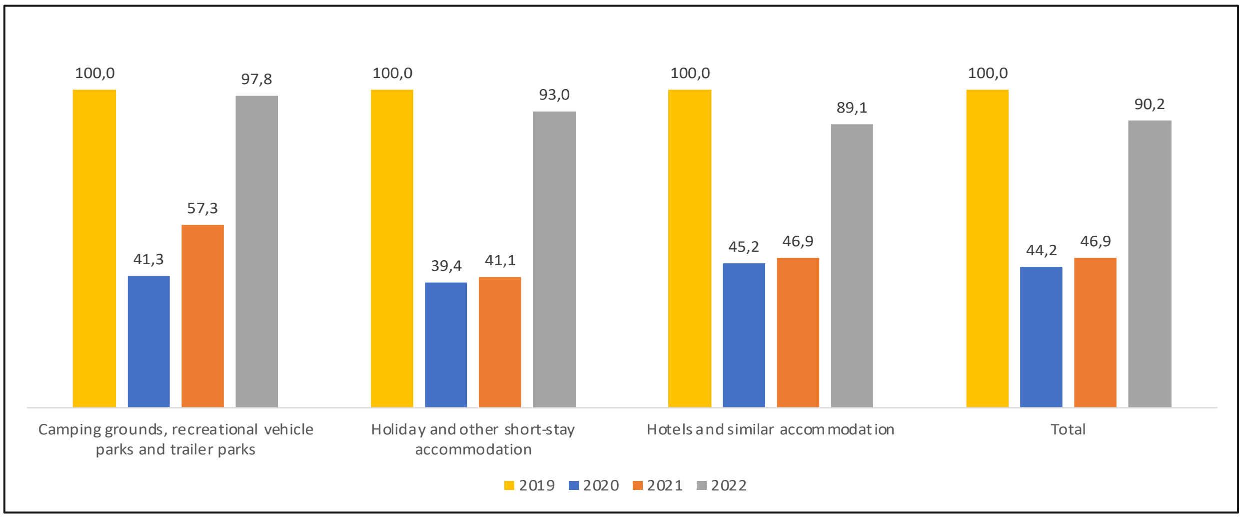
Three out of four European potential tourists have declared their intention to travel in the next six months, with a significant proportion of trips concentrated within Europe during the summer months.

4.1.3. Tourism in Europe

Eurostat reported tourism data for the whole European Union until August 2022, and for most of the countries till September 2022. Until this date, night spent in European accommodation facilities in 2022 were 2,255 billion. The 62% shall be recognized to domestic tourists and 38% to the international ones.

Comparing the first eight months of 2022 with the same period of 2019, we see that, albeit the recovery is evident, tourism nights did not achieve the 2019 values (Fig. no. 38).

Fig. no. 38 Nights in accommodation facilities Jan – Aug. EU 27. Index Jan 2019 = 100



Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

The figures show that recovery was different depending on the type of accommodation facility. Camping ground and similar received tourists for a number of nights covering 98% of the 2019 value.

Hotels and similar accommodations got only 89% while the total was 90%. There is no scientific study that analyses this result, anyway we can attempt to make some hypothesis and connect the performances with: i) the still high level of domestic tourism; ii) the search for open spaces and personal distance to guard against the pandemic; iii) the new trends in demand, linked to freedom, nature and the outdoors; iv) not least an attention on the cost of the holiday.

4.2. Tourism in the CREDinGREEN partner countries

Night spent in the accommodation facilities in the five project partner countries represented 38% of the EU27 area, almost two points less than the in the same period – Jan. Aug. - of y2019 (Table 8).

Table 8 Incidence of overnights in partner countries on total EU 27 Jan. – Aug (in %)

Country / Region	2019	2022	Recovery status
Austria	5.2	5.5	91.8
Germany	14.2	12.4	84.7
Italy	15.8	15.9	87.3
Portugal	3.1	3.1	95.5
Romania	1.1	0.9	79.6
Total partner countries	39.42	37.95	
EU 27	**100.00**	**100.00**	**90.2**

Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

Italy has the higher share of overnights (16%) with no evidence of reduction of the importance. Germany is in the second place, dropped from 14% of 2019 to 12% of 2022. No big changes in the incidence of the others. Germany was probably most affected by the lack of business tourism and the reduction in flights. The following reading of individual countries can help us (Table 9).

Table 9 Synthesis of CREDinGREEN country partners tourism data (Jan. – Aug.)

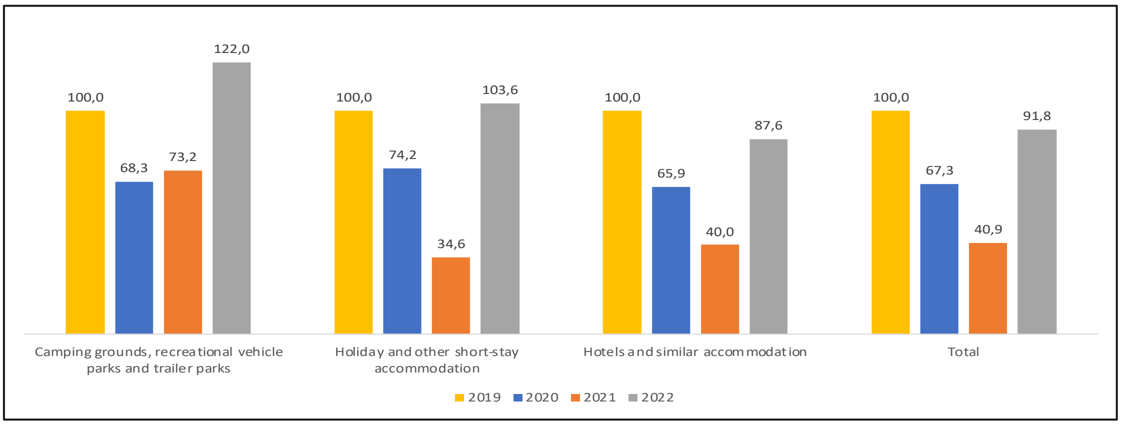
Variable	Country	2019	2020	2021	2022	Recovery status
	Arrivals					
Arrival	Austria	29.388.432	17.578.287	11.885.507	25.805.779	88%
Arrival	Germany	124.454.477	68.304.299	50.148.366	103.200.414	83%
Arrival	Italy	94.380.242	41.453.546	50.021.510	76.887.426	81%
Arrival	Portugal	19.116.711	7.727.825	8.313.770	18.442.336	96%
Arrival	Romania	9.137.000	4.367.369	6.437.792	7.613.097	83%
Arrival	**CIG partner countries**	**276.476.862**	**139.431.326**	**126.806.945**	**231.949.052**	**84%**
Arrival	European Union - 27 count.	703.717.200	347.826.565	359.548.990	632.955.637	90%
Arrival	**Incidence on EU 27**	**39%**	**40%**	**35%**	**37%**	
	Nights					
Nights	Austria	95.314.898	65.401.769	41.788.340	88.475.666	93%
Nights	Germany	299.709.314	185.156.742	152.158.193	269.236.972	90%
Nights	Italy	330.217.876	159.238.267	199.913.148	292.260.161	89%
Nights	Portugal	54.331.068	21.279.770	23.746.987	52.745.091	97%
Nights	Romania	20.874.114	10.163.356	14.733.465	16.686.602	80%
Nights	**CIG partner countries**	**800.447.270**	**441.239.904**	**432.340.133**	**719.404.492**	**90%**
Nights	European Union - 27 count.	2.108.086.557	1.085.126.530	1.195.667.437	1.967.364.842	93%
Nights	**Incidence on EU 27**	**38%**	**41%**	**36%**	**37%**	
	Average stay					
Nights	Austria	3,2	3,7	3,5	3,4	106%
Nights	Germany	2,4	2,7	3,0	2,6	108%
Nights	Italy	3,5	3,8	4,0	3,8	109%
Nights	Portugal	2,8	2,8	2,9	2,9	101%
Nights	Romania	2,3	2,3	2,3	2,2	96%
Nights	**CIG partner countries**	**2,9**	**3,2**	**3,4**	**3,1**	**107%**
Nights	European Union - 27 count	3,0	3,1	3,3	3,1	104%
Nights	**Incidence on EU 27**	**97%**	**101%**	**103%**	**100%**	

Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

4.2.1. Austria

Figure of overnights in Austria show the strong dynamic of Camping grounds, recreational vehicle, parks, and trailer perks and that of Holidays and other short stay accommodations, that passed the number of nights of y2019. The weak performance of the hotels kept the number of nights 8 points down the y2019 for the Jan. - Aug period (Fig. no. 39).

Fig. no. 39 Nights in accommodation facilities Jan – Aug. Austria. Index Jan 2019 = 100



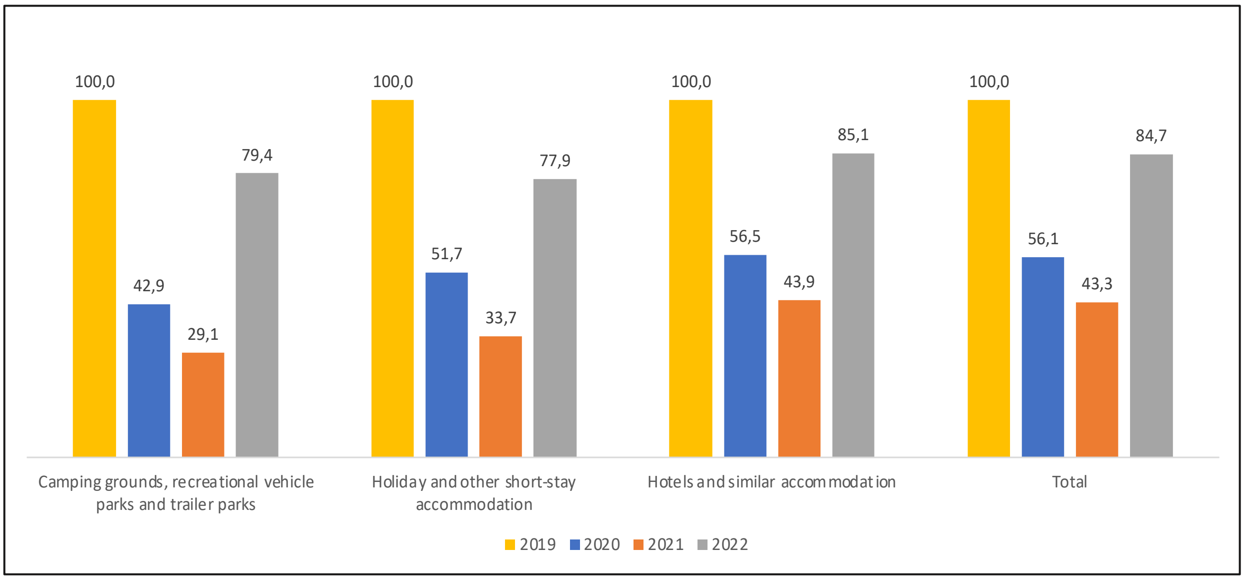
Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

The monthly dynamic shows a particularity in the month of June 2022, when the number of nights passed that of y2019 in the same period. One reason could be the intense hot climate of the past summer.

4.2.2. Germany

Recovery in Germany seems to be very slow. Total nights spent in the country in the period Jan. – Aug. 2022 achieved only 85% of the volume in the value in the same period in 2019 (Fig. no 40).

Fig. no. 40 Nights in accommodation facilities Jan – Aug. Germany. Index Jan 2019 = 100



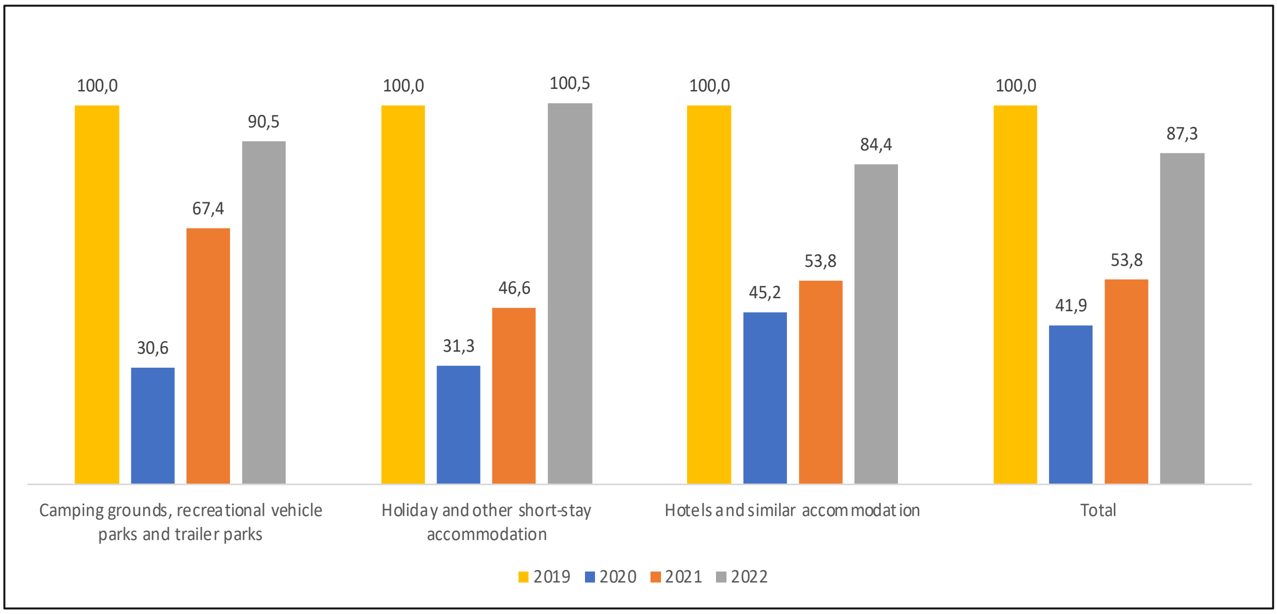
Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

Contrary to many other countries, Hotels outperformed other form of accommodation. The lack of nights must be attributed to foreigners, whose weight has gone from 17% to 13% of totals, and to a notable absence of tourists in the winter of 2022.

4.2.3. Italy

In Italy too, the figure of nights spent between Jan. and Aug. 2022 show a total of night spent 13% lower compared with y2019. Camp sites and similar and Hotel show more difficult in recovering while Holidays and other short stay accommodation reached again the y2019 levels (Fig. no 41).

Fig. no. 41 Nights in accommodation facilities Jan – Aug. Italy. Index Jan 2019 = 100



Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

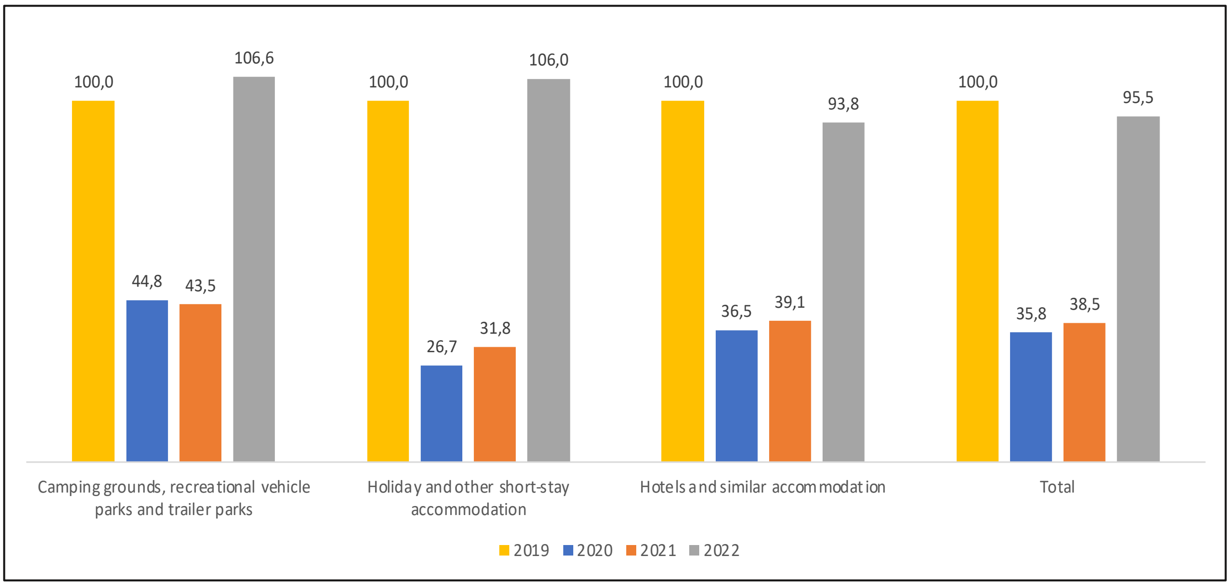
This picture reflects the success of Agritourism and Short home stay in Italy in 2022, related with a research of contactless stay, secondary destinations and local typicity. The international tourist nights did not recover completely, due to the absence of Asian visitors and the paralysis of flows from Russia.

Co-funded by the
Erasmus+ Programme
of the European Union

4.2.4. Portugal

Portugal reached the higher level of recovery within the partner countries. A recovery that saw leading Campground and similar, and Holiday and other short stay as accommodations. Hotels still remain under the 2019 figures, but still over 94%. Portugal was a fast-growing destination before the pandemic, and many travellers wishing to visit the country satisfied their will as soon as the restrictions were removed (Fig. no. 42).

Fig. no. 42 Nights in accommodation facilities Jan – Aug. Portugal. Index Jan 2019 = 100



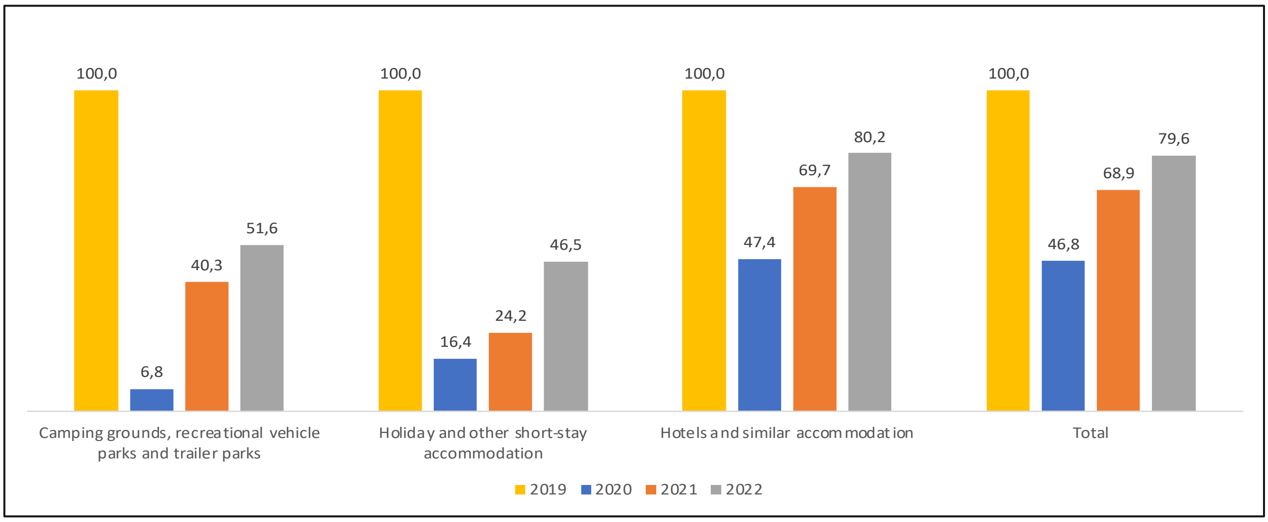
Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

Portugal was a fast-growing destination before the pandemic, and many travellers wishing to visit the country satisfied their will as soon as the restrictions were removed.

4.2.5. Romania

Romania had the worst performance during the first eight months of 2022 (Fig. no. 43).

Fig. no. 43 Nights in accommodation facilities Jan – Aug. Romania. Index Jan 2019 = 100



Source: https://ec.europa.eu/eurostat/databrowser/product/page/TOUR_OCC_NIM

Some figures could be also influenced by the refugees passing through Romania.

4.3. Market changes in the post-pandemic period

4.3.1. Situation

Tourism faces a series of challenges, due to economic volatility, geopolitical tensions and the increase in the prices of goods and services, together with the increasingly widespread desire to adopt sustainable and environmentally friendly behaviour.

While achieving pre-pandemic tourism volumes may capture major media attention, other aspects such as reducing the travel industry's impact on climate change or countering the pressure of over tourism in some destinations need not be overlooked (European Travel Commission). With the return of travel, the governance of destinations should adopt new principles in the planned management of tourist flows, to avoid the mistakes of the past and significantly reduce the negative effects of tourism on the quality of life of residents and on natural ecosystems.

- Environmental issue clearly emerges, transforming into a greater demand for eco-sustainable travel (Allianz Partners. 2022). Six out of ten families, aged between 25 and 40, say they will pay more attention to the environmental impact of their travels in the future, compared to the pre -covid period. Therefore, an increasingly marked orientation towards "slow travel", which prefers more sustainable options also in the choice of transport such as train, the camper and the caravan.

- The *Booking.com 2021 Report*, dedicated to sustainable tourism, affirms that pandemic could be a watershed for the tourism industry, due to the change of habits of a significant share of tourists. The demand for sustainable tourism is growing, with 81% of the interviewees declaring that they wish to stay in sustainable structures, a figure up by 7% compared to the previous year. Additionally, 61% of respondents indicated that the pandemic will prompt them to travel more sustainably in the future. This includes not only the choice of means of transport, but also the accommodation facility and the activities carried out in the holiday destination. Therefore, is growing the attention to environmental issues and the desire to live experiences that, in addition to bringing local culture closer, supports the communities of the destinations. Also, according to Booking.com, the desire to make more informed and respectful choices during the entire travel experience is particularly widespread among Italian tourists. For 93% of Italians interviewed, it is important to travel sustainably, 60% are influenced by recent news on climate change; 74% would like to leave the places they visit better than they found and 30% would like to travel in the low season to avoid mass tourism. About 25% have chosen to visit a destination closer to home to reduce their carbon dioxide emissions.
- The place where people travel, the length of the journey and the relative expenditure are factors directly influenced by inflation, rising energy costs and a general increase in the cost of living (hotels, restaurants, …) getting more repercussions on long-haul journeys, which are becoming increasingly expensive. The risk is that leisure travel is no longer seen as a priority by consumers with limited spending power.
- The way we work has changed dramatically due to the pandemic, and so has business travel. Over the past couple of years, with remote working and online conferencing taking the center stage, has drastically reduced business travel. As borders reopen, businesses are now finding ways to re-evaluate the way they

work. A reduction in business travel has helped to contain costs for companies, but the lack of travel has allowed to reduce carbon emissions, thus achieving sustainability goals. However, the desire for face-to-face interaction and relationships remains strong. On this front, the situation appears quite fluid and, probably, the integration strategies between online and offline will consolidate in the coming months, i.e., the ability to offer the market new proposals and unique experiences. Many live events will probably be organized, with the addition of virtual and immersive experiences, in a hybrid way. For example, the use of 3D holograms inserted in congress events, fairs and musical performances simply guaranteeing the participation of international speakers, without having to spend for air travel, accommodation costs, etc. is a recent trend.

- The need for adaptation in the changing demand created new opportunities. Challenges such as reduced spending power, geopolitical tensions and labour shortages are slowing the recovery. Many countries have provided incentives to promote domestic tourism (Singapore, South Korea, Japan and Hong Kong, China). Trends towards rural and nature-based tourism are an opportunity for less developed economies.
- Greater attention in traveling is following the pandemic (European Travel Commission). Travelers will continue to pay attention to COVID-19 guidelines – social distancing, masks and hygiene – throughout 2022 and 2023, avoiding crowded places while traveling. Many are willing to take out travel insurance to reduce the risk of further health expenses or cancellation of service reservations, perhaps preferring nearby destinations. To increase travel certainty, reservations will be made not too far in advance and therefore trips will be planned in a more accurate and detailed way.
- Flexibility will continue to be a key consideration for most travelers throughout 2022; this will also influence the search for accommodation looking for the possibility of canceling the reservation or for personalized services.

4.3.2. Experts' opinion about market changes in the post-pandemic period

As part of the research process carried out in our project, there were organized a set of structured interviews with specialists in tourism field from all members countries in the project. We looked for key persons in ministries, national or regional professional bodies, professionals with international experience, or people with decision-making power at local, regional and/or national level, entrepreneurs, and DMO experts.
All in all, there took place 9 qualitative, structured interviews: 2 interviews in Germany (hotel owner/hospitality association and regional destination management), 2 in Italy (hotel manager/regional destination marketing, destination project management), 2 in Portugal (tourism specialist, restaurant manager) and 3 in Romania (director of a national destination management and marketing organisation, 2 researchers from a national institution for tourism research and development).

The interviews addressed questions regarding the impact of COVID-19 pandemic on tourism sector, sustainable tourism and European Green Deal approach, present and future actions to rebuild the tourism and travel sector especially at SMEs level. A synthesis of the answers at the structured interviews is presented below.

A first set of two questions discussed the impact of COVID-19 pandemic on the tourism and travel sector. According to the opinion of the participants at interviews, the year 2022 marked the recovery of tourism, reaching, for some destinations, values of arrivals and overnights bigger than those of 2019. These results are reached after a process that did not completely stop tourism but changed its characteristics: the flows were converted from international to national, isolated and quiet locations and accommodation facilities where distancing was easier had taken the place of mass destinations, real estate formerly used mainly for weekends were reopened for the whole holidays. Ending the pandemic, the desire to travel was reborn, towards classic and desired destinations, at the point that certain cities and territories suffered again the "over tourism" phenomena.

At the same time, the pandemic speeded up an ongoing behavioural process that pays increasing attention to aspects that can be summarized by the word Well-being: physical and mental attention which have led to greater care: for the food health expressed by bio and zero chemical ingredients, for various meditation techniques, for Spa and Thermal resorts, for the environment through energy saving and circular economy, for smart mobility with the growing use of bicycles and electric cars, etc. It is an evolving lifestyle that every tourist brings with him/her even when staying in other places than where he/she resides. However, other elements that condition the system are grafted onto this post-pandemic vision, generated by events that have overshadowed the same Covid-19, despite the attention that is still dedicated to it: the war in Ukraine, which has the effect of the increase in the cost of energy and fuel for transport, inflation and the realignment of international currencies, the difficulty in finding manpower, climate change which has even made it difficult to visit some places, are the main ones.

Regarding the most affected activities on long term, the participants at the interviews identified the following:

- air transport, due to travel restrictions,
- business tourism (MICE) and events,
- accommodation in major cities, mainly due to their dependence on event tourism,
- cruises,
- coach travel and groups
- travel agencies.
- any business that operates with a traditional attitude and no innovation.

Air travel and cruises were predicted to take the longest to settle down while hotels and restaurants, were considered as having already fallen back into old patterns. The same for the organized transport for groups.

The reason for the difficulties was the proximity of travellers on ships and planes, the risk of being quarantined on board, and the previous long stop, which would have required a restart also in terms of personnel and maintenance. The same difficulties were predicted for coach tours and groups.

On the other side, is stated that the higher-level accommodations were those affected quite positively by the Covid-19 pandemic. The customer spent a little more to be safe on several levels during their vacation. Consequently, low-level accommodations with cheap prices and low quality went back, accelerating a trend already perceived before the pandemic. Another sector that did not experience crisis was the one of open air and adventure tourism, done in nature and with minimal contact with large gatherings of people.

After the pandemic, it will be necessary to pay attention to innovation to get out of business crises. Mainly those hotels established between the '50s and the '80s, managed with rigidity and old model, structured as micro-businesses, family run, facing problems of generation change, employees that must get in line with the new demand, and with the changes in lifestyle, accelerated by the pandemic.

The second part of the interview was focused on the knowledge and implementation of the European Green Deal in tourism and travel industry, highlighting the strength points and weaknesses of actual situation, expectation for the future, opportunities and risks specific for each country brought by the adoption of European Green Deal in tourism.

Regarding the general knowledge and understanding of the principles included in the document European Green Deal, there are differences between the participants; some of them indicated correctly, specifying that it is not easy to implement due to the complexity of the concept of sustainability, while others indicated it generically as a strategic initiative also connected to the complex concept of sustainability. The goals of European Green Deal are considered ambitious and there is fear that many companies will not be able to adapt to it. The European Green Deal is the starting point for a shift in everybody's way of thinking and acting, private persons, small businesses, and big businesses. The improvements will positively affect the tourist, the local people, the SMEs in tourism or connected with tourism activities, the local authorities, and other stakeholders. Even the results of the application of the European Green Deal will be different from country to country, from tourism destination to tourism destination, tourism will gain in image and in business development. Through the European Green Deal, it is possible to avoid over-tourism. Any destinations should take the document as a reference base for their future actions, especially for reducing the emission of greenhouse gases (GHG).

There is a common opinion among the participants at the interviews regarding the importance of the European Green Deal; it is good to set a goal together as the European Union, but the problem is how to get there. There will be a lot of financial support from the European and local governments to implement sustainable measures and the economy, in general, will beneficiate. The European Green Deal will foster numerous new opportunities if the tourism actors are willing to adapt and innovate. Table 9 summarizes the brief SWOT analysis made from the suggestions of the participants at the interviews (Table 10).

Table 10 SWOT analysis of the European Green Deal

Strengths	Weaknesses
- Environmental issues will be part of all strategies and actions; - Focusses the attention on the local resources and initiatives; - Can be applied in all sectors, and all will beneficiate - Agriculture will be mechanized; - The number of new jobs will increase; - A developed industrial strategy for a clean and circular economy; - Developed biodiversity, zero pollution, and toxic-free environment mainstreaming; sustainability, trade and foreign policy and the European Climate Pact; - New opportunities to promote electric mobility in accordance with reducing pollution and a friendly environment; - New generations are more sensitive to the problem, can really contribute to improving strategies both in terms of planning and in changes in individual behaviours;	- Doesn't take into consideration the differences between the EU members;
Opportunities	**Threats**
- Suggests a new way of tourism development; - Contributes to the limitation or even decrease of over-tourism in very popular destinations; - Offers the opportunity for small destinations to create their own, distinct image; - Slowness and the so-looking lack of interest in setting up concrete actions to hinder the problem and the market: economy, finance, and the consumerism model that characterized the last few decades are winning the climate problem and slowing the change.	- The lack of money or limited financial resources will deepen the differences between countries, or between tourism destinations; - Missing recycle options for electric vehicles' batteries in order to have a more developed electric strategy; - Waste management is not working to benefit product circularity; recycled materials are not put into circulation while setting efforts into motion to make buildings last longer and become more easily adaptable to suit different future needs; - Less developed technologies.

Source: the answers of the participants at the interviews carried out by the project partners.

The implementation costs of the European Green Deal commitment are very high, especially for resource-intensive, high-impact countries, which is why these countries may not take a fall or slowdown in economic growth to apply the commitment provisions. Also due to high costs, economic operators may be reluctant to apply certain measures, which would make it necessary to have state support measures, thus increasing pressure on national budgets. In other words, the development gap between Europe's regions may be a hindrance to achieving the targets proposed by the European Green Deal.

Besides the SWOT analysis, we discussed with our participants at interviews about the possible social, economic, and market effects due to the implementation of the European Green Deal. Effects depend strongly on political and environmental context. The EU Green Deal will affect enterprises and influence people. It is not sure if the effects will be all positive, but the positive ones will bypass the negative ones. Table 11 presents the main possible effects in three fundamental directions.

Table 11 Social, economic and market effects through the implementation of the European Green Deal

Social effects	Economic effects	Market effects
- Consumers/travellers will give more attention to the small, but important details. For example, while the tourist takes a shower, he/she can turn off the TV set to spare electricity. The EU Green Deal application can impact education and the good habits of people. - The elimination/re-duction of some negative effects of tourism on the tourist and local population as air and water pollution, over-tourism, and the lack of parking spaces. - Strengthening the connection between the tourism sector and society - Improving the health of the population.	- Reducing regional economic disparities. - Increasing the efficiency of certain economic activities due to lower energy consumption. - Sustainability and regeneration of natural resources. - A rational use of any resources (natural, human, food, entertainment …) - New possibilities to develop tourism destinations. - More stable prices in destinations - Increment use of the recycling and recovering processes.	- New tourism products will be launched on the market, specially designed on the principles promoted by the European Green Deal - New jobs especially in recycling, recovering, green cleaning processes. - Implementation of EGD will help local markets to develop in accordance with the market request. To stimulate electric vehicles, encourage people to use electric vehicles, offer a financial solution to develop infrastructure for electric mobilities also sustain the recovery batteries from electric vehicles at the regional level, then will help the local community to develop it and create new jobs at the regional level. - A range of opportunities, due to the transition to increasing the sustainability of transport, buildings, energy production, sustainable product development, and digital transformation. - If defined in the way of implementation and in timing will be a driving force for employment and investment.

Source: the answers of the participants at the interviews carried out by the project partners.

Some of the interviewees stated that changes in people and in society will be very slow. The sensibility toward Climate Change increased, but still are few projects and concrete actions bringing toward a change in behaviour. The pandemic did not improve society, but rather worsened it, leading to more personal interests, contrary to what was initially predicted. The actions of the EU Green Deal must be accompanied by an equally strong awareness of the population.

Regarding the time frame for the implementation of the European Green Deal the common opinion is that it is very hard to assess a realistic time frame. According to some participants, a time frame of 6 to 12 months for the application of the EU Green Deal document is appreciated and a time frame of 2-3 years is necessary to have major results in all fields of activity, including tourism.

For the business environment, all the parts of the EU Green Deal are seen as positives; difficulties are seen in implementation coming mainly from the cost. The critical phase of the process is considered the transitional one. Smaller enterprises will certainly be penalized and, in a system composed mainly of micro-enterprises, this is a problem to be addressed. There is the fear that willing more service, more quality, more travellers, and more sustainability, will bring higher costs and higher prices. For some people travelling will become a luxury causing social problems and marginalizing those who can afford only cheaper, no green travel (Table 12).

Table 12 Positive aspects and difficulties in the implementation of the EU Green Deal

Positive aspects:	Difficulties:
- The tourists will select the means of transport more carefully - The rapid spreading of electric cars will enhance the application of the Green Deal document. In the future will be available electric buses, electric trucks and a network of electric trains will be developed. - Green tourism packages will include more and more walking, and sports activities, with less use of the means of transport. - Improving the protection of biodiversity and other environmental factors, and reducing pollution, will contribute to more attractive tourist destinations and higher quality tourism products; - Improvement of the landscape; - Stimulation of multimodal transport; - Building and renovating buildings, including those in tourism, in an energy-efficient manner; - Improving digitalization.	- The European Green Deal application cannot influence to a great extent the materials used for different buildings used in tourism activities, in this case, the market is the main factor. - The lack of knowledge of managers in tourism can create difficulties in the application of the principles promoted by the EU Green Deal document - The lack of money (financial support from authorities) will be a barrier to the implementation of the Green Deal document.

Source: the answers of the participants at the interviews carried out by the project partners.

For the travel industry will be easy to implement sustainability of the food system increasing local suppliers and the quality of tourist services will rise and be sustainable, too. To increase sustainability and to achieve the targets of European Green Deal, tourism, and travel industry need:

- To be less bureaucratic. There should be no legal barriers to implementing new things, especially about sustainability (non-repayable loans for the improvement of energy efficiency, and other, new models for waste taxes since the current discourages separate collection or recycling).
- Appropriate human resources. They should be motivated to act. Training could be a good starting point. Many business owners and workers need to properly understand what the European Green Deal means to their lives. For many people, it is only an abstract idea that was decided outside of their country by European

bureaucrats.

Business environment from tourism and travel industry needs support in the following directions:

- The first type of support is the technological one. The states should support different programs to help the SMEs from tourism to change old, polluting technology with modern, sustainable ones. It will be a big advantage for many stakeholders (companies, tourists, local population, state) if the tourism activities will be more sustainable;
- The second type of support refers to the information and education aspects. The professional organisations in the tourism area can promote the principles of the EU Green Deal document among the members and play the role of consultancy organisation for a better understanding of the goals and how each tourism organisation can contribute;
- The third support is the financial one, in order to start the development of a production mechanism for the circular economy. It could be tax cut or not refundable financing for businesses that adopt measures connected with the plan.

The broad concept of tourism includes a wide variety of activities, simple and complex with different levels of environmental impact (Table 13). One question from the interview refers to what activities are easier and fast to implement and what ones are more difficult to put into practice. The easier-to-implement activities are the ones that the existing enterprises can do without external help, such as changing internal activities, plans, and processes. The harder to achieve are the ones that require external help. Everything that will be expensive for business will be difficult to implement. This means that we need ecologically sensible products and services that are acceptable in terms of price.

Table 13 Activities easier /more difficult to implement

Easier to implement	More difficult to implement
- Smart mobility – the first steps were already done and the perception of the people is going well, they start to use it. - Farm to fork– small farms started to appear on the market and the target group is increasing also. They could build step by step a fair, healthy, and ecological food system.	- Preserving and restoring ecosystem and biodiversity. - Building and renovating in an energy and resources-efficient way is an action that connects different suppliers, and it is very hard to change your mind all of them at the same time. - Providing clean, safe, and affordable energy. - Preserving and restoring ecosystem and biodiversity.

Source: the answers of the participants at the interviews carried out by the project partners.

Anyway, ease or difficulty will depend on the strategy adopted and on the needed investments but must be implemented initially the less expensive ones.

Another concern of our project refers to possible changes in the offer/demand ratio by pursuing the requirements of the European Green Deal. The people interviewed state that tourists are different now compared with 10 years ago, even with 3 years ago. There is a critical mass of tourists very sensitive to the changes in society. They have a rapid reaction to negative aspects or behaviours. For example, the lack of concern for the consumption of natural resources, which characterized sometimes the tourism services, is not seen as an abundance, but as waste. Accordingly, these tourists will look for sustainable services, low carbon impact, recycling, and other initiatives specific to sustainable tourism and in line with the European Green Deal document. The behaviour of tourists will be affected. For example, an increase in air fares will lead to a reduction in the number of long-term trips. Instead, regional train travel will be encouraged (and should be encouraged). On the other hand, improving the environmental factors and the state of biodiversity conservation, but also increasing the awareness of the population regarding the importance of sustainability in tourism, will contribute to a greater focus on natural, rural, unpolluted areas and the development of niche forms of tourism (e.g., ecotourism), on the search for authentic experiences, areas with healthy gastronomy. The path to achieving the targets will sensitize people to have more attention and different behaviour of tourists: avoid excess heating, use air transport in short-haul travel, and respect the rural and urban environment.

The general perception is that the businesses in tourism field are not ready for the implementation of the European Green Deal core directions. All the participants affirmed that there are a lot of things to do, even some initiatives are already implemented. Many businesses only changed small things with minimum efforts and spendings. An interesting proposal to improve the implementation process is the organisation of competitions at the regional and/or national level for the 'greenest' destination. The winners could share their experiences, strategies, best practices, and problems or barriers faced during the process of the adoption of the European Green Deal. Tourists are more and more interested in all types of ranks regarding destinations and this competition could be a very good promotion.
Examples of already implemented measures/initiatives to reduce GHG emissions are:

- The implementation of farm-to-fork concept especially at local, regional level involving the local food producers;
- The development of more bicycle paths in urban and rural areas and their inclusion in tourism packages;
- Extension of use of the electronic signatures, internet banking, electronic bills with positive environmental impact;
- Recharging stations for electric vehicles, water fountains, and reduction of bureaucracy for the installation of solar panels.

The main threats in the implementation of the European Green Deal are coming from different directions: communication, financial and technological support, policies, planning and coordination, and human resources training.

People all over the world must be honestly informed about things and they have to be shown the possibilities to find a way to get out of the current situation. To raise awareness for everybody it is necessary to address in a different way to each group of persons: the "green people", very emotional, the "blue people" looking for facts, the "yellow people" acting only for an effect on their business.

The main aspects which can hinder the implementation of the European Green Deal can be:

- The lack of understanding of the main goals of the European Green Deal;
- Inappropriate strategies at the local and national level
- The lack of financial support
- The economic crisis

In the current context, political issues are the most important short-term risks for the implementation of the Green Deal project.

At the end of the interview, the participants were asked to formulate some recommendations, presented in the table below.

Table 14 Recommendations for a successful implementation of the European Green Deal

DO's – this I can recommend	DON'Ts – this should be avoided
- Work globally; - Develop research in the field; - Smart innovation; - Support local activities; - Legal frameworks for enterprises must be motivating; - Easy and clear understanding of what everybody is doing; - Regulations of carbon emissions balanced for travelling by enterprises; - Awarding the organisations which have good initiatives and good results in the implementation of the European Green Deal (yearly); - Support programmes for destinations with high potential in developing green tourism, but with fewer financial and technological resources; - Education and training for the tourism managers, with examples of right and wrong decisions; - Sustainable mobility; - Sustainable industries associated with tourism; - Biodiversity and Farm to Fork; - Financial support for the implementation of the measures; - Tax cuts; - Awareness campaigns for all stakeholders involved, but also for consumers; - Education, continuous training for economic agents and the population in general, to change the paradigm of economic and social development; - Strategic planning; - Guarantee in timing; - Communicate the importance and benefits of change also at the level of the general economy (jobs, etc.).	- Focus on individual technologies; - Using only national perspective; - Legal frameworks for enterprises must not be barricading – it should not be on the money, but on inventions; - The same requirements and measures at the level of the regions: The tourism destinations are not similar, and the implementation of the European Green Deal will be different, adapted to each specific context of factors. - Don't impose the EU Green Deal project by force, explain what the possible advantages are and let each organisation or destination find its own way. - Don't introduce certification of the destinations according to the EU Green Deal requirements. This will become a business and a possible source of corruption for the certification organisations without real results at the level of tourist organisations. - Coercive measures; - The application of measures without taking into account negative economic effects or the lack of measures to counteract negative effects; - Adapting the implementation schedule, the stage of regional development; - Budget under the sizing; - Different rules between states; - Favouring larger companies with the possibility of greater investments; - Leave or slow down the path already made, for reasons of contingent necessity.

Source: the answers of the participants at the interviews carried out by the project partners.

5. Micro-credentials: on-demand and short learning experiences for upskilling in green tourism

5.1. Micro-Credentials in a nutshell

5.1.1. Introduction

High-quality and practice-oriented vocational education and training is an important basis for securing company-skilled workers and the competitiveness of companies. The main purposes of micro-credentials are employability, upskilling and reskilling, lifelong learning, adult education, and inclusiveness.

The advance of technology, changes to the nature of work, and new ways of learning (supported by the emergence of platforms and online learning) have repositioned the central learner's role as they "build their own learning pathways". Since the start of the COVID-19 crisis, however, there has been an unprecedented surge in demand for online system of vocational education and training, including for short, tailored courses.

There is a growing sense that 'skills, rather than occupations or qualifications, form the job currency of the future. Traditional teaching and learning models have not adapted adequately to changing employees' demands and labour market needs (shorter learning activities; integrated into the workplace – input from the labour market) Micro-credentials (MCs) are evidence of practical, flexible, on-demand, and short learning experiences. This is what makes them so attractive!

Personalised learning, micro-learning, and high-velocity training are amongst the key global education trends identified by Euromonitor. Interest in micro-credentials has exploded (The Council of the European Union, 2020).
However, the term "Micro-credentials" has not yet been used or is only barely used in vocational education and training in many EU countries. In countries with traditional

high-quality vocational education and training systems such as Germany and Austria, holistic professional competence is the top priority in achieving a formal vocational qualification. But employers/employees are concerned with the speed that the formal qualifications systems can identify skills needs and adapt training offers accordingly.

Now, in the EU Council Recommendations 2021, the topic of micro-credentials has also been formulated for vocational education and training in Europe to take into account the very dynamic changes in the labour market. Due to its current flexibility, it can respond precisely to new and urgent competence needs of the labour market and companies through quickly designed courses or modules.

In particular, the numerous digital trainings offered via YouTube, podcast, Moodle, or MOOCs have received a large increase in the pandemic. Whether from home, directly at work, or on the go, you can acquire new professional skills. The focus is on the learning outcome regardless of place and time. The aim is not to replace the formal acquisition of qualifications, but to complement them flexibly.

The Covid-19 pandemic and the lockdown have brought very large cuts in employment. A lot of personnel were affected by short-time work and unemployment. To a considerable extent, migration to other industries took place. In many industries (aviation, hospitality) there are shortages of skilled workers in the post covid period. - At the same time, the demand for new skills (digital; EU Green Deal, eMobility) has accelerated during the pandemic.

A growing number of adults, with a higher education degree or lower, will need to reskill and upskill through more flexible alternatives than a full degree in order to overcome the gap between the learning outcomes of initial formal qualifications and emerging skills needs in the labour market.

Given this background courses that lead to micro-credentials could contribute to answer flexibly to specific labour market needs. They can help overcome skills shortages in certain industries.

The CredinGreen project is aimed at employees in continuing vocational education and training who already have a vocational qualification and who aspire to acquire quality-tested professional skills on the subject of the EU Green Deal flexibly by means of micro-credentials ("VET to Go").

5.1.2. Definition and terminology

Micro-credentials are frequently portrayed and promoted as a new way for individuals to build their own skills profile (portfolio) by collecting and 'stacking' learning in a flexible way, at their own pace and according to their own priorities. We have different "official" definitions but we insert here the one issued by UNESCO:

> *"A term that encompasses various forms of credential, including 'nano-degrees', 'micro-masters', 'credentials', 'certificates', 'badges', 'licenses' and 'endorsements. As their name implies, micro-credentials* ***focus on modules of learning much smaller than those covered in conventional academic awards****, which often allow learners to complete the requisite work over a shorter period".* (Chakroun & Keevy, 2018)

Micro-credential, definition by European Commission, Brussels, November 2021 (European Commission, 2021c):

> ***"Micro-credential' means*** *the record of the* ***learning outcomes that a learner has acquired following a small volume of learning.*** *These learning outcomes have been assessed against transparent and clearly defined* ***standards.*** *Courses leading to micro-credentials are designed to provide the learner with specific* ***knowledge, skills, and competencies that respond to societal, personal, cultural, or labour market needs****. (Transversal skills) The proof is contained in a certified document that lists the name of the holder, the achieved learning outcomes, the assessment method, the awarding body, and, where applicable, the qualifications framework level and the credits gained. Micro-credentials are owned by the learner, can be shared, are portable, and may be combined into larger credentials or qualifications. They are underpinned by quality assurance following agreed standards. "*

Micro-credentials are not objectives in themselves. They are considered:

- Tools for making learning - and skills, and competencies acquired through learning- visible.
- Tools to give value to the same learning, knowledge, and skills, competencies
- Tools to encourage learning, and motivate individuals to develop in a lifelog/life-wide perspective.
- They cannot be seen in isolation – not free-standing instruments;
- Micro-credentials are awarded by a diversity of stakeholders operating at different levels and institutional contexts;
- Need to find an appropriate balance between fostering trust and transparency

Currently, we find micro-credentials at universities and colleges, in academic education. It will be new and exciting to integrate them into higher vocational education and training at the national and European levels. If you can obtain a certificate of qualification at the university by means of MCs`, vocational training is more about flexibly supplementing basic qualifications.

5.1.3. Challenges and barriers

There are currently still some challenges and barriers to overcome to accept these micro-credentials as proof of professional vocational qualifications. A distinction must be made between formal proof (badge; certificate) and the pure acquisition of competence in the learner, which enables the learner to apply new knowledge, skills, and competencies. In particular, the numerous digital and globally available "learning units" must be considered from the point of view of quality assurance, trust, and recognition.

Here are some challenges that have been identified at the European level:

- Key barriers relate to processes of assessment, recognition, and quality assurance of micro-credentials both at the institutional and system level (Hudak, R., Camilleri, A. 2018), due to a lack of consistency and standardization between micro-credentials;

- Employers have difficulties assessing the quality of alternative credentials due to the lack of transparency in the variation and range of offers delivered and branded as alternative credentials;
- MCs are not yet prominent in strategic policy documents. However, at national level there are initiatives and projects promoting MCs, as well as data collection and storage;
- A term 'micro-credential' is not commonly used in national contexts; terms like 'open badges' or 'small volume certificates' indicate that the actual phenomenon is real, the term MC is still not accepted or recognized;
- Area of conceptual conflict in relation to the holistic understanding of education and training and modularizing MC approach
- Relation between MCs of different education sectors. Does the current approach of MC apply to all education sectors, i.e., vocational, general, and higher education as well as continuing education;
- Danger of overregulation and bureaucratization of the continuing education market;
- Need to find an appropriate balance between fostering trust and transparency.

5.2. Micro-Credentials at the systems level

5.2.1. A European approach

> *'We need to bring down barriers to learning and improve access to quality education. We need to enable learners to move more easily between education systems in different countries. And we need to change the culture of education towards lifelong learning that enriches us all.' (von der Leyen, n.d.).*

Increasingly rapid advances in technology and the labour market require graduates and professionals in the workforce to be familiar with state-of-the-art knowledge and to possess the skills and competencies needed to make full use of technological and non-technological know-how. Employees need 'just-in-time' skills development that is immediately applicable.

This trend is likely to accelerate with the economic crisis triggered by the COVID-19 pandemic. A European approach to micro-credentials will increase personalised learning opportunities for all. It will help widen learning opportunities and strengthen the role of higher education and vocational education and training institutions in promoting lifelong learning by providing more flexible and modular learning opportunities.

A growing number of adults, with or without a higher education degree, will need to reskill and upskill through more flexible alternatives than a full degree to overcome the gap between the learning outcomes of their initial formal qualifications and emerging skills needs in the labour market.

Short-term learning opportunities leading to micro-credentials can help to substantially widen learning and skills development opportunities, and further shape the lifelong learning dimension. (EU Commission, 2020).

Many micro-learning units can be accessed online across national borders, which makes quality assurance, recognition, and trust across national borders all the more important. This is where the EU approach comes in. It is difficult to transfer this approach of the MCs originating from academic education to countries such as Germany and Austria with an excellent system of vocational education. This is why the attempt to adapt ECTS in the form of ECVET has more or less failed.

The European approach sees micro-credentials as a complementary tool to provide additional opportunities for learning and upskilling, as well as enable people to acquire the knowledge, skills, and competencies they need to thrive in a changing labour market and society, so they can benefit fully from both a socially fair recovery from the coronavirus pandemic and just transitions to the green and digital economy (European Centre for the Development of Vocational Training CEDEFOP, 2022).

5.2.2. Country-specific knowledge

5.2.2.1. National Policy and relevant stakeholders

European countries are looking for the best ways to operationalize micro-credentials as documented learning outcomes of a short, quality-controlled learning experience. Modularisation and outcome orientation of VET programmes is one of the factors setting the scene for their wider use. In many EU countries, however, MCs are only located in academic education or digital learning spaces. The system of vocational education and training is still rather in its infancy at the European level.

The term 'micro-credential' is not commonly used in national contexts; terms like 'open badges' or 'small volume certificates' indicate that the actual phenomenon is real, but the term MC is still not accepted or recognised. Most countries have qualification systems that partly prevent easy integration of MCs but are mostly focused on HE.

Austria

At the moment, MCs are not well known at national levels; there are just some HE providers which apply them in a very small area (just for very few individual courses). Generally, there is a lot of positive feedback and commitment to realise this educational concept. Above all, the business community is very interested in a shortened, cheaper, and targeted academic education.

HE providers are also committed and see their chance to open further. However, it must also be said that each group of actors and stakeholders interprets and defines MCs somewhat differently, always from their perspective and their interests. This is understandable, but subsequently brings the potential for conflict, which is why this process must be pursued together with all actors and stakeholders.

In Austria, the Federal Ministry of Education, Science, and Research is responsible for all coordination at the European level as well as for implementation at the national level.

It has set up a working group for MCs, in which representatives of the following areas are represented:

a) all four university sectors (private and public universities, universities of applied sciences, and universities of teacher education)
b) Agency for Quality Assurance and Accreditation Austria
c) the Ministry

Now, the focus is on evaluating and commenting on proposals and documents from Brussels, loose networking at national and transnational levels, including participation in expert conferences and workshops. In Austria, MCs are still in their infancy. In principle, they are open to it, but Austria has a traditional education system that has a hard time with innovation and still must get used to the changes brought about by the Bologna Process.

Germany

Micro-credentials play a minor role compared to vocational education qualifications and are seen as supplementary to the existing system. In Germany, MCs are well known by business representatives and VET experts, e.g., in the Federal Institute for VET (BIBB). Business representatives generally welcome MCs: BDA and regional employers' associations such as VBW in Bavaria are in favour of the proposed EU Council recommendation, arguing that MC can improve the quality, transparency, and acceptance of short learning experiences throughout Europe. On the part of these employers' associations, it is particularly emphasized that the proposal "does not contain a mandatory uniform system for the classification of MCs in European systems" (VBW communication of 21 January 22).
The chambers of commerce rather fear infiltration of vocational education and training and prefer, especially in initial training, the Initial-VET of holistic vocational action competence and recognition based on an examination before the competent body. The chambers are in favour of increased use of the non-regulated VET market. Due to its

current flexibility, this market can react precisely to new and urgent competence needs of the labour market and companies through quickly designed courses or modules.

A European standard for micro-credentials possibly planned by the EU Commission would interfere with this dynamic and free design and would also only be associated with a greater bureaucratic effort for training providers and ultimately also with delays for the market entry of such further training offers, which in turn would be disadvantageous for companies. To avoid this, the principle of voluntariness should instead apply to the adoption of or adherence to common European standards or principles. Moreover, such standards and principles should only serve as a possible "toolbox" from which the member states or training providers can selectively and voluntarily draw (DIHK).

In Germany, so-called "additional qualifications" in the form of courses or modules can be acquired voluntarily during or after dual training to additionally qualify trainees or employees according to the needs of the companies. On the other hand, it is not possible to "add together" dual training with several additional qualifications acquired and to replace the examination in the regulated system. This is regulated by law, in Germany by the Vocational Training Act.

Portugal

In Portugal, micro-credentials are a concept not yet completely explored, having few articles and information in the national context. Institutions, connected to Science and Technology, are the ones promoting micro-credentials education in Portugal explaining the benefits this could bring to a new level of education and work integration. Instituto Politécnico de Beja is currently offering micro-credentials to attract more students to it. These micro-credentials are also aimed at private entities and institutions.

Most of the promoters of the concept of micro-credentials are national identities, with a connection to the Government or the Government itself. Its implementation is done by institutes or polytechnics that offer those to students or individuals who want to improve competencies and abilities on a foundation of knowledge they might already have. With this aim, micro-credentials are promoted at Work Fairs that might attract businesses and students, and the dissemination of these on news media and social networks surrounding its target.

Romania

The current training policy does not address the MC concept. The Ministry of Education, the National Authority for Qualifications, and the Ministry of Labour should be responsible for introducing and implementing this concept at the national level.

Higher education institutions could take the necessary steps to integrate this concept into national training policies. Based on research in the internal and external environment, they can also provide these services through the participation of teachers.

The main threat is that there has never been a truly independent authority to coordinate and control work in this area. The two ministries that are successively or simultaneously in coordination (Ministry of Education and Ministry of Labour, n.d.) have no direct connection with the field, each trying over time to leave their mark on the training of adults, which has caused the breaking and even the blocking of activity.

A closer analysis of the adult education and training system should have the effect of making local authorities genuinely interested in authorizing adult vocational training providers. The creation of a county-level body with representatives from the city hall, representative unions, and employers' associations could have positive effects on the development of the system.

5.2.2.2. National VET Experts - personal opinion and common understanding

In our project partner countries Austria, Germany, Portugal, and Romania there were conducted qualified interviews with national VET experts (2 from Romania, 2 from

Portugal, I from Italy and 1 from Austria and 3 from Germany). From spring until autumn, 2022 we interviewed national education experts, education managers, but also European VET experts. The main recommendations and expert opinions are briefly presented here.

The final question to all experts was: “In your opinion, what is required from the European Commission as well as from national authorities to get micro-credentials successfully introduced and integrated into Europe’s as well as your national educational system and the labour market as quickly as possible?” (Table 15).

Table 15 Recommendations for a successful implementation of the micro-credentials concept

DOs – this I can recommend	DON’Ts – this should be avoided
Statement VET Expert Austria:	
- Perhaps it makes sense to start with a smaller group of Member States… those who are willing and interested to apply MCs asap; once it has become a success story, others are more likely to follow. - Most important will be that economy recognises MCs as quality indicators for the level of education, knowledge, skills, and competencies … therefore business representatives need to be involved in the process of setting up this concept.	- Don’t define it as too strong/narrow - Don’t define it as too soft/wide - Keep going and do not waste too much time and energy by discussing, discussing, discussion – it simply kills an idea with time!
- **Statement VET Expert Germany:**	
- Put the learner in the centre” – qualification pathways, employability, etc. - Link labour market requirements to individual qualification pathways. - Quality assurance – mutual trust; - Validation, Recognition.	- EU “Over” Regulation and bureaucracy vs. flexibility; - Individual training pathways, ok. But do not forget the requirements of the industry; - Substitute formal Initial qualifications
- **Statement VET Expert Romania:**	
- Creating a legal framework; - Providing financing possibilities for suppliers' infrastructure; - Offering micro-credit financing possibilities for adults.	- Creation of methodologies adapted to national legislation; - Adaptation of the system only for universities; - Imposing standards that are difficult for small suppliers to meet.
- **Statement VET Expert Portugal:**	
- Give autonomy to the students to choose; - Have a way to evaluate the courses; - Courses with good supporting materials.	- Impose a path for the students. - Unregulated micro-credentials; - No quality control.

Source: the answers of the participants at the interviews carried out by the project partners.

5.3. Micro-Credentials are they here to stay?

5.3.1. The role of qualifications frameworks

In Europe and globally, qualifications frameworks have become a currency for recognition of learning through the award of qualifications and as a means to create mutual zones of trust (Young & Allais, 2009).

In contrast to the European Qualification Framework, in the US we have a "Credential Framework". This shows the different approach! The phenomenon of micro-credentials is not a new one. Small, usually short-in-duration courses leading to different types of awards or credentials, are already dominant in many education and training sectors, professions, and labour market systems e.g., in diving instruction, IT certification, and continuing professional development for health workers.

The European Qualifications Framework for Lifelong Learning (EQF) (European Commission, 2008) indicates 'levels of qualification' based on proficiency of learning in three domains of learning outcomes: knowledge, skills, autonomy, and responsibility. The EQF provides a common reference framework for qualifications, which assists in comparing the national qualifications systems, frameworks, and their levels.

That the European Qualifications Framework is a reference framework for qualifications implies that it does not contain qualifications directly. The European Qualifications Framework allows for the referencing of entities smaller than full qualifications from the national education and training systems. Therefore, it already provides a basis for the inclusion of micro-credentials if Member States decide to reference these in their national qualification frameworks. EQF can be a tool to indicate the level of micro-credentials. Furthermore, it is neutral in terms of provision, and its focus is on the outcomes of learning, which is an advantage for professional courses.

In European policy making the idea of offering Micro-credentials in VET courses for flexible reskilling and upskilling the labour force has been present since at least 2001.

While qualifications and degrees from initial education and training play a key role in Europe, alternative credentials (including digital badges, micro-credentials, nano-credentials, minor awards, etc.), are increasingly seen as a way to add to, and/or reform, existing qualifications systems. MCs are not a substitute for formal qualifications but demand-oriented flexible add on.

Micro-credentials are frequently portrayed and promoted as a new way for individuals to build their skills-profile (portfolio) by collecting and 'stacking' learning in a flexible way, at their own pace and according to their own priorities. (CEDEFOB, 2022)

5.3.2. Quality assurance

With a large number of micro-learning credentials, the topic of quality assurance of learning opportunities, mutual trust, and recognition in the job market is becoming increasingly important. For this reason, the EU's initiative to create more trust and camouflage is of strategic importance here.

For all short training and education courses or programmes that comply with characteristics of micro-credentials, the trust depends on the quality of the content as well as on the issuer and provider and market success.

Quality assurance is a way of focusing changes within VET systems on outputs and recognition of their achievements. Separate external quality assurance and accreditation mechanisms for non-degree programs like MOOCs, short programmes, continuous learning programmes, or different ways of offering (blended learning, online learning, etc.) are, however, generally not adopted by accreditation organisations. A large number of micro-credentials are offered as blended learning or in a digital format.

The European Association of Distance Teaching Universities (EADTU) has in the E-Excellence Project developed a comprehensive reference tool for quality assurance and benchmarking of online learning. (https://e-xcellencelabel.eadtu.eu/).

Apart from the digital format, which may require additional consideration in quality assurance mechanisms, there are other factors, which need to be taken into account in institutional quality assurance processes:

1. Micro-credentials may not generate the same level of revenue as modules in a degree program, furthermore:
2. Quality assurance processes need to take scalability into account as demands could increase once the benefits of micro-credentials are better understood.

5.3.3. Accreditation & Certification

Looking at the certification and qualification landscape in general, task- and competence-oriented certificates – often linked to shorter learning experiences – already play an important role in many parts of the labour market (for example offered by sectors, private companies, international organisations, and public bodies).

Looking at the certification and qualification landscape in general, task- and competence-oriented certificates – often linked to shorter learning experiences – already play an important role in many parts of the labour market (for example offered by sectors, private companies, international organisations, and public bodies).

Frequently, accreditation and certification are used synonymously and what is called accreditation in one country might be called certification in another. They are both about external verification of quality, but they have a slightly different focus.

Certification is about compliance with the standards, rules, and criteria as defined by a methodological framework for quality assurance, such as the ISO-9000ff standards.

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Accreditation normally will encompass certification: in Italy, for example, a provider certified according to ISO-9000ff will be accredited by the regional authorities for education and training. Accreditation is primarily understood as an assessment tool, which is applied not by the VET provider himself but externally by a body officially recognised for this task.

It will be helpful for Micro-credentials to set up national frameworks for quality assurance that can give VET providers guidance when assuring and improving the quality of their services. In many countries, these efforts have been complemented by certification or accreditation procedures.

While policy frameworks for quality are the driving forces behind the VET improvement, with their role to define the objectives, criteria, and standards to be pursued, accreditation procedures must determine whether vocational training programmes are implemented by those objectives, criteria, and standards.

5.3.4. Digital platforms

The role of digital platforms in the issuing of alternative credentials has grown as more and more higher education institutions partner up to provide micro-credentials in existing and emerging skills areas.

Europa`s Digital Credentials Infrastructure (EDCI) will provide the infrastructure for so that organisations across the EU can use to issue digital credentials. It will enable certificates from one Member State can be understood and verified in any other securely, and it will enable portability so that learners can take charge of their own credentials (EC, n.d.).

The Digital Credentials Consortium is a transatlantic partnership between European founding partners (Hasso Plattner Institute at the University of Potsdam (DE), Technical University of Munich (DE), Delft University of Technology (NL), and the University of

Milano Bicocca.), plus several prominent North American university partners such as MIT and Berkeley University. The consortium has explored how to create a trusted, distributed, and shared infrastructure which becomes the standard for issuing, storing, displaying, and verifying digital academic alternative credentials (Hamilton, et al., 2020).

The business model for micro-credentials

The business model for alternative credentials has evolved since the first MOOCs were put online in 2012. (Moore, 2019). When the platform COURSERA was launched by researchers, the vision was that a new global service for higher education would evolve and lead to a democratisation of higher education, which would draw new audiences to higher education as online learners.

The business model was based on making learning materials freely available, and the revenue would stem from those learners who chose to purchase verified certificates and credentials. Monetisation became a key issue when major venture funding rounds started to dry up.

The free-of-charge model with a fee for certification then increasingly evolved into part of an academic credit offer. Known generally as MOOC-based degrees, these are seen as 'the second wave of the MOOC narrative (Shah, 2018).

In October 2018, edX became the last of the major MOOC providers to announce partnerships with universities to offer fully online professional master's degrees, five years after Udacity made the first such partnership with Georgia Tech (Reich & Ruipérez-Valiente, 2019). As the offer of alternative credentials has increased, and more learners have gone online, it has become more complex to search and identify a relevant offer.

Guidance

A European approach to micro-credentials will need to integrate guidance services taking into account that micro-credentials may be offered directly by higher education institutions or through existing and emerging platform solutions.

At present, Eurodesk is a network of more than 400 national offices that offer information about learning opportunities available in the EU (Commission, n.d.). The evolution of artificial intelligence is likely to provide innovations in guidance services. This can for example entail that job applicants and guidance services more easily can identify emerging skills demands and based on this provides updated and granular information for course developers, job seekers, and employment services. In the USA, this is the case in priority areas such as cyber security (CompTia, 2020).

Trends like these are evolving for example through the collaboration between CEDEFOP and national employment services, and their growing use of real-time labour market analytics.

The platform Coursera is currently the digital platform, which has taken the most comprehensive approach to offer some level of user guidance. Since 2017, they have offered a search function that enables users to search its vast course offer through a skills-based search, whether you want to find out if you can learn how to be more resilient to cope with change, or you are looking to acquire very granular skills, an important concept used in statistical hypothesis testing._Some of the most recent features involve functions to further support user choice and learning progress (COURSERA Blog. 2020):

Common Micro-Credentials Framework of the European MOOC Consortium

European MOOC platforms launched a Micro-credential framework fitting into the European Qualification Framework for Lifelong Learning, which combines learning outcomes in higher education and professional training. The key criteria are associated with learning outcomes and workload (4-6 ECTS or 100 to 150 hours) and level. A micro-credential should comply with the descriptors of the European Qualifications Framework (levels 6, 7, or 8, with options for Levels 4 and 5, in combination with ECTS) and the equivalent levels in the national qualifications framework of the concerned higher education institution.

The proposed structure for micro-credentials accommodates adult learners in employment and their need to upgrade skills over time with features such as stack ability and personalisation of learning the criteria are designed to contribute to recognition and quality assurance processes. The framework has gone through a consultation process and will be tested among partners on a voluntary basis. The aim is that the standard will be administered by the European Association of Distance Teaching Universities.

6. Conclusions and Recommendations

The report summarises a big volume of information resulting from a mixed research method – a survey combined with structured interviews. It makes a `photo` of the tourism sector now when this field faces simultaneously several difficult problems: recovery after the Covid-19 pandemic, new requirements from EU bodies regarding the adoption the sustainability in all fields, and significant changes in the tourist behaviour. **In this context, once again, the key factor is the human resource involved in tourism!**

The survey results highlighted that there is a lack of knowledge about some important issues specific to the actual period of tourism development. It is not about basic knowledge in the tourism field, but narrow/niche information or an up-dating process for the employees from different hierarchical levels. The solution for filling the gap seems to be the concept of micro-credential, a short and very focused training course officially recognised by tourism organisations. One of the main goals of the survey was to identify which are the areas of interest for the tourism employees and what type of knowledge they consider is needed.

We noticed that the document European Green Deal is not very popular among the tourism employees, slightly more than half of our respondents affirm that they know about its existence. In this situation, it will be difficult to implement the strategies and objectives proposed by European Green Deal. The participants in the survey are interested to know more about all the eight strategic directions of the European Green Deal, almost all of these key directions being directly or indirectly connected with tourism activity.

More knowledge, provided in different accessible forms, will give the possibility to implement new initiatives with a double positive impact on the socio-economic outputs of tourism – economic and environmental. Combined with the changes due to the changes in tourism behaviour will lead to a `new face` of tourism: economically efficient, more sustainable, and closer to the people's needs.

All the countries participating in the project have now different methods and tools to provide knowledge, training, information, and preparation for the tourism employees, in classical face-to-face form or virtual manner, especially developed during the last 2-2.5 years. These methods and tools can be an interesting subject of discussion about their advantages and disadvantages and, of course, they will not disappear if the concept of micro-credential will be implemented. It is up to each tourism entity to decide what is the best form to keep the employees informed and updated about the new issues related to the future development of tourism.

CredinGreen Proposal: Based on the information gathered in Result 1, the partnership creates the CREDinGREEN syllabus. It comprises 20 units à 3h and contains the embedding of the study course into existing training offers, entrance requirements, EQF - based learning outcomes, learning and teaching methods, assessment, and accreditation.

The work on the content areas is certainly the easier part because the 20 units come from the working areas of all partners in project; there is a lot of prior knowledge, additionally, clear recommendations and instructions come from Result 1.

Generally, the syllabus does not provide for a comprehensive course on Green Tourism (there are enough courses for that); the focus is only on those innovations and changes that can be expected from a general change in customer behaviour and market conditions as a result of C-19 and the expected framework set by the EC's Green Deal policy – and of course, how to respond accordingly by modifying the won business and services.

The course is a spot-on post-graduate VET training on changed market conditions and how to cope with them, complementing previous formal education qualifications and improving the educational portfolio of the learners who are already on the job. The conversion of 50% of the units into e-learning formats (tutorials, webinars, MOOCs, etc.) will be somewhat more difficult; here, Corona showed very clearly how poorly the trainers are trained in this - and that, unbelievably, still hardly any investments have been made in this regard; most education providers seem to cannot wait to switch back to the old learning mode after C-19, without increasing any e-learning/training skills of their trainers and learners.

CREDinGREEN wants to counteract this development and subject about 50 trainers to a 10-hour TTT on e-training, including the professional set-up of MOOCs, webinars, one-to-one support of learners, tutorials, subtitling and animation of clips, etc. 18 trainers will be trained in this before and during a learning, teaching and training activity in Portugal, the rest, in national TTT workshops conducted by the learning, teaching and training activity participants.

The biggest challenge is certainly to anchor the concept of micro-credentials strategically and operationally at the institutional level an at the cooperating HEIs in Germany, Romania, Italy and Portugal, to ensure accreditation for the VET sector and to embed the micro-credential into a national policy.

The trouble is, there are hardly any blueprints for such an undertaking because the concept is new, and the EC plans to establish it in the education markets by 2025. In any case, the project group needs to work closely with all associated stakeholders and experts as well as policymakers at the national level to successfully develop the first VET micro-credential in Green Tourism in Europe. Whether the concept works successfully will be tested in 4 pilots with a total of 100 learners, of whom at least 70% should receive the micro-credential (the others will receive an open badge for each completed unit).

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Annex 1 Questionnaire (English version)

EN language

Green tourism – let’s tackle the challenge!

Perception of the tourism industry & hospitality regarding the adjustment of knowledge and skills to Covid19 and European Green Deal challenges

The present questionnaire was developed in the project CREDinGREEN, KA220-VET - Cooperation partnerships in vocational education and training.

The survey will assess to what extent the service providers in tourism and hospitality already feel changes in market conditions and customer behaviour after Covid-19 and under the influence of the Green Deal policy of the European Union. The survey is carried out in 5 different European countries. Your personal and professional life experiences are extremely valuable for this undertaking and will have a direct impact on the content, shape, and pedagogical set-up of our new training course. We would therefore be very grateful if you could spare about 15 minutes of your time to provide us with your points of view, by completing the following questionnaire.

Before starting, please note:

- There is no right or wrong in answers – all that counts is your opinion and experiences
- The questionnaire is exclusively addressed to professionals from the tourism industry.

The results will be published in a Strategic Paper and forwarded to relevant bodies and will determine the content of the training programs developed within the project.

Thank you very much in advance for your efforts and support in making this survey a success!

The CREDinGreen Project Team

Project N° 2021-1-DE02-KA220-VET-000029979

SECTION 1. COVID 19

C1. Was your business affected by the Covid 19 pandemic? Please opt for one answer:

- To great extent
- Somehow
- Barely
- Not at all

C2. Have you noticed some changes in the way your clients spend their holidays?

- To a Great Extent
- Somewhat
- Very Little
- Not at All

C3. Please tell us if you have noticed one or more of the following customer behaviours. Please opt for one answer on each line.

	Often	Sometimes	Seldom	Never
The stays are shorter				
The stays are longer				
Greater attention to health and well-being				
More attention to safety				
Enhanced travelling with parties of friends or relatives				
Less socializing				
Less participation in collective activities/parties/events				

C4. Which of the next changes in customer behaviour has affected your company the most? Please rate the answers from" High" to "None".

	High	Moderate	Low	None

Shorter stays				
Longer stays				
Greater attention to the well-being				
More attention to safety				
Enhanced travelling with parties of friends or relatives				
Less socializing				
Less participation in collective activities/parties/events				

C5. According to your experience, do you assume that in the future, the guest behaviour will be different than before the pandemic?

- ○ To a great extent
- ○ Somewhat
- ○ Little
- ○ Not at All

C6. Which of the behavioural changes listed below do you think will remain in the long term (after the Covid restrictions have been fully lifted)?

	To a great extent	Somewhat	Very little	Not at all
The stays are shorter				
The stays are longer				
Greater attention to the well-being				
More attention to safety				
Enhanced travelling with parties of friends or relatives				

Less socializing				
Less participation in collective activities/parties/events				

C7. Apart from the government guidelines, do you think that customers will expect and request a Covid-19 strategy from tourism companies?

- ○ Definitely will
- ○ Probably will
- ○ Probably won't
- ○ Definitely won't

SECTION 2. SUSTAINABILITY AND GREEN TOURISM

S1. Please rate the following assumptions:

	Strongly agree	Agree	Disagree	Strongly disagree
Green tourism can ensure the quality of the environment				
Green tourism can promote the local tourism industry				
Green tourism has educational meaning				
Green tourism can enhance the travel experiences				
Green tourism can enhance the knowledge of resource conservation				

S2. In the process of environmental labeling, has your company done the following actions (please check one answer from the alternatives listed below): ○ Has adopted an environmental label (i.e. EU ecolabel) ○ Is in the process of adopting an environmental label ○ Has not adopted one but intends to adopt one within the next two years. ○ Has not adopted an environmental label and does not intend to adopt one within the next two years
S3. Can your company be considered a green company? Please choose an option from the alternatives mentioned below: ○ To a great extent ○ Somehow ○ Very little ○ Not at all
S4. What role plays" the green label" In the booking decision/travel choice made by your customers? ○ High ○ Moderate ○ Low ○ None
S5. In the past 5 years, your company has adopted measures for better energy efficiency? Please choose one of the answers below: ○ Yes, we have adopted new (a lot of) initiatives for energy use reduction. ○ Yes, we have adopted some (a few) initiatives for energy use reduction. ○ No, but we are planning to adopt a plan for energy efficiency in the next 2 years. ○ No, it was not a business priority.
S6. Has your company introduced a clean energy supply (i.e., wind power, solar energy, etc.)? Please choose the option that fits your organization. ○ Yes, we are using a clean energy supply in our business. ○ No, but we intend to do so in the next 2 years. ○ No, it was not a priority until now.
S7. In the last 5 years, have you taken into consideration the sustainability aspect in the construction works? Please choose the appropriate answer:

- Use materials and technologies with a special focus on sustainability and energy saving, no matter the costs
- Use materials and technologies with a special focus on sustainability and energy saving, if the costs are similar to the traditional materials.
- Use the most convenient materials and technologies, without paying attention to sustainability or energy saving.

S8. There are in your company any implemented solutions for the below-mentioned goals? Please choose one option on each line.

	Yes, we have already adopted	No, but we intend to do so in the next 2 years.	No, such solutions are not yet implemented.
Reduction of energy use			
Reduction of water waste (i.e., wastewater recovery, rainwater recovery, installation of purifiers for public water use)			
Less use of non-biodegradable detergents			
Less greenhouse emissions (i.e., calculation, reporting of greenhouse gases, information of tourists for awareness rising)			
Sustainable mobility (i.e. transport of things and people using electric vehicles, bikes, or e-bikes for the customers			
Reduction of packaging			

S9. If you have adopted (in your business) some initiatives to reduce packaging, please indicate, by checking one or more of the following points:

- I use biodegradable packaging.

- I stimulate the reuse of containers by customers.
- I reduced the consistency of the packaging.
- I have eliminated the disposal cleaning kits for guests.
- Other….. (please mention)

S10. Please check the options that are available in your company, to indicate which practices you use for waste management.

	Reduction	Separating	Reusing	None	We would like to, but there is no separate public collection
Food and organic					
Paper					
Plastic					
Glass					

S11. Choose from the following points, the one that is corresponding to the policy in place for your company:

	Supplied locally, no matter the costs	Supplied locally, only the costs are convenient, compared with other sources	Use the most convenient sources, without paying attention to the local suppliers
Use of raw materials			
Use of food ingredients			
Generally defined purchasing guidelines			

S12. In your opinion, will there be dramatic legal restrictions for your company in the future, due to tackling climate change in the EU?

- Definitely
- Probably
- Probably not
- Definitely not

SECTION 3. MICRO-CREDENTIALS

M1. Do you have the opportunity to discuss and compare best practices on sustainability with colleagues?

- To a great extent
- Somewhat
- Very little
- Not at all.

M2. How well do you think your company is prepared for implementing best practices in sustainability?

- Extremely well prepared.
- Very well, beginning to adapt.
- Moderately well, we need to adapt quickly to meet these.
- Slightly well, some sectors (e.g., accommodation, transport) will need to adapt further.
- Not well at all.

M3. Have you taken initiative to make your customers aware, through written messages placed in the organisation, on the subjects of:

	To a great extent	Somewhat	Very little	Not at all.
sustainability				
resource conservation				
environmental compatibility				

M4. Please mention what actions are you implementing in the field of green tourism (how your company is supporting green issues):

	Yes, we have already adopted	No, but we intend to do so in the next 2 years	No, such action is not yet implemented.
Is there a green action plan in place for the business?			
Is there ongoing staff/owner training green issues?			
Do you have a green team in place or a nominated green responsible?			
Are green issues part of staff performance targets?			

M5. Have you ever heard of the "European Green Deal"? *

- Yes
- No

M6. Does your actual professional/academic education and training include knowledge about the following issues (please choose an alternative for each type)?

	To a great extent	Somewhat	Very little	Not at all.
Sustainability				
European Green Deal				
Circular Economy				

M7. How do you rate your knowledge in the following fields?

	Very good	Good	Rather poor	Poor
Sustainability				
European Green Deal				
Circular Economy				

M8. Does your staff undertake professional training in tourism and hospitality?

- Often (more than 2 times a year)
- Sometimes, at least once a year
- Seldom (occasionally, when needed)
- Never

M9. Do you consider you need training/courses about environmental issues?

- Strongly agree
- Agree
- Disagree
- Strongly disagree

M10. How do you rate the knowledge of your work colleagues from within the company in the following fields?

	Very good	Good	Rather poor	Poor
Sustainability				
European Green Deal				
Circular Economy				

M11. Do you consider your staff/colleagues need training/courses about environmental issue?

- Strongly agree
- Agree
- Disagree
- Strongly disagree

M12. Do you think that the success of your organisation could be correlated with the orientation to sustainability?

- Strongly agree
- Agree
- Disagree
- Strongly disagree

M13. Which type of training provider would you trust better?

	High	Moderate	Low	None
A professional training credential from a state-recognized educational body				
A professional training credential from a sector industry-leading company				

M14. The EU has formulated objectives and themes for a sustainable future. We would like to find out if these topics are interesting and relevant to you, in the context of improving the way you do business. Please indicate below your level of interest in each of these topics.

	High	Moderate	Low	None
EU's Climate ambition for 2030 and 2050				
Supplying clean, affordable, and secure energy				
Mobilizing industry for a clean and circular economy				

Building and renovating in an energy and resource-efficient way				
A zero-pollution ambition for a toxic-free environment				
Preserving and restoring ecosystem and biodiversity				
From “Farm to Fork”: a fair, healthy, and environmentally friendly food system				

M15. Please reflect if you would like to know more about the topics presented below, and answer by checking one option on each row:

	Definitely will	Probably will	Probably won’t	Definitely won’t.
Energy use reduction				
Water waste reduction				
Avoidance of non-biodegradable detergents				
Reduction of greenhouse emissions				
Reduction of packaging				
Reuse of materials and goods				
A healthy and environmentally friendly food system				

Efficient use of resources in building and reconstruction				
Preservation of ecosystem and biodiversity				

Section 4. Demographic data

D1. Gender identity
- ○ Female
- ○ Male
- ○ Divers

D2. Age (in years):
- ○ 19 or younger
- ○ 20-29
- ○ 30-39
- ○ 40-49
- ○ 50-59
- ○ 60-67
- ○ 68 and older

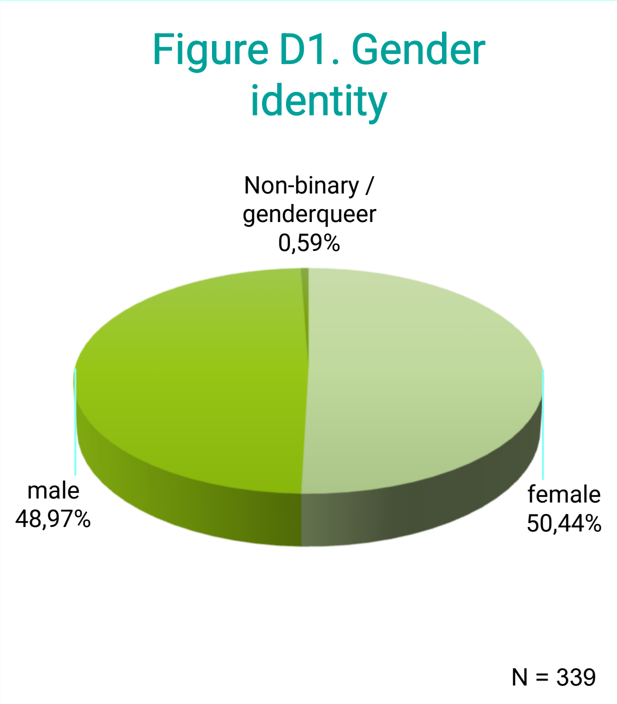
D3. Your main field of activity is in:
- ○ Restaurant business
- ○ Catering
- ○ Accommodation
- ○ Tour operator/travel agency
- ○ Incoming agency / DMC
- ○ Destination management organization/Association/Tourist board/Tourism Information Center
- ○ Transport operator
- ○ Event organizer (MICE)
- ○ Tour / Local guide
- ○ Tourist retailing (souvenir shops or similar)
- ○ Other (please mention): ______________

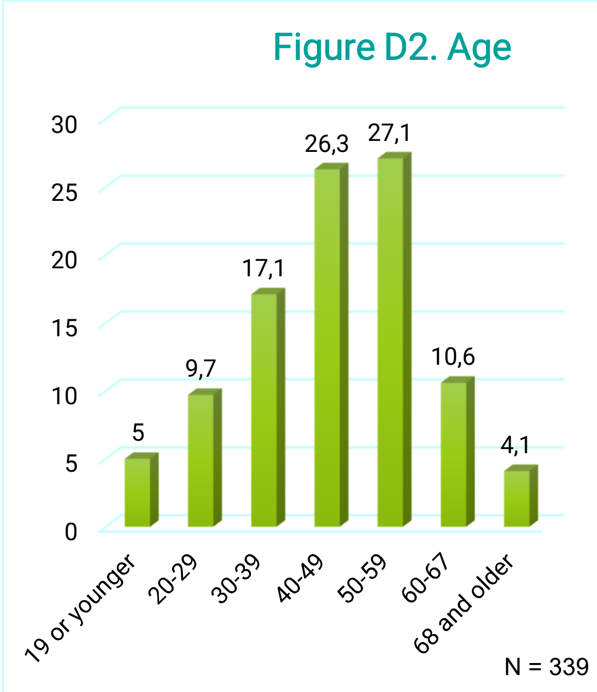
D4. How long have you been working in this organisation? *
- ○ Currently, I am in the trial period
- ○ Less than 6 months, with a work contract

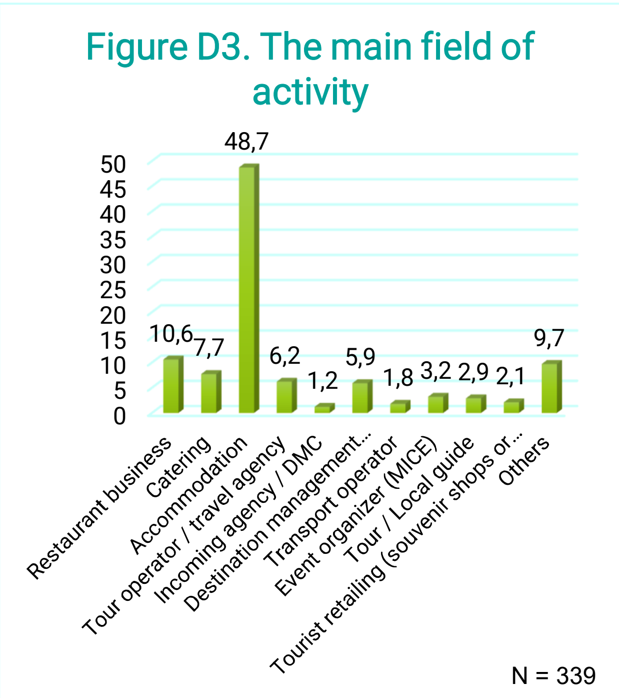
○ Between 6 months and 1 year ○ More than1- up to 5 years ○ More than 5- up to 10 years ○ More than 10-up to 15 years ○ More than 15 -up to 20 years ○ More than 20 years
D5. In which occupational position do you work? ○ I am the managing director of a company / or similar ○ I work in the field of public service administration ○ I am a freelancer/I am self-employed (without employees) ○ I am a company employee (not in public administration) ○ Other…(please mention)
D6. The number of employees working in your company: ○ 0-9 ○ 10-49 ○ 50-249 ○ More than 250
D7. What is your highest educational level? ○ Primary school ○ Secondary school ○ A level / Abitur ○ Professional school ○ Bachelor's Degree ○ Master's Degree ○ PhD or higher
D8. Where is your workplace / company activity? ○ Italy ○ Germany ○ Romania ○ Austria ○ Portugal ○ Other…(please mention)
Thank you very much for your great support in making this European study a success. The results will be published on the project website, where you can also get further information about the project and its latest activities. www.credingreen.com.

Annex 2 Detailed summary of the European Survey 2022 results

Annex 2.a







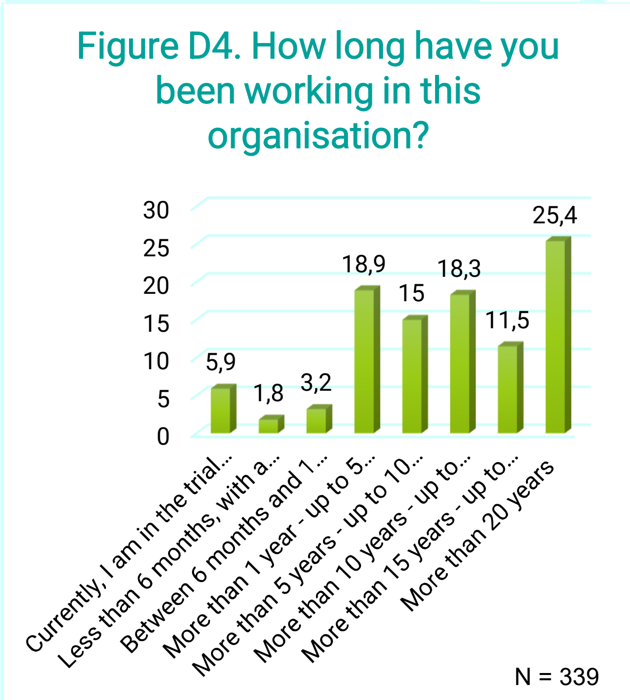


Figure D5. In what occupational position do you work?

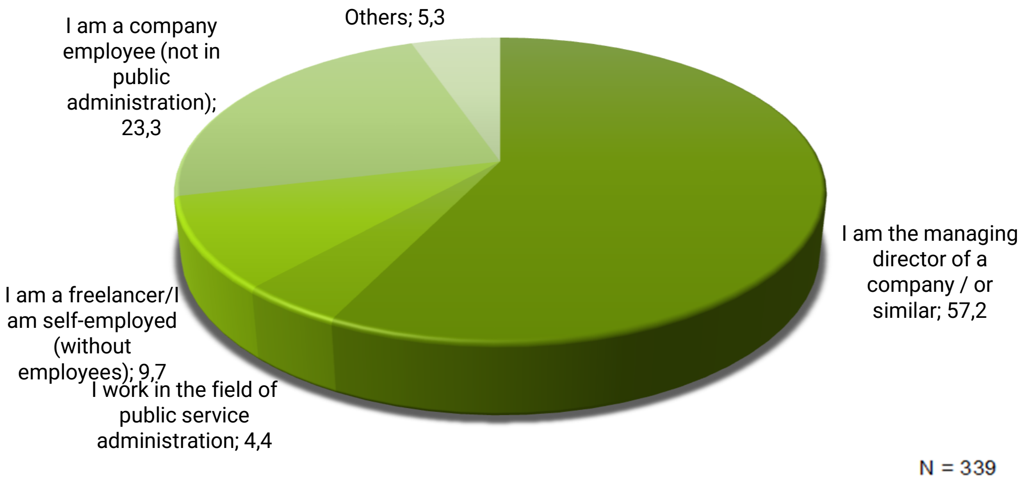


Figure D6. The number of employees working in your company:

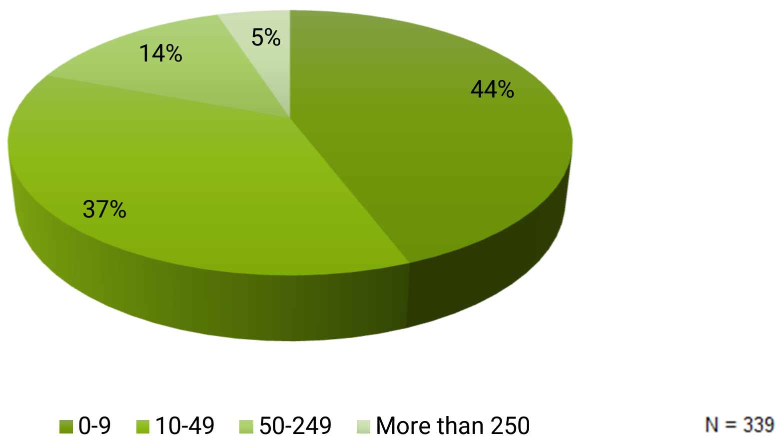


Figure D7. What is your highest educational level? %

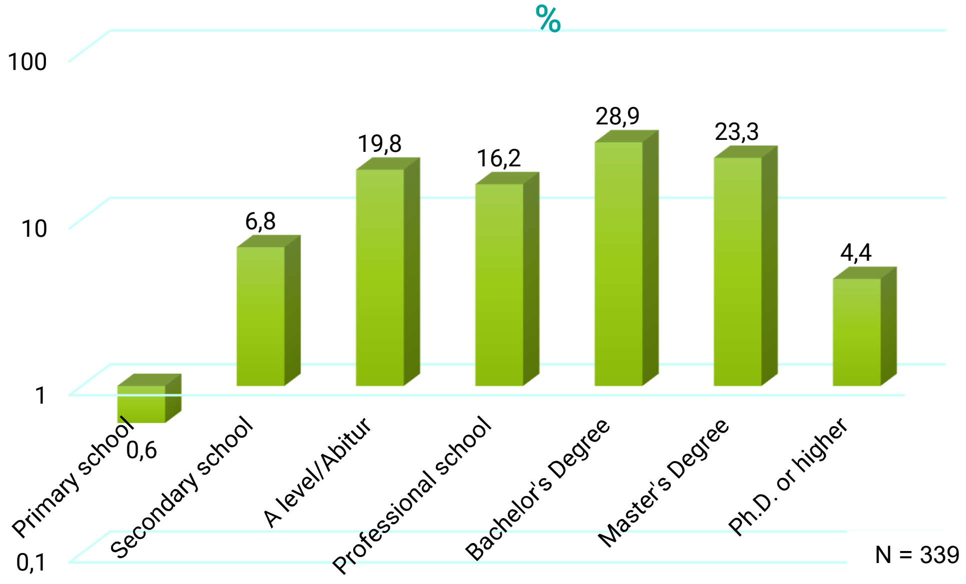


Figure D8. Where is your workplace/company activity ?

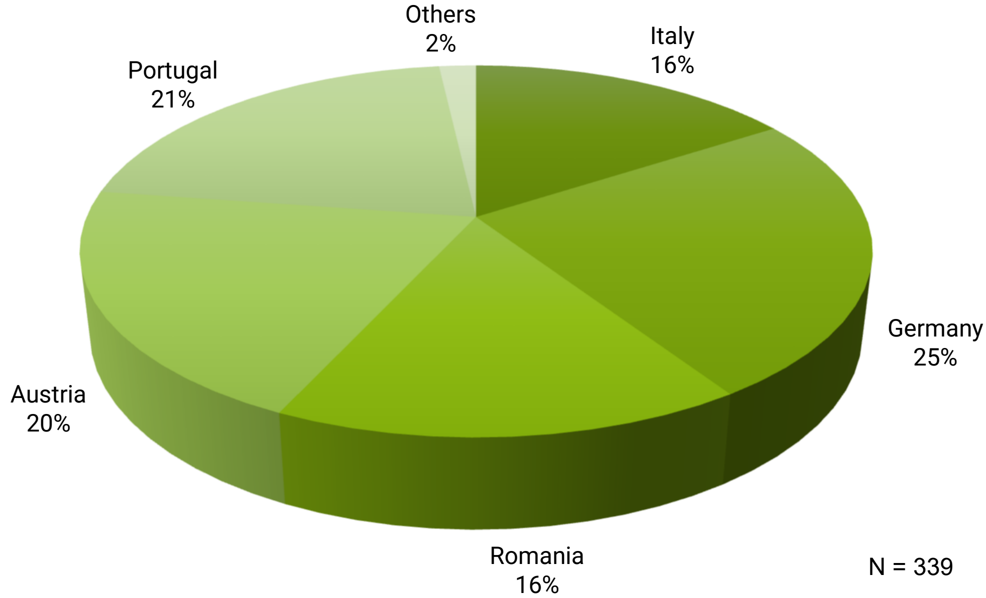


Figure C5. According to your experience, do you assume that the guest behaviour will be different in the future than before the pandemic?

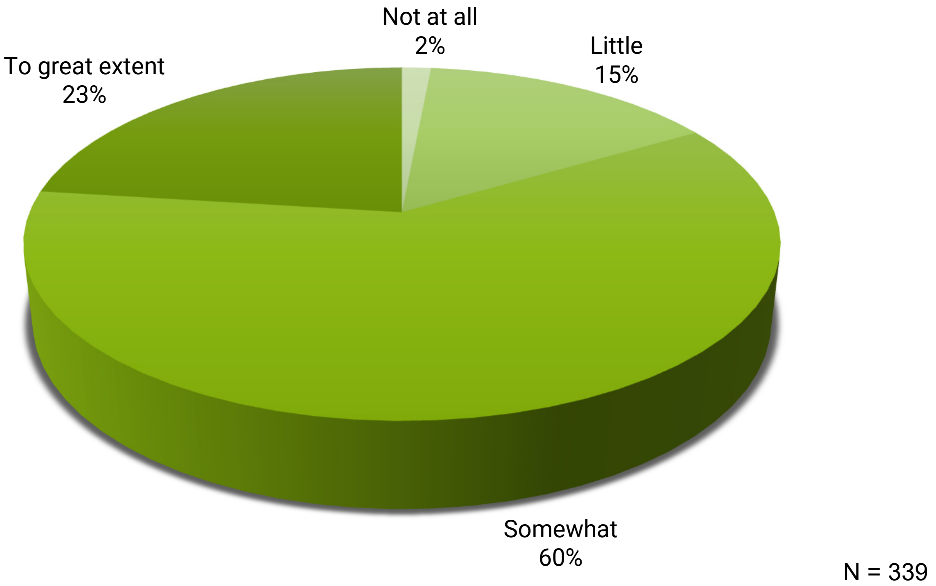


Figure C6. Which of the behavioural changes listed below do you think will remain in the long term (after the Covid-19 restrictions have been fully lifted)?

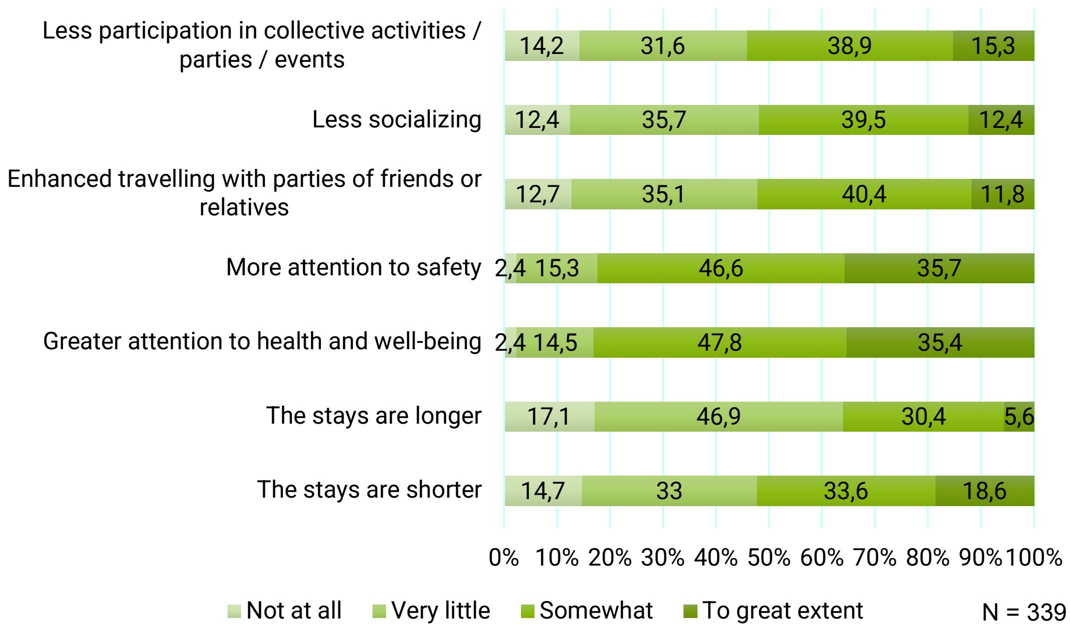


Figure C7. Apart from the government guidelines, do you think that customers will expect and request a Covid-19 strategy from tourism companies?

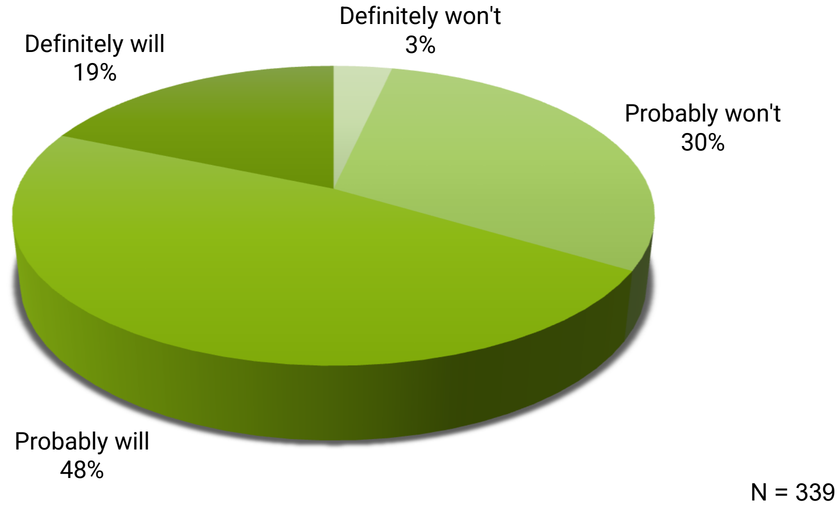


Figure S1.Please rate the following assumptions:

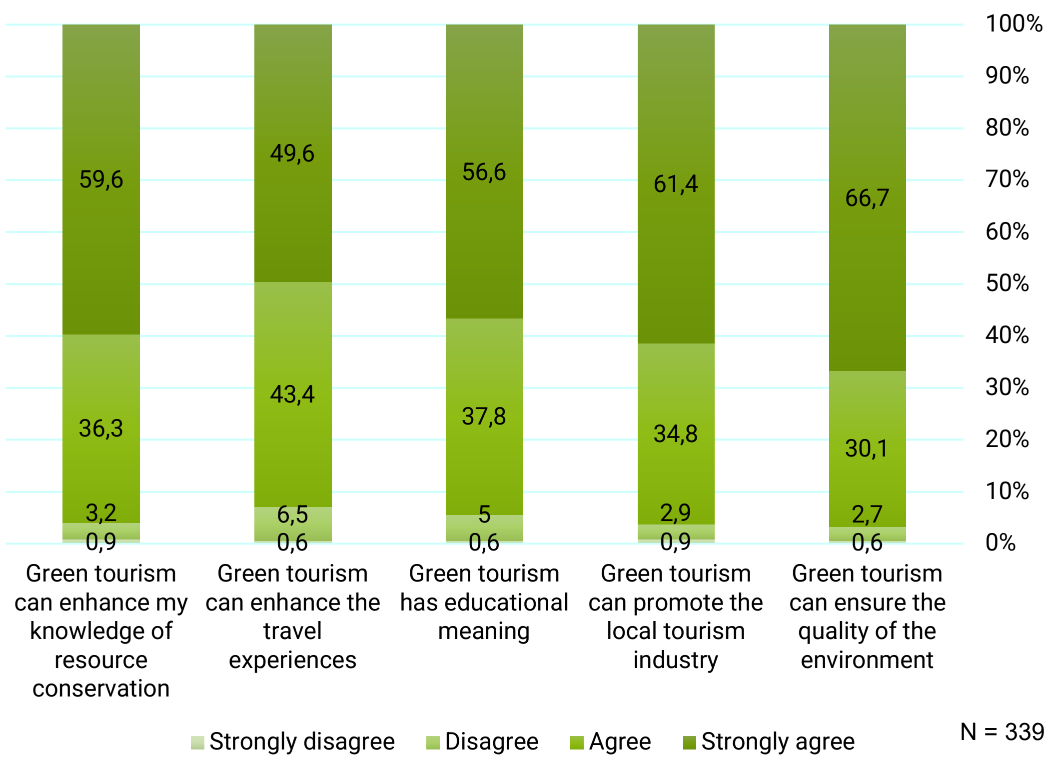


Figure S6. Does your company use clean energy?

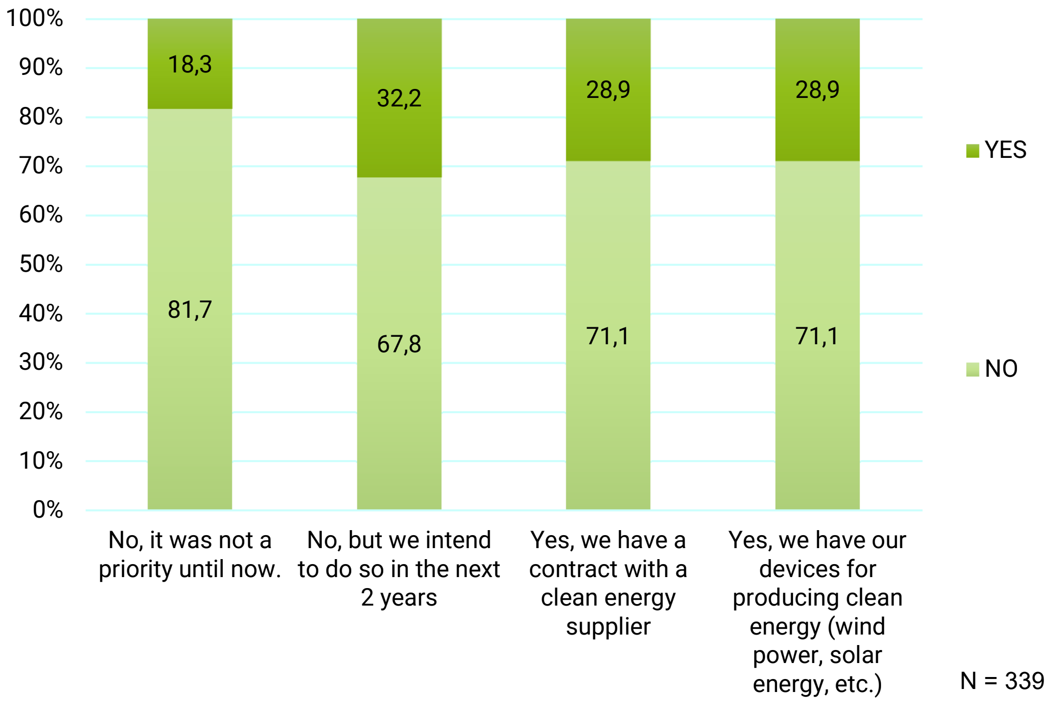


Figure S9. If you have adopted (in your business) some initiatives to reduce packaging, please indicate:

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Figure S10.1. Please check the options that are available in your company, to indicate which practices you use for waste management. -food organic-

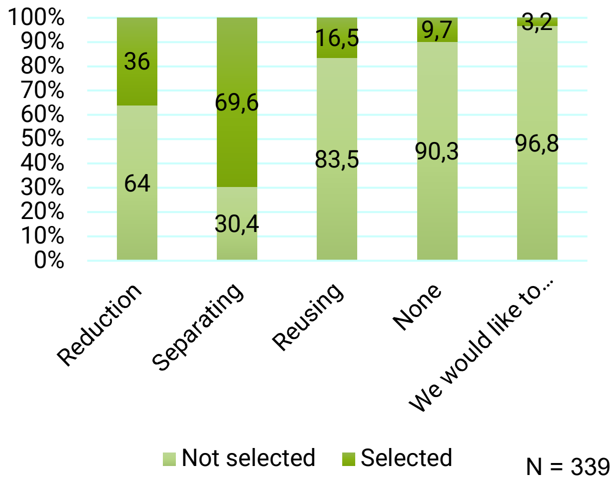

Figure S10.2. Please check the options that are available in your company, to indicate which practices you use for waste management. -paper-

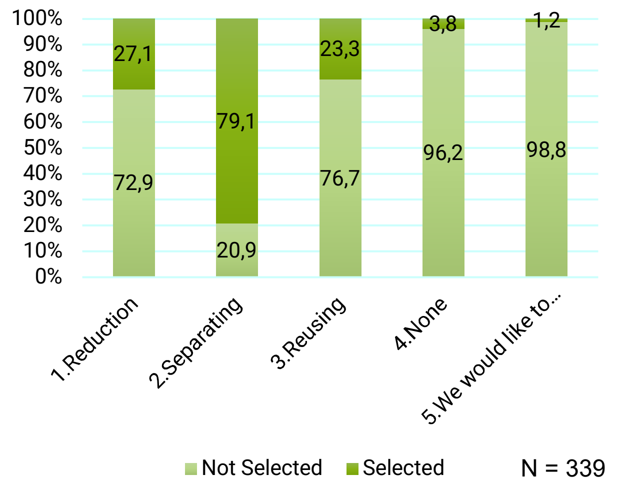

Figure S10.3. Please check the options that are available in your company, to indicate which practices you use for waste management. -plastic-

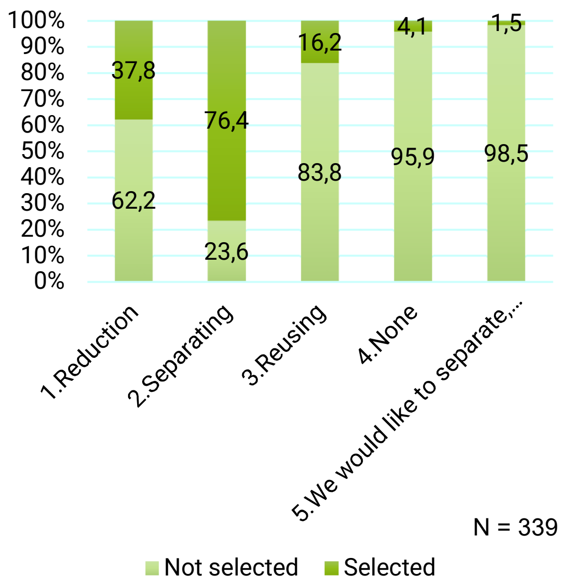

Figure S10.4. Please check the options that are available in your company, to indicate which practices you use for waste management. -glass-

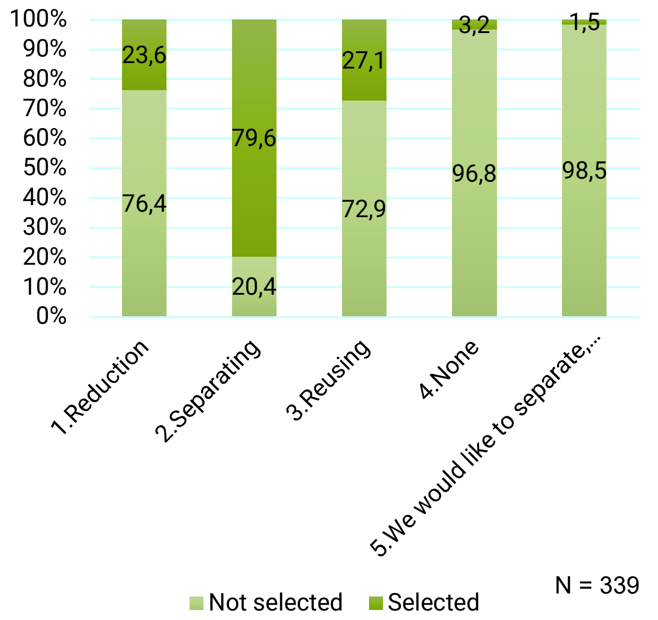

Figure S11. Choose from the following points, the one that is corresponding to the general purchasing policy in place for your company:

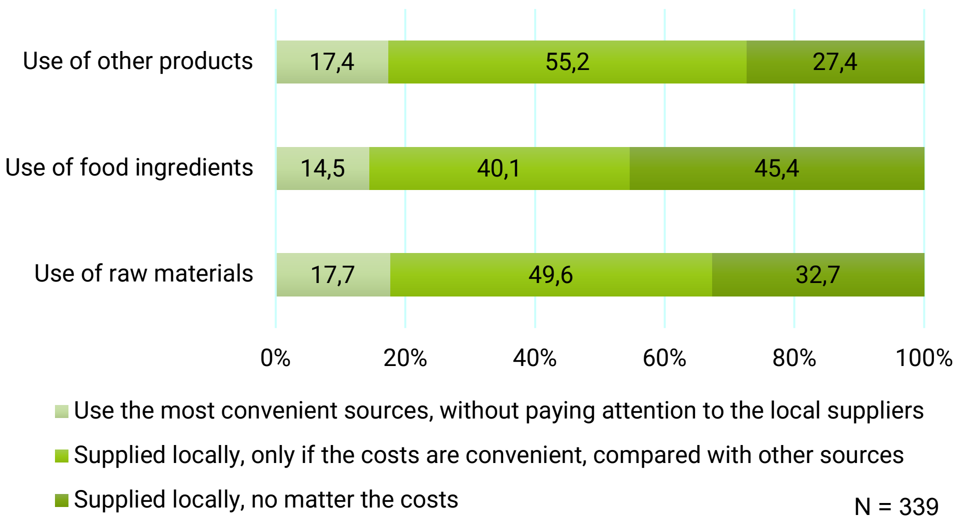

Figure S12. In your opinion, will there be dramatic legal restrictions for your company in the future, due to tackling climate change in the EU?

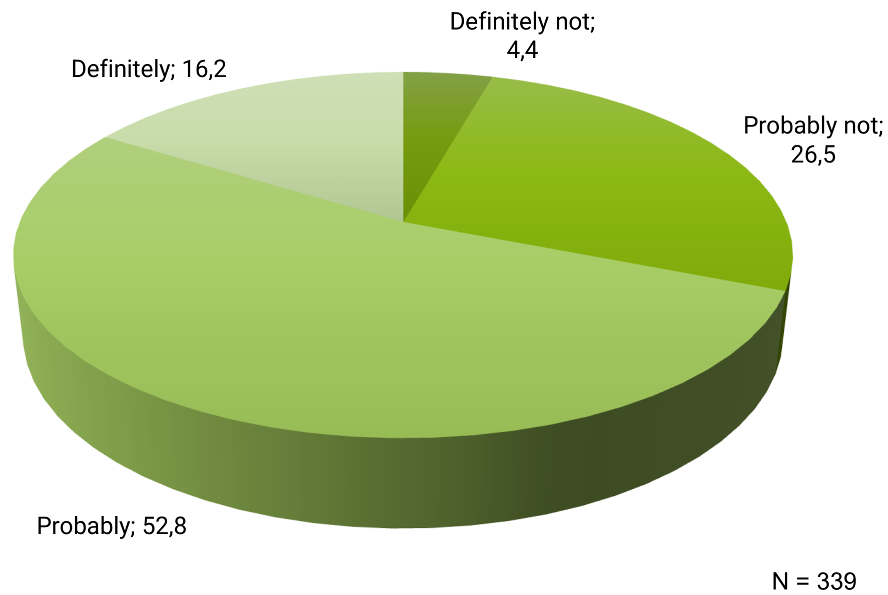

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Figure M1. Do you have the opportunity to discuss and compare best practices on sustainability with colleagues?

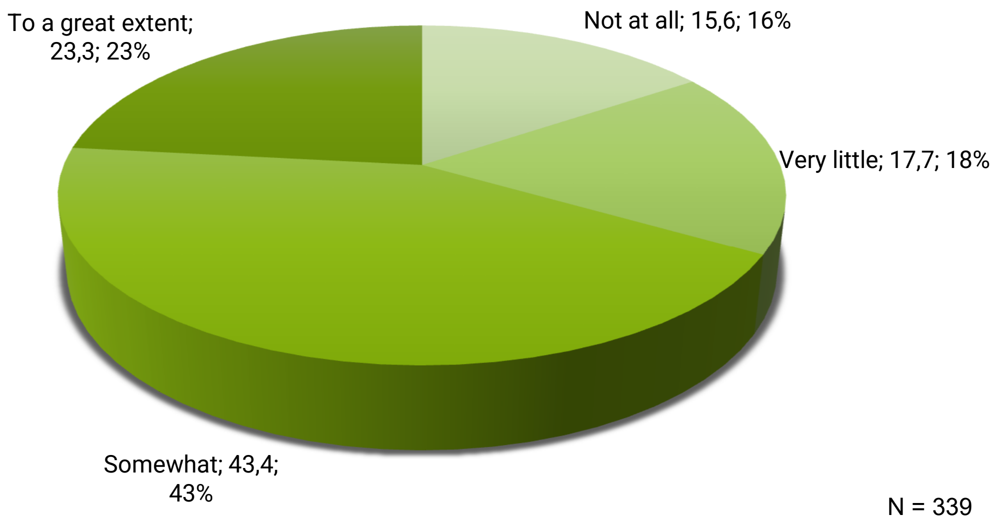


Figure M3. Have you taken initiative to make your customers aware, through written messages placed in the organisation, on the subjects of:

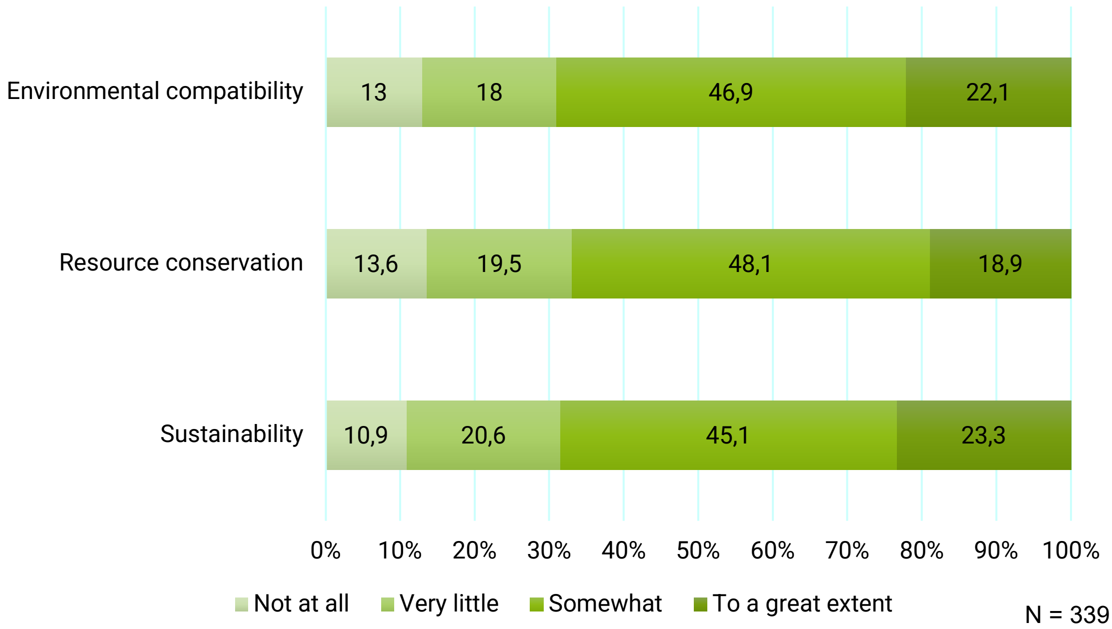


Figure M4. Please mention what actions are you implementing in the field of green tourism (how your company is supporting green issues):

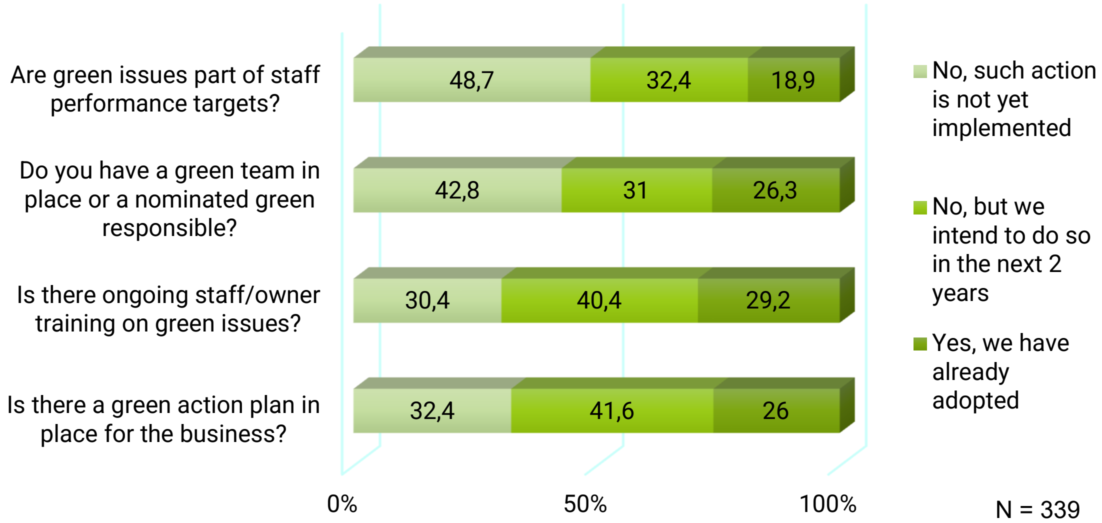
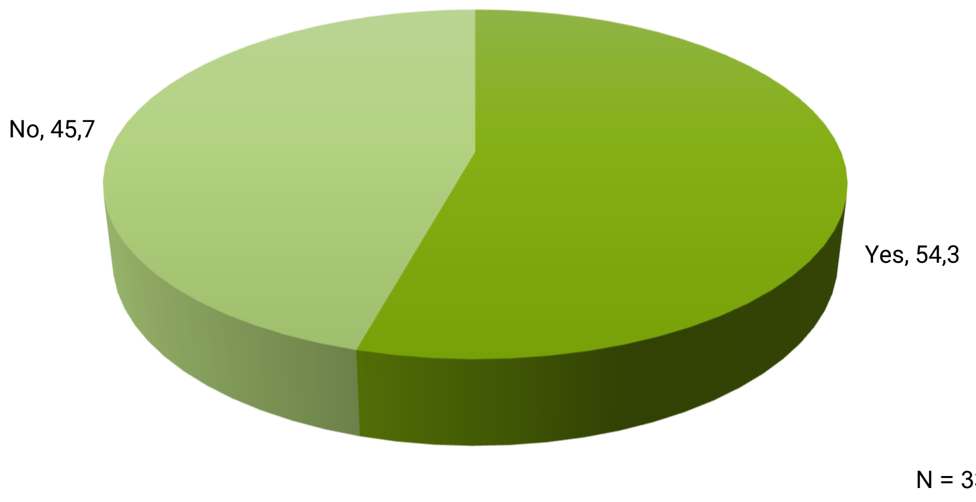


Figure M5. Have you ever heard of the "European Green Deal"?



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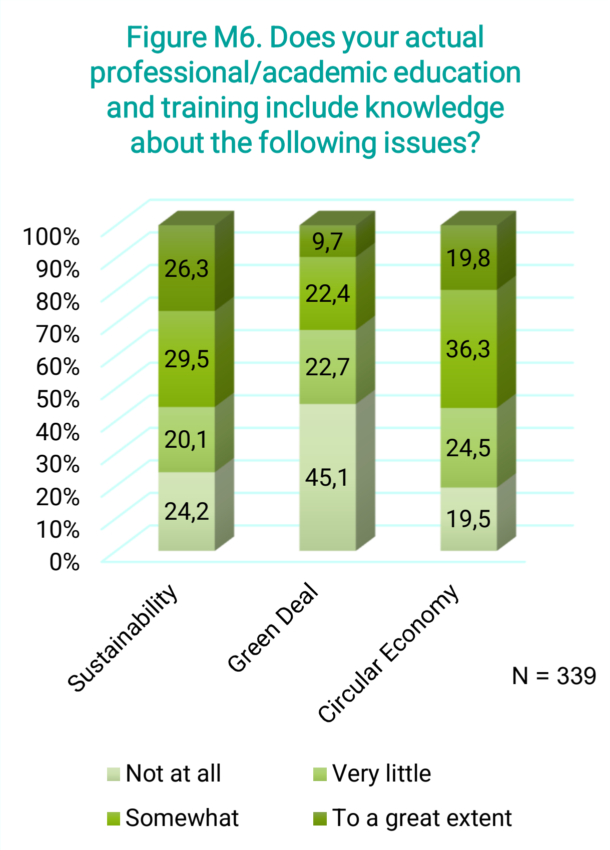
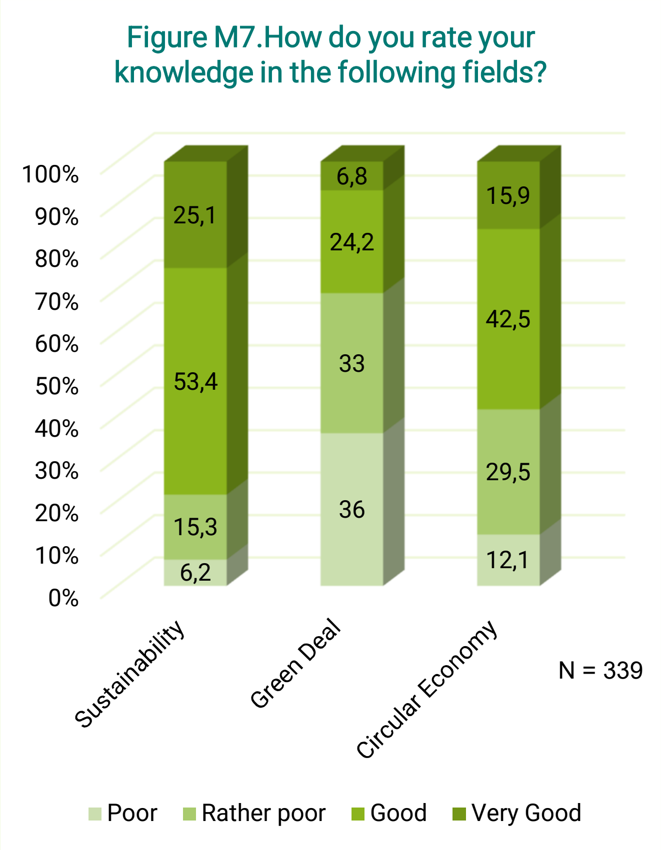




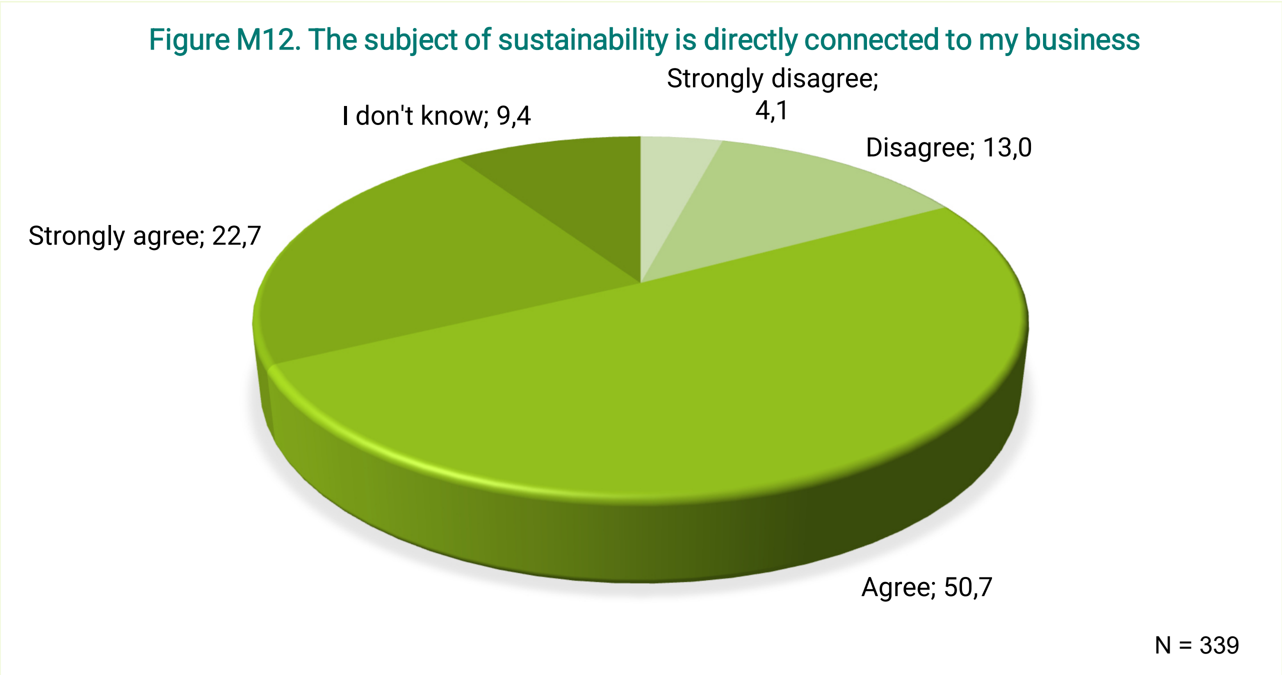
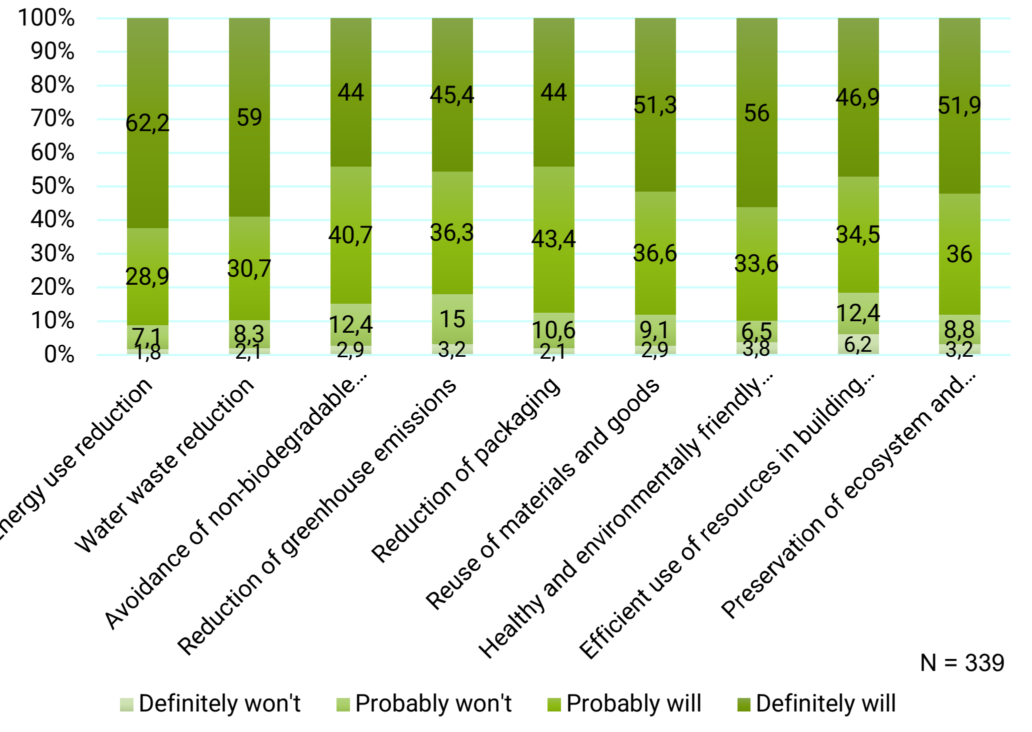


Figure M15. Please complete the following sentence "I would like to know more information about:" and rate the answers.



Annex 2.b

Figure C1. Was your business affected by the Covid-19 pandemic

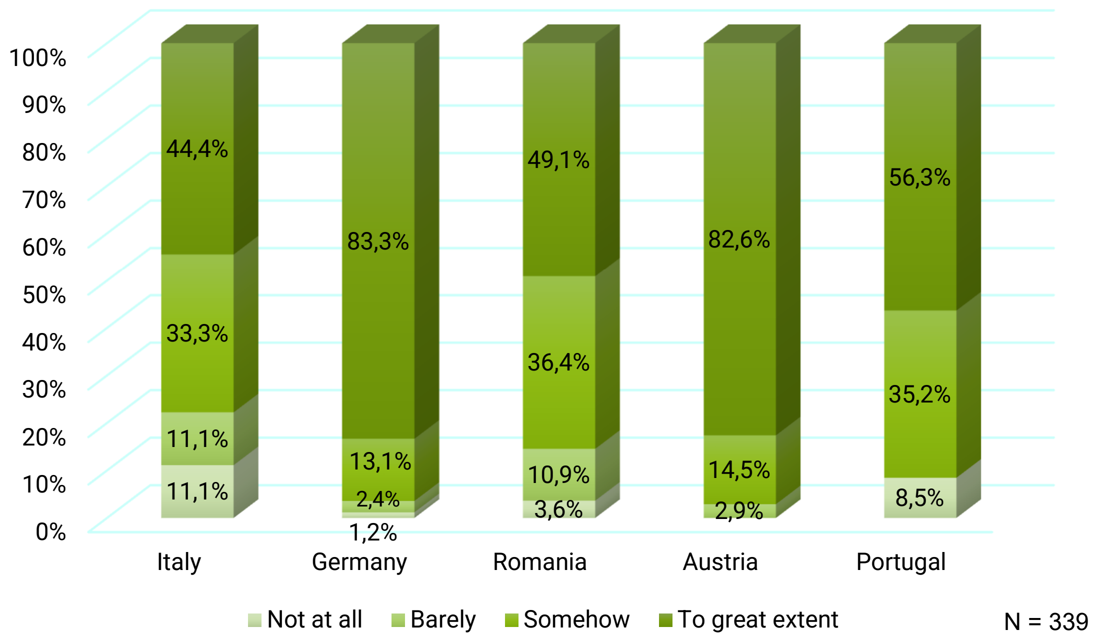


Figure C2. Have you noticed some changes in the way your clients spend their holidays?

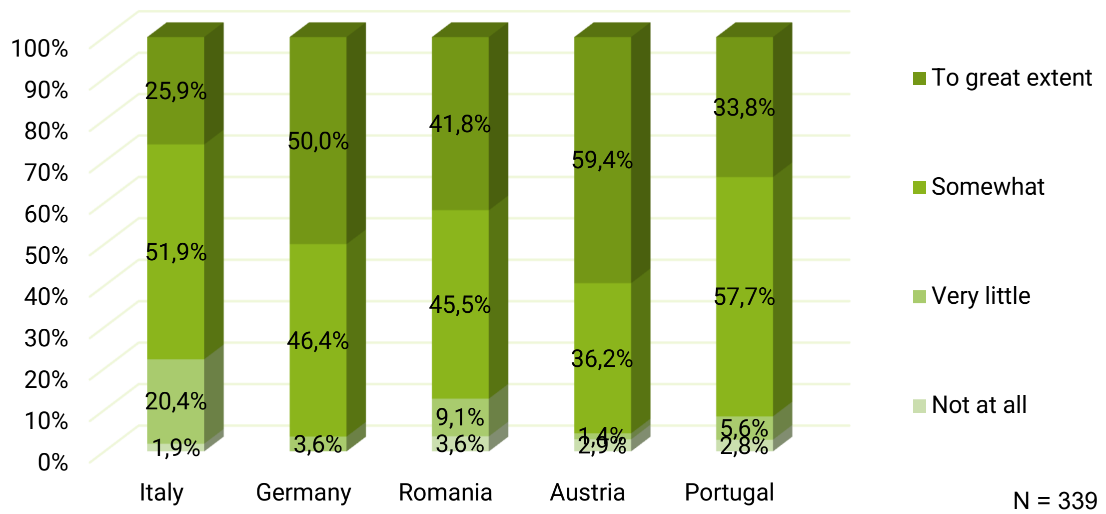


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Figure C5. According to your experience, do you assume that the guest behaviour will be different in the future than before the pandemic?

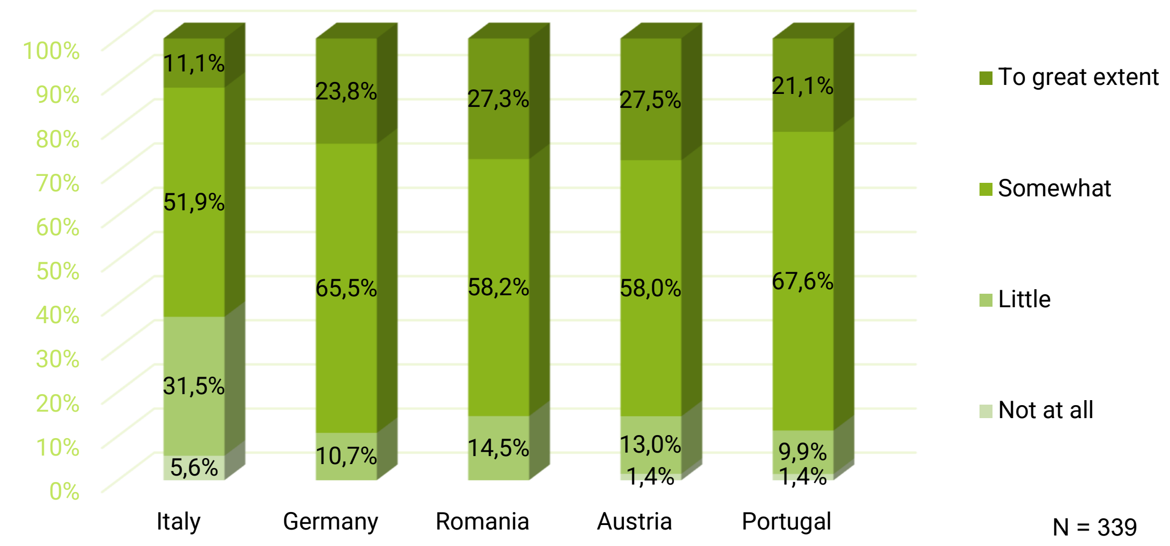

Figure C6. Which of the behavioural changes listed below do you think will remain in the long term (after the Covid-19 restrictions have been fully lifted)?

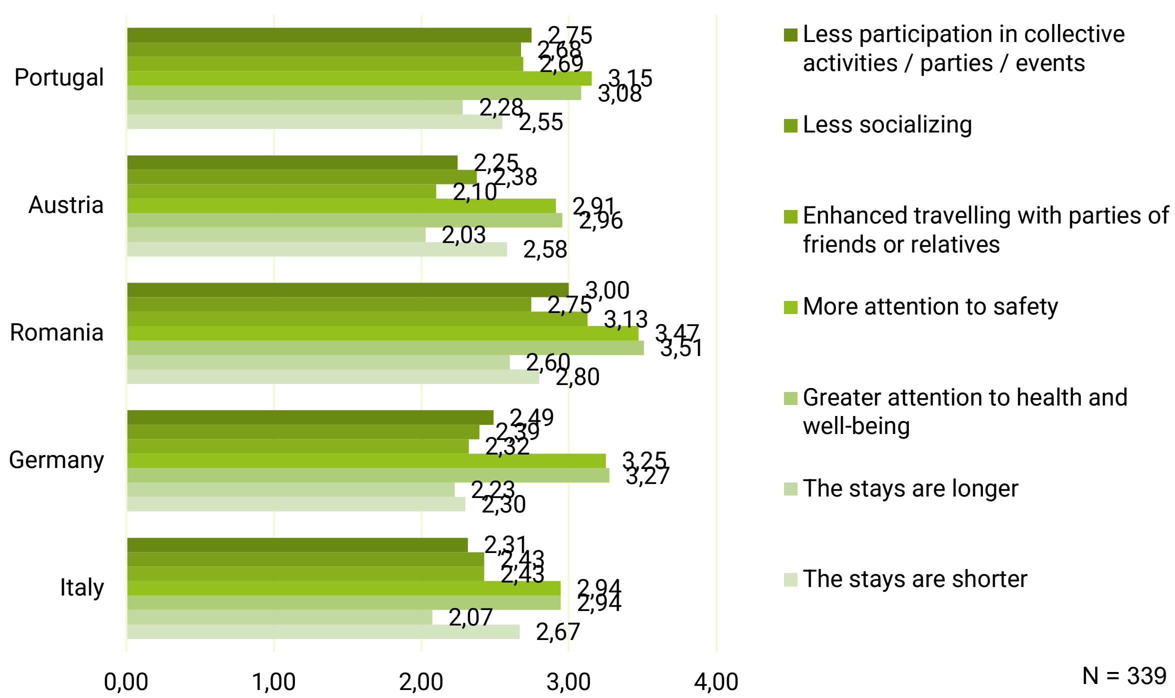

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Figure S1. Please rate the following assumptions:

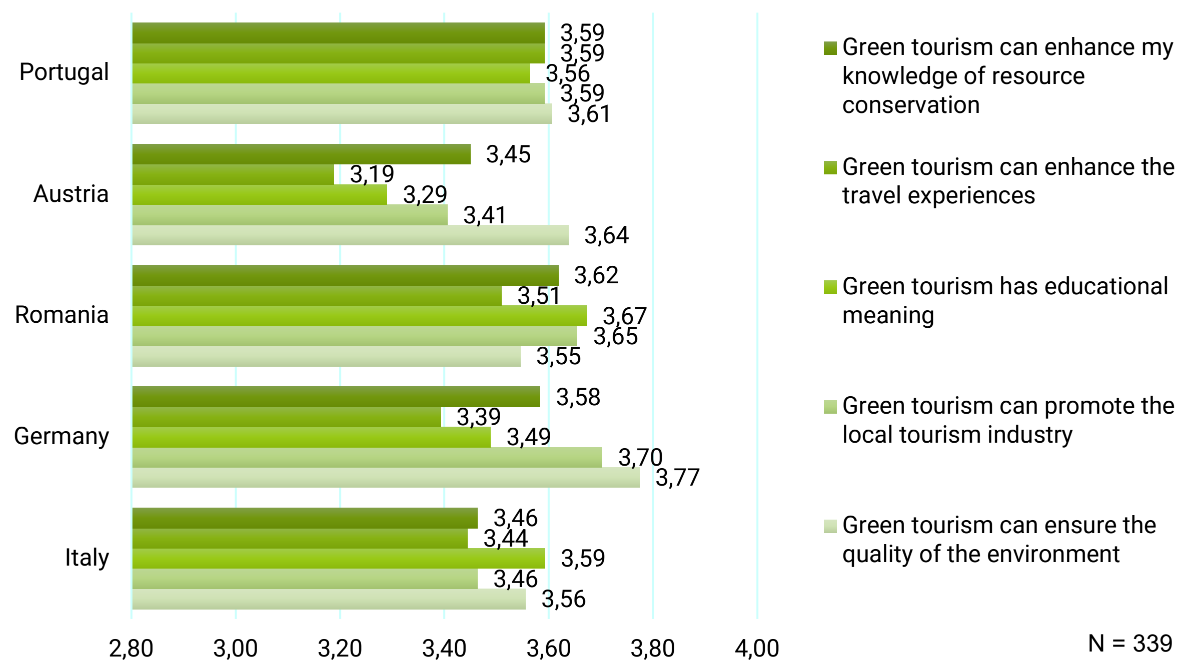

Figure S2. In the process of environmental labelling, has your company done the following actions (please check one answer from the alternatives listed below)

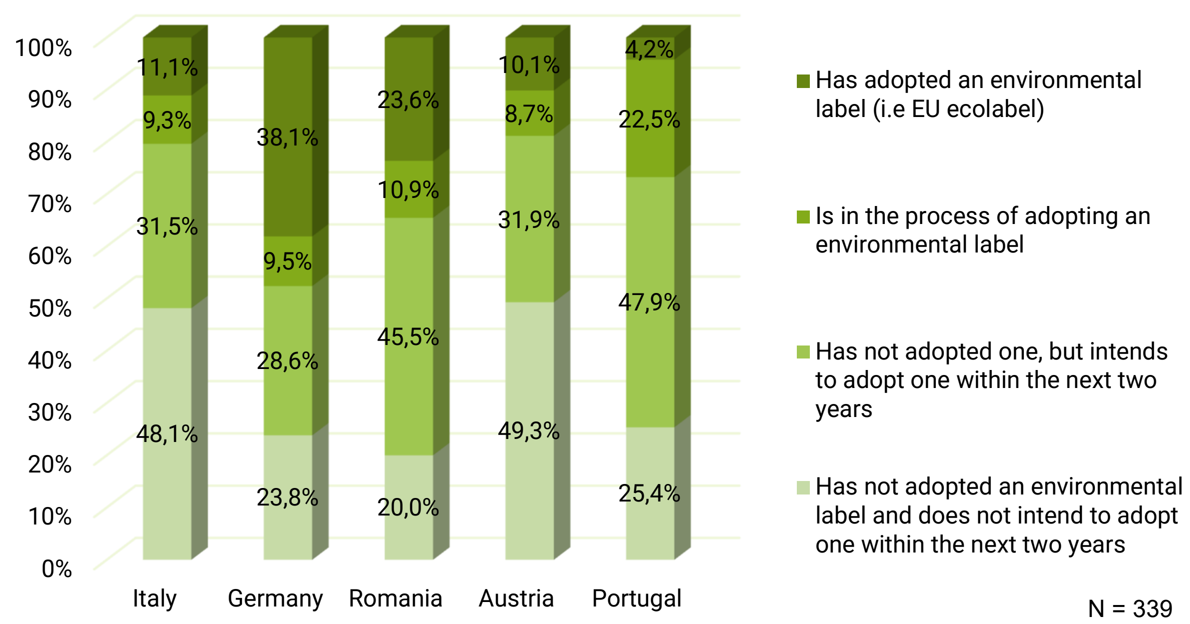


Figure S3. Can your company be considered a green company?
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
20,4%
46,3%
27,8%
5,6%
34,5%
50,0%
10,7%
4,8%
21,8%
54,5%
18,2%
5,5%
26,1%
52,2%
20,3%
1,4%
23,9%
39,4%
28,2%
8,5%
Italy
Germany
Romania
Austria
Portugal
To great extent
Somehow
Very little
Not at all
N = 339

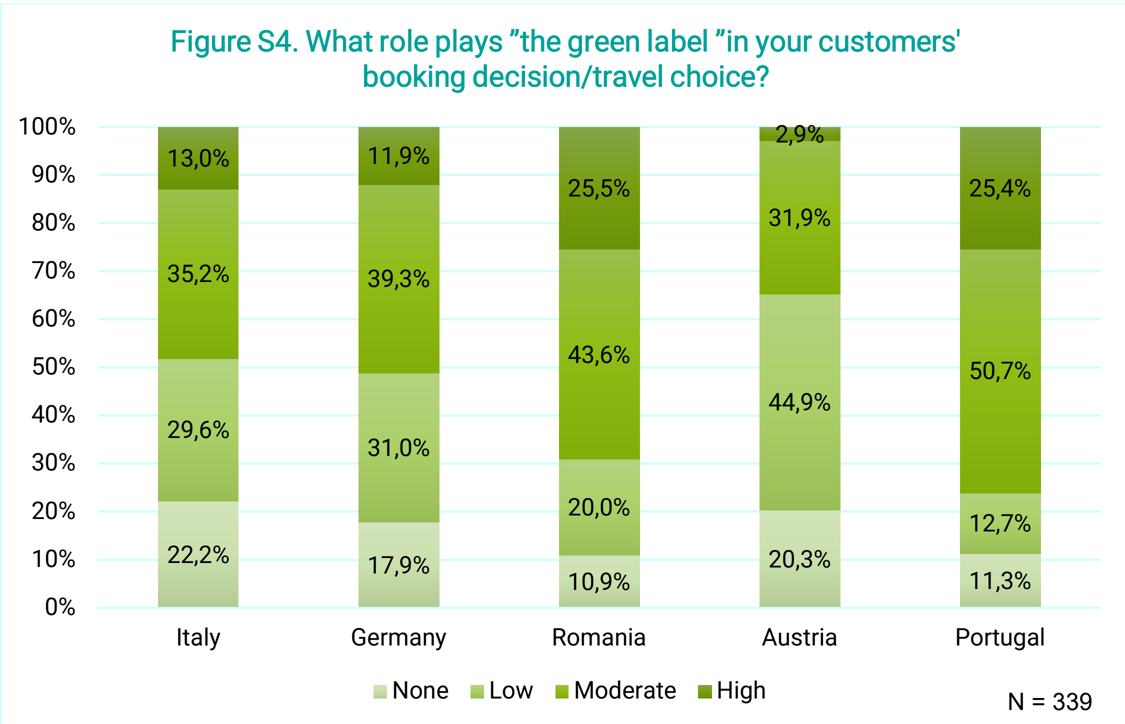
Figure S4. What role plays "the green label "in your customers' booking decision/travel choice?
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
13,0%
35,2%
29,6%
22,2%
11,9%
39,3%
31,0%
17,9%
25,5%
43,6%
20,0%
10,9%
2,9%
31,9%
44,9%
20,3%
25,4%
50,7%
12,7%
11,3%
Italy
Germany
Romania
Austria
Portugal
None
Low
Moderate
High
N = 339

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Figure S5. In the past 5 years, has your company adopted measures for better energy efficiency?

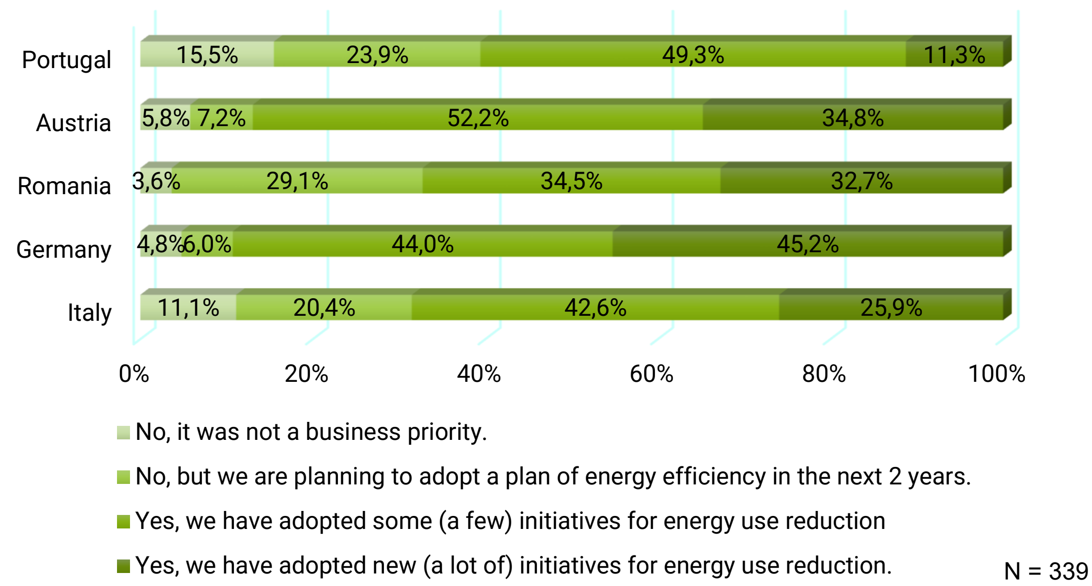


Figure S7. In the last 5 years, have you taken into consideration the sustainability aspect of the construction works?

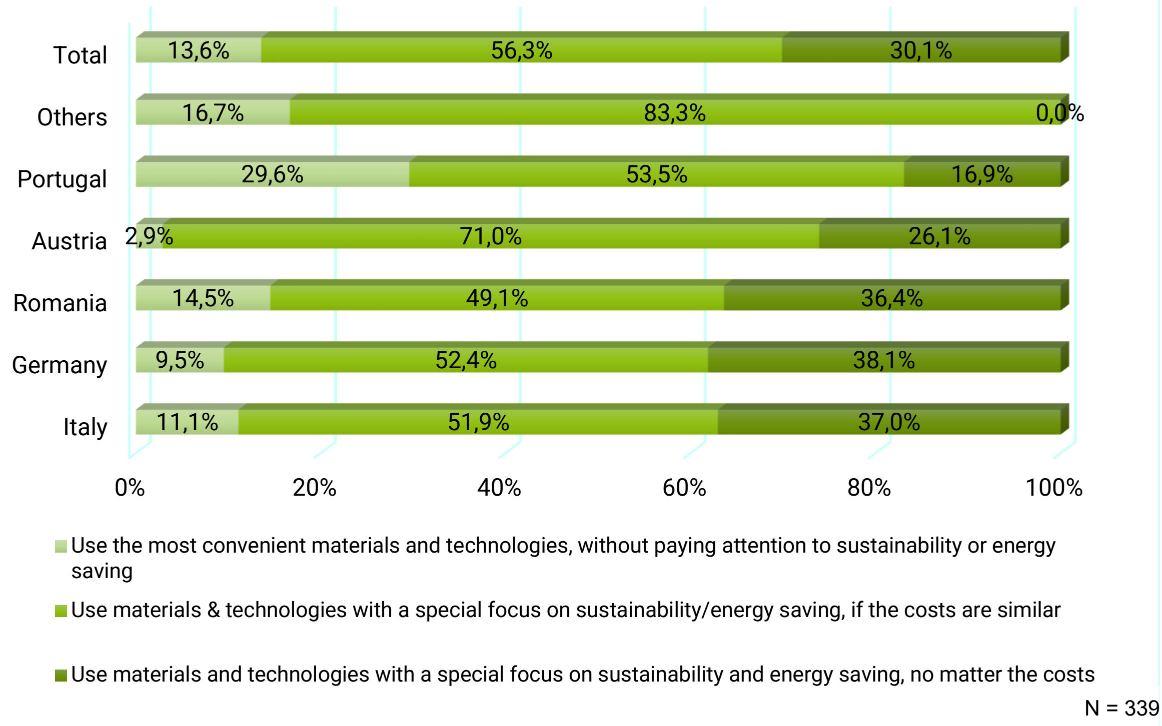


Figure S10.1. Please check the options that are available in your company, to indicate which practices you use for waste management.
-food and organic-

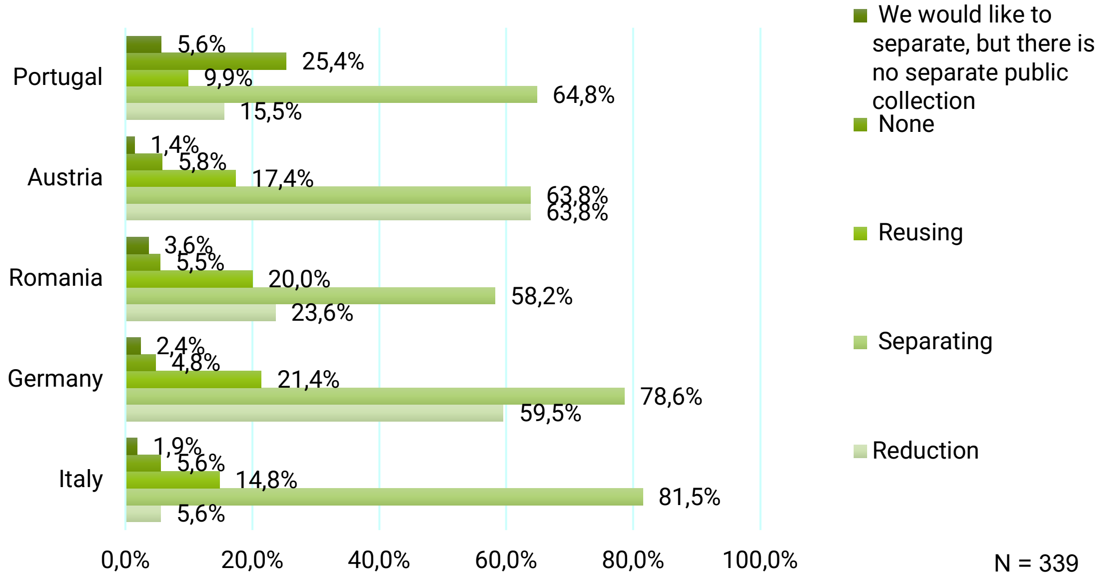


Figure S10.2. Please check the options that are available in your company, to indicate which practices you use for waste management.
-paper-

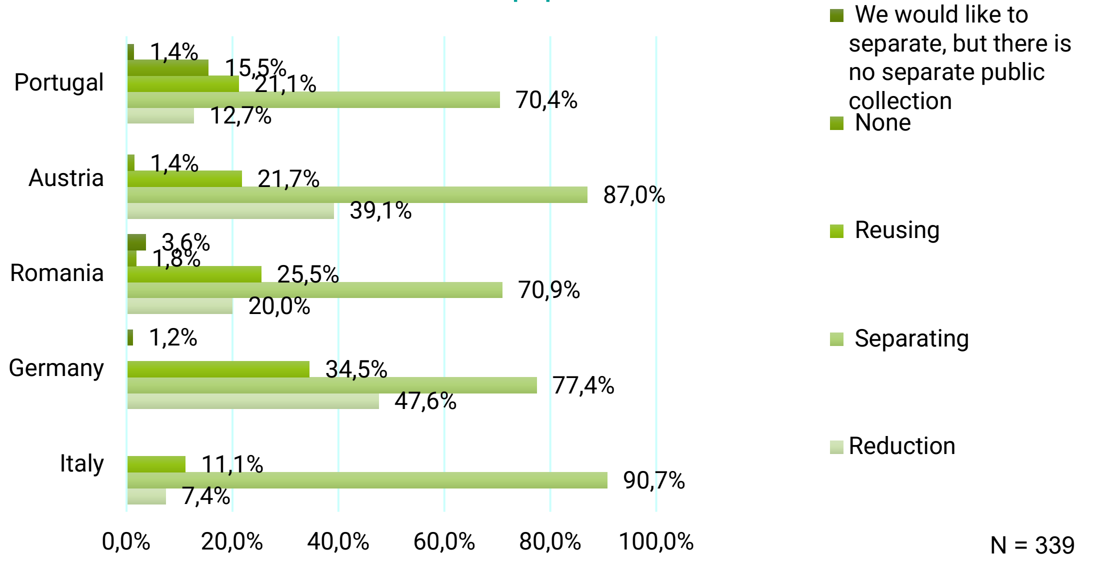


Figure S10.3. Please check the options that are available in your company, to indicate which practices you use for waste management.
-plastic-

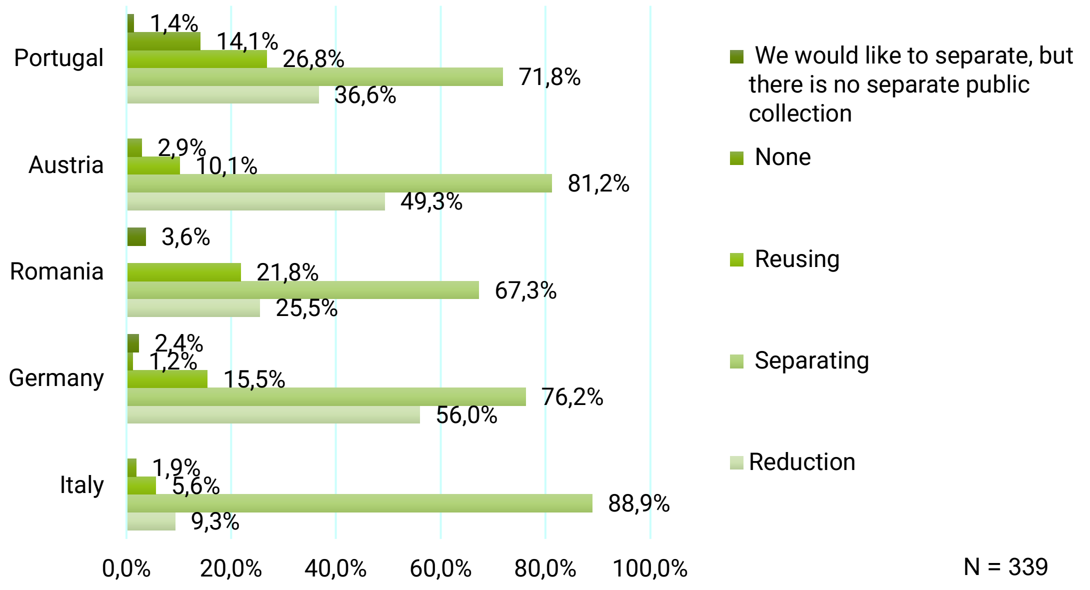


Figure S10.4. Please check the options that are available in your company, to indicate which practices you use for waste management.
Glass

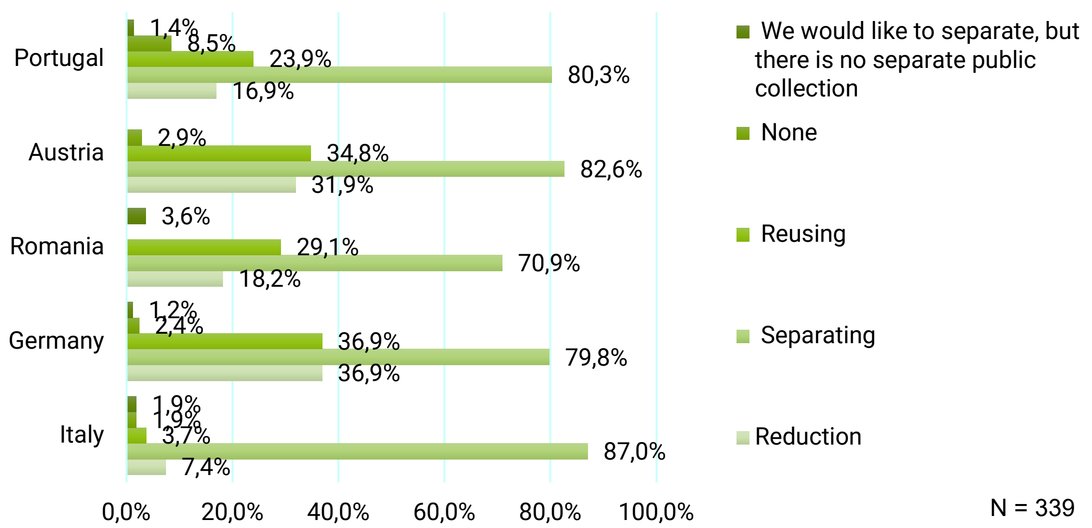
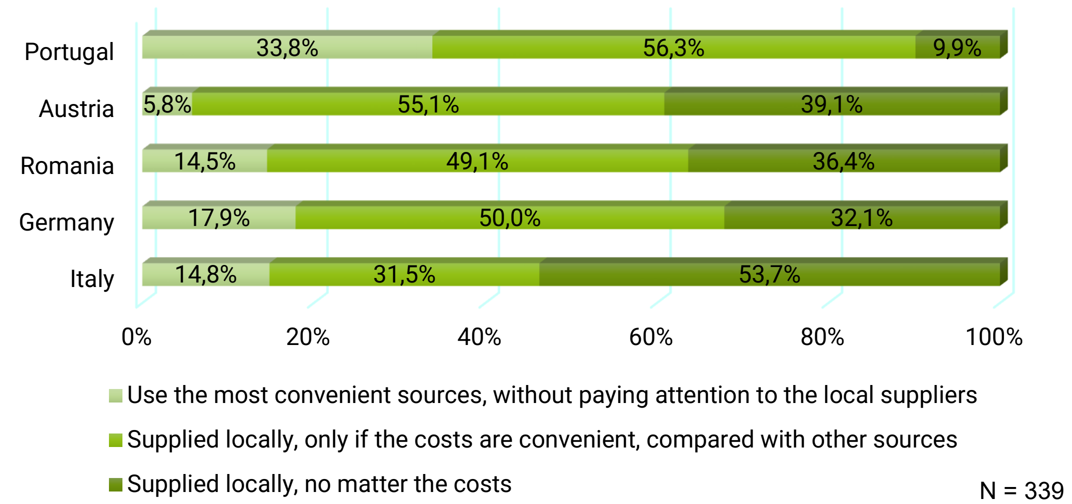
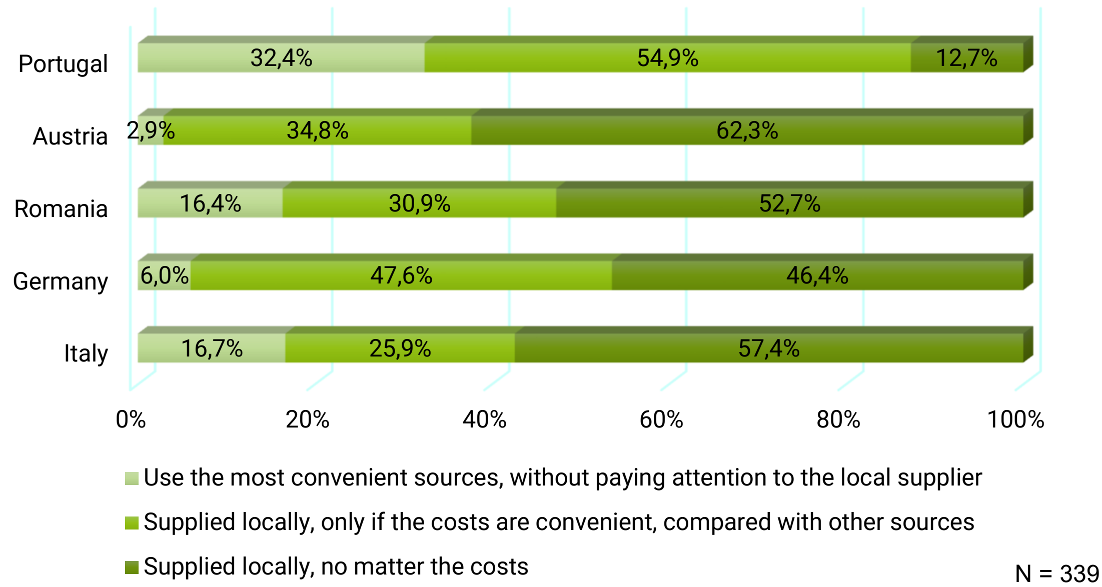


Figure S11.1 Choose from the following points, the one that is corresponding to the general purchasing policy in place for your company:
Use of raw materials



N = 339

Figure S11.2 Choose from the following points, the one that is corresponding to the general purchasing policy in place for your company:
Use of food ingredients



N = 339

Figure S11.3 Choose from the following points, the one that is corresponding to the general purchasing policy in place for your company:
Use of other products

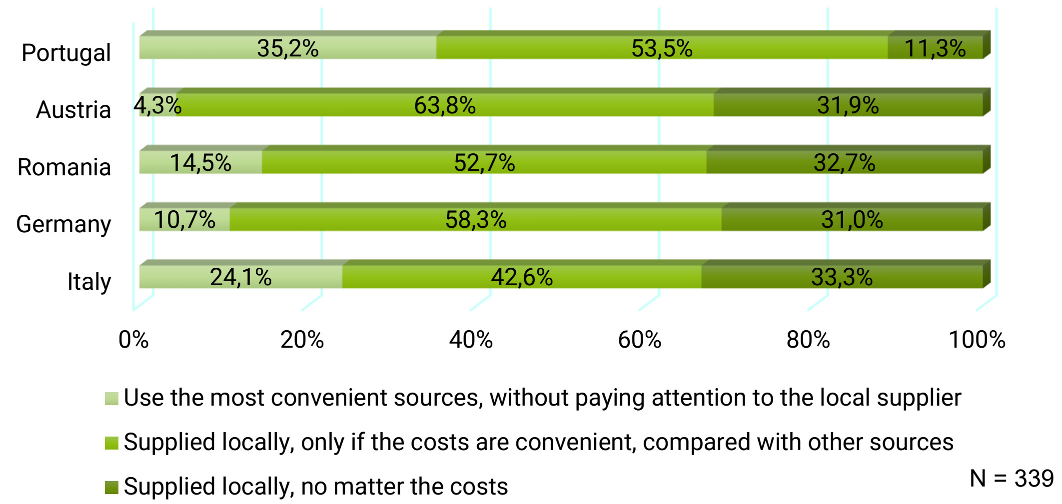


Figure S12. In your opinion, will there be dramatic legal restrictions for your company in the future, due to tackling climate change in the EU?

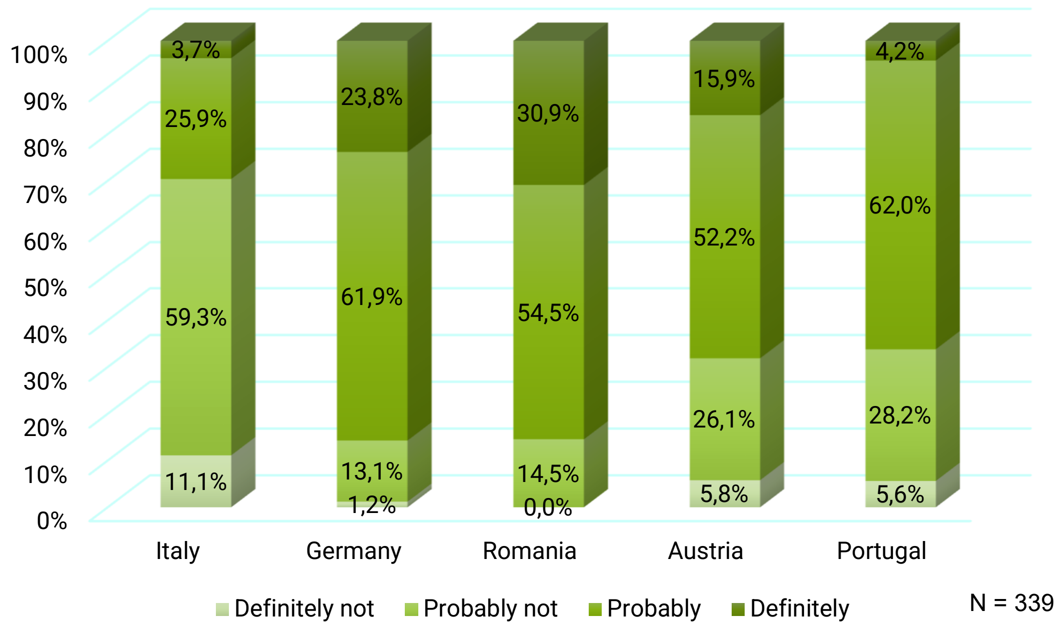


Figure M1. Do you have the opportunity to discuss and compare best practices on sustainability with colleagues?

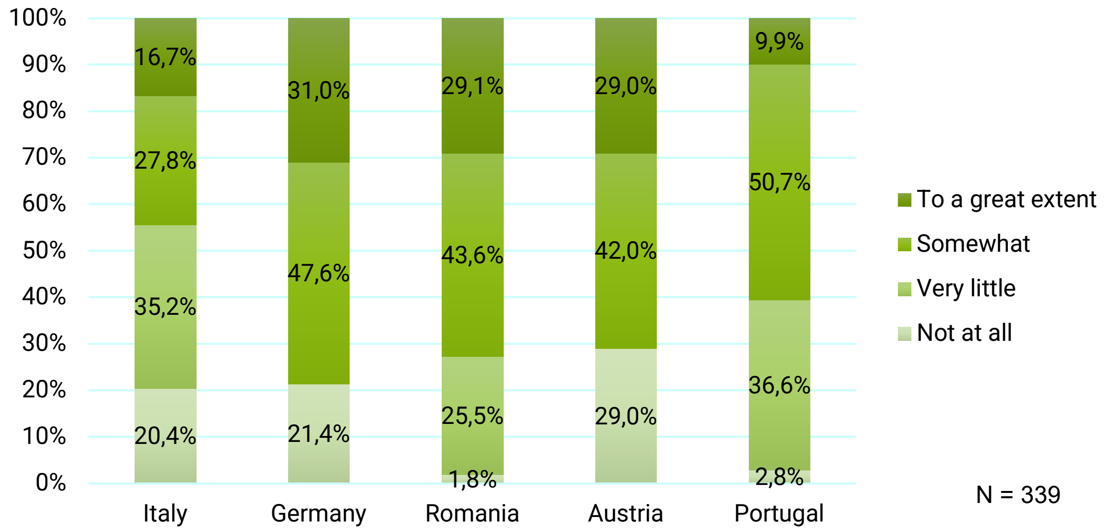


Figure M2. How well do you think your company is prepared for implementing best practices in sustainability?

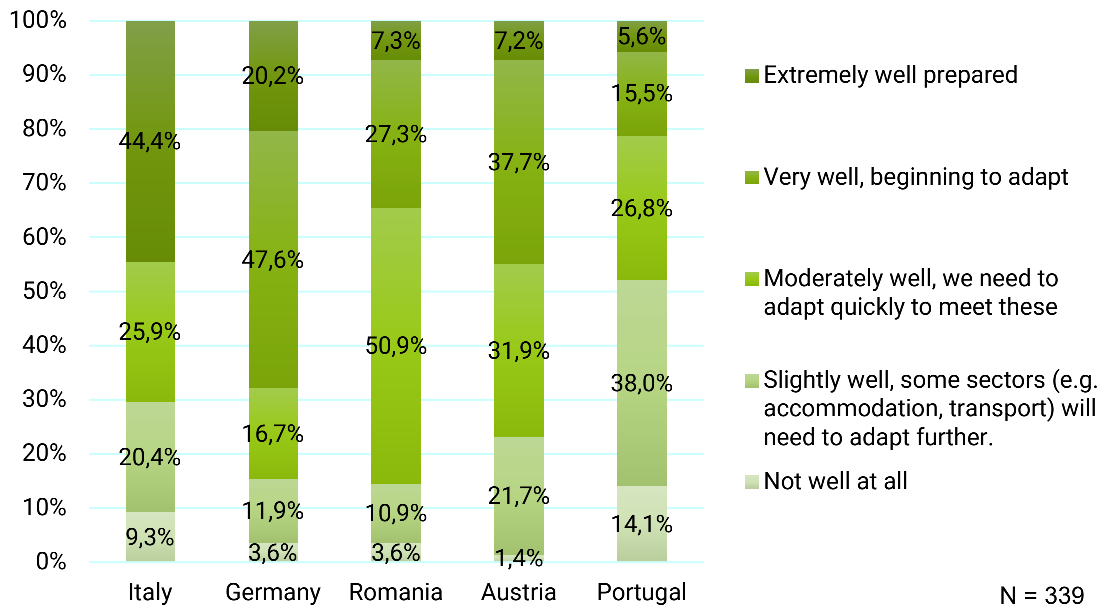


Figure M9. Do you consider you need training/courses about environmental issue?

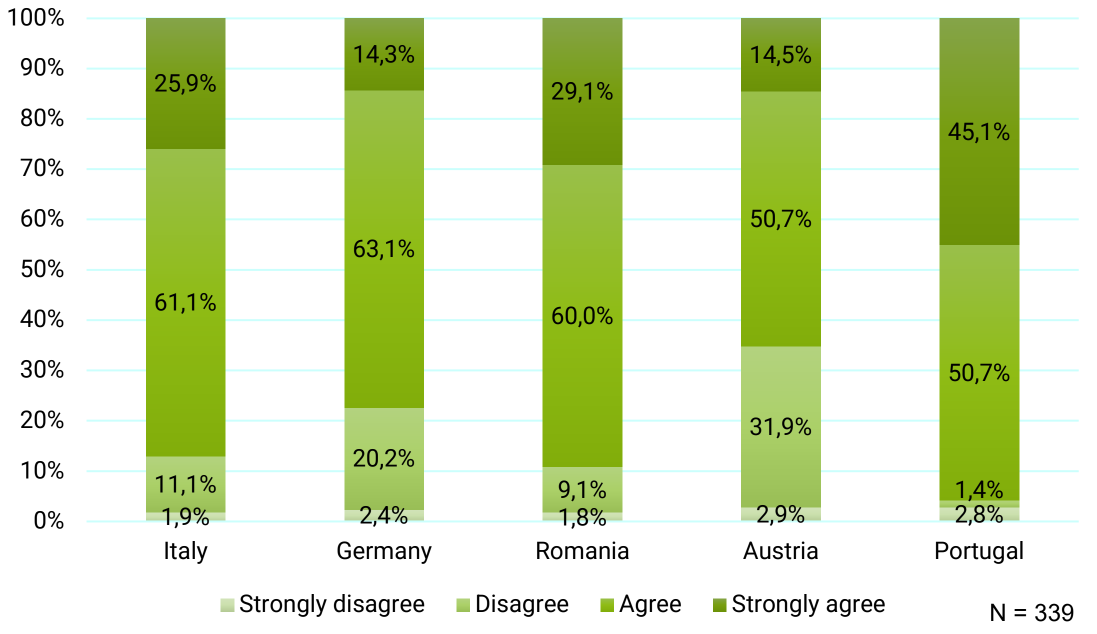
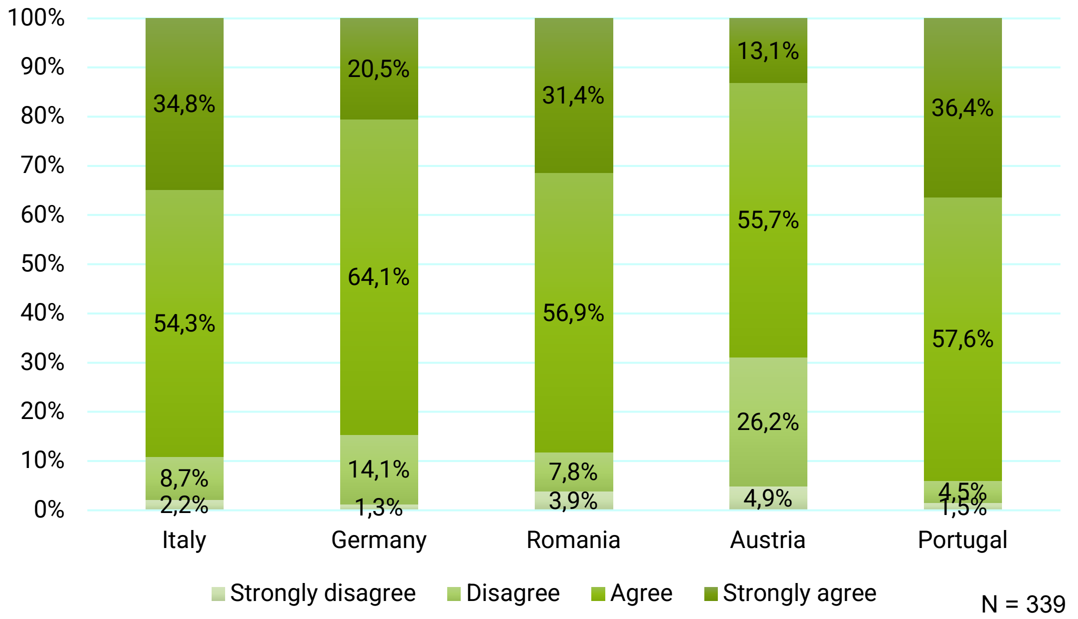


Figure M11. Do you consider your staff/colleagues need training/courses about environmental issue?



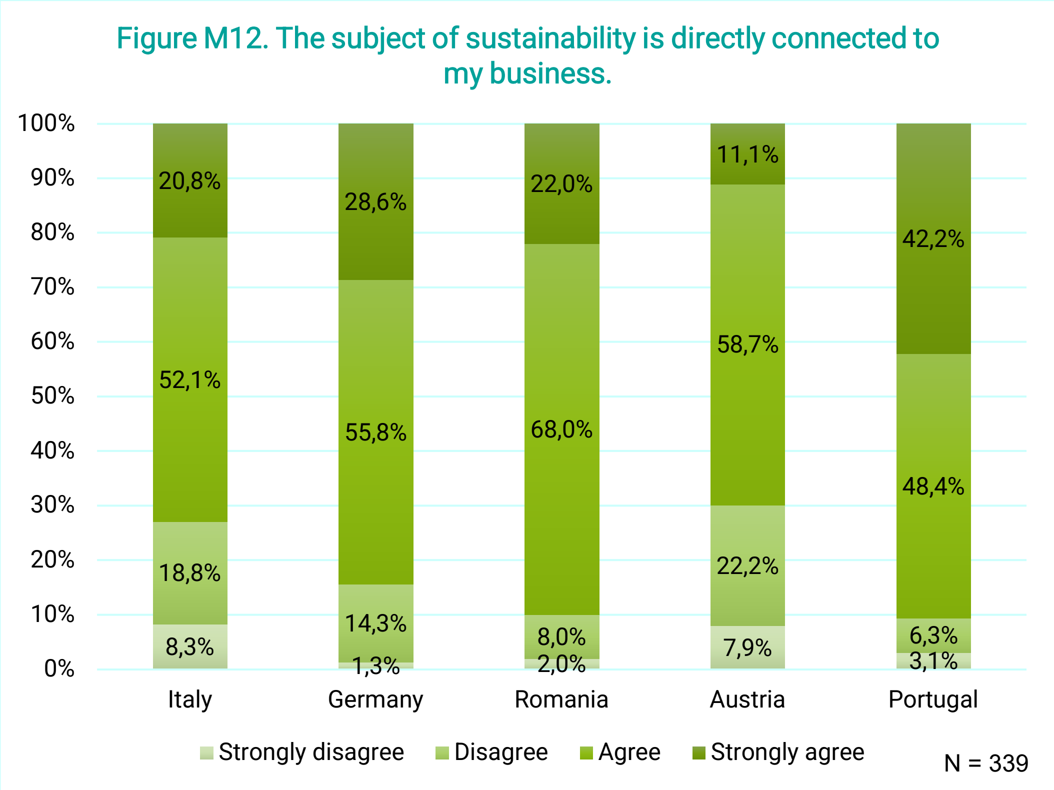


Figure M12. The subject of sustainability is directly connected to my business.
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
20,8%
52,1%
18,8%
8,3%
28,6%
55,8%
14,3%
1,3%
22,0%
68,0%
8,0%
2,0%
11,1%
58,7%
22,2%
7,9%
42,2%
48,4%
6,3%
3,1%
Italy
Germany
Romania
Austria
Portugal
Strongly disagree
Disagree
Agree
Strongly agree
N = 339

Annex 3 Structured guideline for interviewing tourism experts on the European Green Deal and Post-Pandemic Market(English version)

Introduction:

Output 1: - European survey (desk research combined with online questionnaire and interviews) on the expected changes in customer behaviour after Corona and the demands on European tourism economy postulated by the Commission in the Green Deal. Clear derivations for the future strategic and operational orientations of SMEs in the tourism industry

This second sub-study is dedicated to understanding how the COVID-19 pandemic and the Green Deal affected the Tourism Industry. It follows the outline of the questionnaire already sent to business and aims at a broader analysis of the issues through an interview with stakeholders. Concerning COVID, the goal is understanding the level of recovery in terms of volume of guests, if the approach to the stay has changed, if any changes are considered stable or temporary, any other eventual consideration. Concerning the Green Deal, the objective is to evaluate the knowledge and awareness both on the part of business and on the part of the public strategic bodies, investigating whether there are plans to address the various points of the Green Deal by the companies and by the planners.

The Green Deal: Climate change and environmental degradation are an existential threat to Europe and the world. To overcome these challenges, the European Green Deal will transform the EU into a modern, resource-efficient and competitive economy, ensuring:

- no net emissions of greenhouse gases by 2050
- economic growth decoupled from resource use
- no person and no place left behind.

The European Green Deal is also our lifeline out of the COVID-19 pandemic. **One third of the 1.8 trillion euro** investments from the Next Generation EU Recovery Plan, and the EU's seven-year budget will finance the European Green Deal.
https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

Target group:

Interviews should be undertaken with leading experts from the tourism industry, this can include businesspeople, highly qualified academics, representants of employer associations and representants of public bodies.

Methodology:

It is highly recommended that the entire interview be recorded, so that derivations and analysis can be undertake after the interview. The recording must only be made with the strict permission of the interviewee. Please make clear to the interviewee that the recording is strictly for research purposes and will not be shared outside the partnership or uses for any commercial purposes.

Interview Form

0.1 Partner in charge:		0.2 Date:	DD/MM/2021	0.3 Starting time:	HH:MM

(Please insert before starting each interview)

1. Key data

1.1 Name of interviewee:	
1.2 Organisation:	
1.3 Role/position in organisation:	
1.4 Country:	
1.5 How long are you already dealing with Green Economy?	___ months
1.6 Level of expertise and experiences made etc. regarding Green Economy; what is your point of view on this? (Please describe briefly; 500-1000 characters)	

2. COVID-19 pandemic

2.1. Do you think that the COVID 19 pandemic has brought some lasting definitive changes in tourism and travel, or do you think that after the emergency is over everything will settle back as before?

[500 to 1000 characters]

2.2. Which sector of tourism do you think will be more negatively affected in the long term by the COVID-19 pandemic and why? (i.e.: high level accommodation; low level accommodation; catering; air transport; rail transport; cruise; museum; events; etc.)

[500 to 1000 characters]

3. Common understanding – European Green Deal

3.1 How would you understand and define the "European Green deal"?

[500 to 1000 characters]

3.2. What are the **weaknesses and strengths** of the European Green Deal? Do you think that the European Green Deal can enable or foster new opportunities? Which risks can be mitigated by the European Green Deal?

[500 to 1000 characters]

3.3. Do you see or expect any social, economic and market effects through the implementation of the Green Deal

[500 to 1000 characters]

3.4. How do you assess the time frame for the implementation of the green deal? (Include main priority and deadlines)

4. Green Deal for business

4.1 Which part of the Green Deal do you consider more positive for the travel industry and which part difficult to apply?

[500 to 1000 characters]

4.2. Which support do businesses need, to increase sustainability and to achieve the targets of European Green Deal?

[500 to 1000 characters]

4.3. Regarding increasing sustainability and achieving the targets of Green Deal, which activities do you think will be implemented easier and faster? Which activities will be more difficult to implement?

i.e.: climate change; clean, affordable and secure energy; building and renovating in an energy and resources efficient way; zero pollution for toxic free environment; preserving and restoring ecosystem and biodiversity; Farm to fork; smart mobility

[500 to 1000 characters]

5. Green Deal for market

5.1 Do you think that pursuing the green deal could positively affect the market in terms of demand/travel behaviour?

[500 to 1000 characters]

5.2. How would you describe current activities being done concerning the EU green deal at national level? And at regional level? And at local level?

[500 to 1000 characters]

5.3. Do you think that the businesses are ready, prepared and sensitized to face the challenges of the European Green Deal?

[500 to 1000 characters]

5.4. Which threats and risks do you see regarding the implementation of the European Green Deal? Which are the main target groups and stakeholders that need to be convinced? What would derail the project at EU level? Etc.

[500 to 1000 characters]

5.4. Do you see any short-term risks to the implementation of the European Green Deal program? (i.e.: escalation of pandemic, worsening of the international political framework, inflation, lack of energy resources, expropriation of the middle class, etc.

[500 to 1000 characters]

II. Derivations and recommendations:

II. What do you think is from the EU and national authorities for the Green Deal to be successfully accepted and implemented in the sectors of tourism and travel?

DO's – this I can recommend	DON'Ts – this should be avoided
• • • •	• • • •

We have reached the end of the interview!
Thank you very much for your time and efforts!

Annex 4 Structured guideline for interviewing experts on education and micro-credentials (English version)

Introduction:

Output 1: European survey (desk research combined with online questionnaire and interviews) on the expected changes in customer behaviour after Corona and the demands on European tourism economy postulated by the Commission in the Green Deal. Methodologically, the CREDinGREEN Survey 3 in 1 applies the empirical social research concept of triangulation, according to which a subject area is measured and determined by measuring processes from different angles, using different methods, and collecting and analysing data from different sources (Flick, 2018).

This third sub-study is dedicated to the concept of micro-credentials, its developments, approaches and quality standards in national and European educational policy, its integration into existing educational instruments (EQF, EUROPASS) as well as already existing best practice examples; for this purpose, primary and secondary sources from all over Europe are analysed and 10 interviews with policy makers and experts are conducted; responsible partners: P0, P1, P3, P6 and P8.

About Micro-credentials:

Micro-credential' means the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards. Courses leading to micro-credentials are designed to provide the learner with specific knowledge, skills, and competencies that respond to societal, personal, cultural, or labor market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be standalone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity." [1] European Commission. Proposal for a council recommendation on a European approach to micro-credentials for lifelong learning and employability. COM/2021/770 final. European Commission, Brussels, November 2021.

Micro-credentials are a completely new concept in European education policy, which will be concretised and anchored in the national education systems in the next few years.

The most important element is that **higher education institutions** offer smaller and smallest learning units **in vocational education and training** (if possible, even to non-academics) **and assess the learning outcomes into micro-credentials**.

While qualifications and degrees from initial education and training play a key role in Europe, alternative credentials (including digital badges, micro credentials, nano-credentials, minor awards, etc.), are increasingly seen as a way to add to, and/or reform, existing qualifications systems. Micro credentials are frequently portrayed and promoted as a new way for individuals to build their own skills-profile (portfolio) by collecting and 'stacking' learning in a flexible way, at their own pace and according to their own priorities. [2] CEDEFOB: Micro credentials for labour market education and training | CEDEFOP (europa.eu)

Related content
https://education.ec.europa.eu/education-levels/higher-education/micro-credentials
https://op.europa.eu/en/publication-detail/-/publication/7a939850-6c18-11eb-aeb5-01aa75ed71a1

Interview Form

0.1 Partner in charge:		0.2 Date:		0.3 Starting time:	

(Please insert before starting each interview)

1. Key data

1.1 Name of interviewee:	
1.2 Organisation:	
1.3 Role/position in organisation:	
1.4 Country:	
1.5 How long are you already dealing with micro-credentials?	___ months
1.6 Level of expertise and experiences made etc. in regard to micro-credentials; what is your point of view on this?	

2. Common understanding

2.1 How do you define “micro-credentials”? What makes them different from traditional courses, certificates, or degrees?

2.2. What characterises micro-credentials that could be used for labour market purposes?

2.3. How could micro-credentials be linked to and integrated into overall qualifications and credentials systems at the national level in your country?

2.4. What are your predictions about the future of education in a post COVID-19 world? Do you think that micro-credentials could shape the future of education in your country? If so, in what ways?

3. Micro-credentials and the added value

3.1 What conditions must be met for VET learners to trust micro credentials, to ensure value and transferability?

3.2 Are employers recognising alternative credentials in hiring decisions??

3.3. How could micro-credentials play a more targeted role in supporting ‘age neutral’ systems for VET, strengthening the focus of up-skilling and re-skilling?

4. Micro-credentials at National level

4.1 How would you generally describe the situation of the concept of micro-credentials in your country? Is it well known and if yes by whom? Are there already success stories of integration into national education/labour markets? If yes, can you please describe these? Etc.

4.2. How would you describe the official national policy on the concept of micro-credentials? Who is officially responsible for its implementation (e.g.: national ministry, working group etc.)? How do they promote micro-credentials and with what aim? Etc.

4.3. What chances and opportunities do you see regarding this concept? Where and how can it work well and who can benefit? What frameworks are required to make it a success story? Etc.

4.4. What threats and risks do you see? What makes it difficult to implement and integrate micro-credentials in your country in general, and when considering your national VET framework? Which are the main target groups and stakeholders that need to be convinced? What needs to be avoided to prevent it becoming failure on EU levels? Etc.

II. Derivations and recommendations:

II. In your opinion, what is required from the European Commission as well as from national authorities to get micro-credentials successfully introduced and integrated into Europe's as well as your national educational system and labour market as quick as possible? (at least 3 items each side)

DOs – this I can recommend	DON'Ts – this should be avoided
• • • •	• • • •

We have reached the end of the interview!
Thank you very much for your time and efforts!

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Staatlich anerkannte, private
Fachhochschule des
Mittelstands (FHM)

Stefan cel Mare
University
of Suceava

IHK-Projektgesellschaft mbH
OSTBRANDENBURG