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Transforming tourism in the Pan-European region for a resilient and sustainable post-COVID world

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TRANSFORMING TOURISM

GO 4 SDGs
ACCELERATING REGIONAL SOLUTIONS

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Acronyms

ABTA	Association of British Travel Agents
COP	Conference of the Parties
DMO	Destination management organization
EfE	Environment for Europe
EFTA	European Free Trade Association
EU	European Union
GDP	Gross domestic product
GHG	Greenhouse gas
GSTC	Global Sustainable Tourism Council
$GtCO_2e$	Gigatons carbon dioxide equivalent
MRV	Measurement, reporting and verification
MSME	Micro, small and medium enterprises
NAMA	Nationally appropriate mitigation action
NGO	Non-governmental organization
PPE	Personal protective equipment
SDGs	Sustainable Development Goals
UK	United Kingdom of Great Britain and Northern Ireland
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNWTO	World Tourism Organization
WTTC	World Travel and Tourism Council
WWF	World Wide Fund for Nature

1 Executive Summary

By October 2021, the coronavirus COVID-19 pandemic had infected more than 60.3 million people and caused more than 1.5 million deaths across Europe.[1] As a result, the region saw an unprecedented fall in international tourist arrivals, from 746 million in 2019 (up 4 per cent from the previous year) to 221 million in 2020 – a 70 per cent decrease.[2] Travel and tourism accounted for 38.5 million jobs in Europe in 2019, declining to 34.9 million jobs in 2020,[3] with the accommodation and food and beverage sectors representing the majority of employment providers.[4]

The world is facing a triple planetary crisis relating to the climate, pollution and nature, and it is becoming increasingly important for all tourism players to shift towards more sustainable and circular business models. However, governments and private tourism investors have not systematically prioritized the environment and social sustainability in their decision-making in the past.

In June and July 2021, the United Nations Environment Programme (UNEP) conducted a survey to understand the impacts of the COVID-19 pandemic on the tourism sector in the pan-European Region, which received 135 responses from people representing governments, non-governmental organizations (NGOs), tourism businesses, associations and research institutions in 35 countries. Participants also submitted examples and illustrations of impacts.

This report aims to describe the changes brought to the tourism sector by the pandemic, as well as opportunities, challenges and recommended measures for mainstreaming sustainable tourism. It first outlines the pre-pandemic environmental context of tourism and then reviews the implications of COVID19 for mainstreaming sustainability in tourism, and adequate financing responses. The report focuses on impacts on the environment, climate, waste and water linked to changes in tourism, and recommends 10 policy measures for the next decade to transform tourism development and build a resilient, inclusive, net zero and resource-efficient sector. The scope is the pan-European region; however, when pan-European data is not available, the report uses two types of data i) Europe (excluding Central Asia) and ii) European Union (EU) and European Free Trade Association (EFTA) data to show trends and the current status.

The pandemic impacts the environment (see **section 2.3**): It pandemic directly affected energy use and greenhouse gas (GHG) emissions across Europe,[5] and led to a seven per cent reduction in global GHG emissions in 2020.[6] This reduction was associated with a dramatic decline in air travel in Europe in 2020 compared with 2019.[7] However, this dip in carbon dioxide (CO_2) emissions could be brief, and the world may still be heading for a temperature rise in excess of 3°C this century.[8] Most survey respondents thought that use of personal vehicles and non-vehicle transport (e.g. walking, cycling) increased during the pandemic (58 per cent and 46 per cent respectively) as people moved away from public transport. At the same time, nearly half of respondents (49 per cent) thought that air pollution due to tourism had declined; air quality has indeed improved in many European cities,[9] but the relative contribution of tourism has not been quantified.

Travel restrictions and lockdowns also reduced disturbances in urban and remote areas, giving ecosystems and habitats a chance to recover and providing new spaces for species to occupy.[10] Long-term research on wildlife distribution is needed to establish whether this is a temporary change.[11] Protected areas in Europe that normally charged visitor fees faced a decline in overall revenue in 2020 compared with the previous year,[12] which may pose financing difficulties in the future. As domestic travel restrictions were lifted, the European summer of 2021 saw a surge in domestic tourism[13] and overcrowding in protected areas. Pollution increased in natural areas, where litter proliferated.[14]

However, when respondents were asked whether there had been changes in biodiversity or natural habitats in the pan-European region, the most frequent response was "no change" – demonstrating the importance of ecological monitoring data to record actual rather than perceived impacts.[15]

During the pandemic, there has been a surge in take-away food in single-use plastic packaging[16] and use of personal protective equipment (PPE) to meet sanitary standards and protocols in tourism.[17] The production, consumption and disposal of additional single-use products may lead to increased air pollution, GHG emissions, waste and littering. [18] A slight majority of respondents believed that solid and liquid waste had increased during the pandemic (39 per cent and 33 per cent respectively), but similar proportions thought these had declined. Most respondents thought there had been greater use of chemical products for cleaning and sanitation (47 per cent), but lower levels of food waste (38 per cent). They also thought that waste management practices (49 per cent) and chemical use (47 per cent) in tourism, which the hospitality industry struggled to deal with during the pandemic, had caused greater pollution.[19] Although there is no specific research in this area, it is assumed that additional cleaning and sanitation measures for safe reopening will lead to greater overall use of chemicals.

Demand for mainstreaming sustainable tourism is gaining momentum: Consumer research suggests that the pandemic has made most travellers want to travel more sustainably in the future.[20] Travellers are particularly concerned about excess waste, threats to local wildlife and natural habitats, overcrowding at popular destinations, and GHG emissions.[21] This suggests that efforts to drive sustainable tourism and capitalize on the sustainability trend may have reached a turning point – and that we should take advantage of this pivotal moment to mainstream sustainable tourism. Survey respondents reported increased availability of sustainable tourism products and services due to the pandemic (e.g., virtual tours and locally produced foods and materials). However, many respondents did not perceive any changes in the reuse and recycling of materials (52 per cent), waste management (44 per cent), or energy efficiency (40 per cent) in the tourism sector. In terms of socioeconomic benefits, the most frequent responses were that people had not observed changes in the involvement of women in tourism (40 per cent), while 32 per cent of respondents thought entrepreneur participation had increased, compared with 28 per cent who thought there was no change. As for youth involvement in tourism, 32 per cent thought this was unchanged, while 25 per cent thought it had increased.[22]

Financial and technical resources: Across the European region, governments and destination management organizations (DMO) have made available millions of euros to address sustainable tourism challenges. For example, both for Croatia and Norway is supporting stakeholders to recover from the COVID-19 crisis and invest in more sustainable tourism, tackle circularity, foster resource efficiency and improve digital data exchange.[23] Likewise, Norway is supporting tourism companies to focus on closer markets, apply environmental certifications for transparent sustainability efforts, and support nature conservation.[24] Survey respondents identified priorities for financial support, including capacity-building for new sustainable tourism practices and products, nature conservation, environmental education for visitors, and establishing mechanisms to ensure that income from tourism supports local communities.[25]

The COVID-19 pandemic has exposed the many fragilities of our economies and deepened existing inequalities, while highlighting the need for resilience, innovation and cooperation[26]. Emergency measures to address the health crisis and its economic fall-out are the immediate priority; but greening recovery efforts can help nations to "build back better" and increase resilience to future crises.

With increasing demand for sustainable tourism options, now is the time to capitalize on emerging opportunities to build a more sustainable and resilient tourism sector.

The literature and survey responses have informed the following 10 policy measures proposed by UNEP to support sustainable tourism in the future, and address increasing risks of natural disasters, climate change and pandemics.

These measures need to be underpinned by efforts to bolster sustainable tourism practices, including strengthening the enabling environment, using appropriate investment and fiscal measures to stimulate good practices, promoting digitalization and using technological advances for the benefit of all, supporting cohesive destination management and stakeholder involvement, and meaningfully enhancing coordination and collaboration. The measures comprehensively support the findings of the European Commission's consultation on the "New Industrial Strategy" and its 27 transition pathway topics across the green transition, digital transition and resilient transition, coupled with its targets and milestones.[27]

1. Strengthen policy, regulatory and institutional frameworks to prevent future crises
2. Stimulate supportive fiscal measures and disable harmful ones, including fossil fuel subsidies
3. Support investment and finance for sustainable tourism, including sustainable mobility, local governance, and development of sustainable tourism products
4. Accelerate sustainable infrastructure and transport, and retrofit towards net zero and resource efficient operations
5. Establish monitoring frameworks and systems to measure the sector´s general progress towards sustainability, climate, biodiversity and nature conservation
6. Engage and partner with tourism stakeholders, and build their capacity to participate effectively
7. Adopt digital, circular, and technological solutions
8. Adopt sustainable procurement and consumer information tools, including sustainability standards and voluntary certification schemes
9. Support vulnerable groups, including women, youth, migrants, ethnic and indigenous communities
10. Invest in research to support science-based decision making in tourism

2

Setting the scene

2.1. Context and aim of this report

Greening the economy is increasingly becoming a strategic priority for governments around the world. A green economy is characterized by substantially increased investments in economic sectors that build on and enhance the Earth's natural capital – improving human well-being and social equity while significantly reducing environmental risks and ecological scarcities.[28] Green solutions incorporate circular models to keep materials at the highest possible value along the tourism value chain[29] and help combat climate change.[30]

The Pan-European Strategic Framework for Greening the Economy set out an integrated regional vision, as well as objectives and outcomes to promote the green economy in the region.[31] The application of circular principles in tourism will be one of the two main themes for discussion at the forthcoming Environment for Europe (EfE) Ministerial Conference in Nicosia from 5–7 October 2022, which will focus on "Greening the economy in the pan-European region: working towards sustainable infrastructure" and "Applying principles of circular economy to sustainable tourism" to promote green solutions to build back better from the pandemic and other crises.[32]

Box 1: Snapshot of perceptions of environmental impacts related to tourism amid the COVID19 pandemic

58% thought the **use of non-vehicle transport** had increased

47% thought the **use of chemical products** for cleaning and sanitation had increased

49% thought **air pollution due to tourism** had declined

45% thought **pollution from the use of chemical products** (including from cleaning and sanitation) had increased

38% thought **food waste** had declined

46% thought the **use of personal vehicles** had increased

49% thought **pollution from waste management** practices (including single-use plastics) had increased

58% thought the **use of public transport** had declined

Box 2: Snapshot of perceptions of sustainability opportunities and practices in tourism amid the COVID-19 pandemic

75% thought the **use of social media and innovative tools** had increased

53% thought the **consumption of locally produced foods and materials** had increased

32% thought there was no change in the **involvement of youth** in tourism, while 25 per cent thought it had increased

This report will be used to prepare background and participant information papers for the forthcoming EfE conference. It provides information for government ministries, departments and institutions addressing tourism, as well as large business associations and private companies in the pan-European region. **It analyses the impacts of COVID-19 on the region's tourism sector and presents a compendium of opportunities and measures to promote and contribute to sustainable tourism. The analysis combined a literature review and a regional stakeholder survey to identify opportunities,[33] case studies, initiatives and policy recommendations to build back from the pandemic with a more sustainable and resilient tourism sector over the next 10 years.**

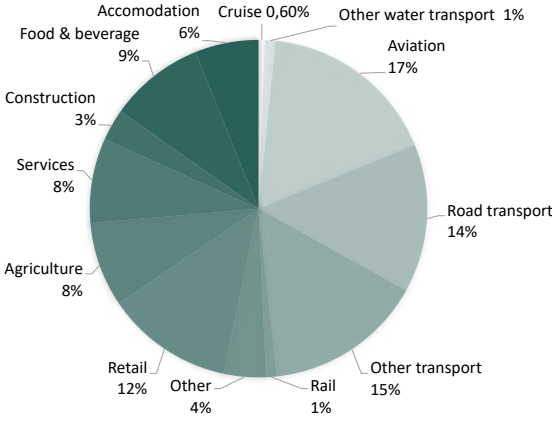
While this report addresses environmental and socioeconomic issues of global importance, it focuses primarily on pan-European countries.[1] However, it is important to highlight that where pan-European data could not be found, European data was used to highlight the magnitude of impacts in the region.

2.2. Environmental context prior to COVID-19

The world is facing a triple planetary crisis relating to the climate, pollution and nature. Therefore, it is becoming increasingly important for governments and businesses to shift towards more sustainable and circular models in the tourism sector.

Climate: Tourism is an ever-increasing contributor to climate change. Pre-pandemic, it accounted for about 8–11 per cent of global GHG emissions, with 3.9–5.4 billion tons of CO_2 emissions in 2019.[34] The majority of tourism emissions are exerted by and in high-income countries for transport and accommodation (see **Figure 1**).[35] Under a "business-as-usual" scenario, it is predicted that tourism could see a 154 per cent increase in energy consumption and a 131 per cent increase in GHG emissions by 2050.[36] The Sustainable Hospitality Alliance recommends that the hotel industry reduces its GHG emissions by 66 per cent by 2030 and by 90 per cent by 2050 to stay within the 2˚C threshold of global warming.[37] In line with the Glasgow Declaration,[38] the World Travel and Tourism Council and UNEP recommend targets and differentiated decarbonization approaches to achieve net zero in various areas of the sector even before 2050. The Net Zero Roadmap for Travel and Tourism[39] showed that while 42 per cent of the businesses analysed currently have publicly announced climate targets, only 20 per cent are in line with science-based targets. Tourism is also highly vulnerable to climate change, including extreme weather events, loss of biodiversity, damages to assets and increasing insurance costs and safety concerns;[40] it is therefore in the best interests of the sector to urgently address climate change and contribute to the Paris Agreement and the 2030 Agenda for Sustainable Development.[41] Progress in tackling the climate emergency will depend on addressing various challenges, including emission measurement and reporting (especially Scope 3 emissions), the fragmented regulatory landscape, dependency on infrastructure, and insufficient budgets. Moreover, small and medium enterprises (SMEs), which make up the majority of businesses in the sector, face special challenges and will require strong commitments from all stakeholders to increase collaboration and ensure inclusiveness.[42]

Figure 1: Contribution of tourism subsectors to CO_2 emissions (%)[43]



1 Pan-European countries include Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, European Union, Georgia, the Holy See, Iceland, Israel, Kazakhstan, Kyrgyzstan, Liechtenstein, Monaco, Montenegro, North Macedonia, Norway, Republic of Moldova, Russian Federation, San Marino, Serbia, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine, the United Kingdom of Great Britain and Northern Ireland, and Uzbekistan.

Note 1: The above emission share has been updated for aviation by using the latest IATA's Aviation and Climate Change Fact Sheet pre-pandemic estimates. Cruise was separated from water transport by conducting a bottom-up estimation based on sustainability reports.
Note 2: The above chart includes shares of most contributing Scope 3 emission sources (e.g. agriculture).

Pollution: Tourism contributes to air, water and land pollution: the transport and electricity generated can cause air pollution, while water contamination may be caused by sewage, solid waste, petrol and toxins entering the environment from tourism facilities or discarded by tourists. Solid waste, particularly plastic waste, can harm wildlife and create toxic environments and unsightly beaches, oceans and landscapes. Every year, humans produce 300 million tons of plastic waste, including 11 million tons that end up in the ocean.[44] As 80 per cent of all tourism takes place in coastal areas, plastic from the sector can be a large contributor to this pollution (e.g. marine litter can increase by up to 40 per cent during the peak tourist season in the Mediterranean region).[45] Food waste is one of the major waste streams generated by hotels and conference centres. In 2017, the United Kingdom of Great Britain and Northern Ireland (UK)'s 236,000 hospitality and food services generated 2.9 million tons of waste (including food and packaging), only 46 per cent of which was recycled. Reducing this footprint would not only save money but also reduce GHG emissions.[46] One way to reduce the amount of carbon and embedded water is to reduce meat consumption and increase the amount of vegetarian and vegan (plant-based) food offered.[47]

Nature: Biodiversity is vital for tourism; coasts, mountains, rivers and forests and their wildlife are major tourist attractions across Europe. However, there have been severe reductions in wildlife populations and natural habitats globally, coupled with increases in wildlife crime and habitat conversion.[48] Across Europe, population sizes of mammals, birds, amphibians, reptiles and fish declined by an average 24 per cent between 1970 and 2016.[49] Tourism can have both positive and negative impacts on nature. Negative impacts include the degradation of air and water quality, increased water use, changes in landforms through infrastructure development, mineral and energy consumption, disturbance or destruction of wildlife habitat, behavioural change in animals, increased pressure on endangered species, introduction of invasive alien species (including for hotel gardens), land-based pollution, and direct mortality (e.g. from vehicle collisions, hunting, fishing or disease transmission). Indeed, the origin of zoonotic disease pandemics and epidemics, such as COVID-19, lie in our unsustainable exploitation of nature[50] – emphasizing how interlinked humans are with their environment.[51] In contrast, positive impacts can include public education on conservation issues and needs, awareness of the value of natural resources and their protection, revenue to finance conservation and protected area management, and environmental and species monitoring by citizen science volunteers.[52]

2.3. Impacts of the COVID-19 pandemic on tourism and the environment

Up to March 2020, travel and tourism in the EU had grown steadily for over six decades.[53] In 2019, the sector accounted for over 9.5 per cent of gross domestic product (GDP), provided jobs to 22.6 million people,[54] and had a direct impact on transport, retail, the agrifood industry and the wider economy.[55] Europe is the top tourist destination worldwide, with half the global market share of international tourism.[56]

However, COVID-19 has caused a systemic shock to the tourism sector globally. According to the World Tourism Organization (UNWTO), between January and May 2020, 100 per cent of global destinations imposed travel restrictions, and 45 per cent totally or partially closed their borders to tourists.[57] Other measures included restrictions on transiting travellers, suspension of flights, quarantine or self-isolation requirements, and the need for medical certificates.[58] International tourist arrivals declined by 74 per cent globally during 2020,

from 1.5 billion to 381 million.[59] This led to a loss of USD 1.3 trillion in tourism exports (11 times the income loss experienced during the 2009 economic crisis), and an estimated loss in global GDP of over USD 2 trillion.[60] Europe experienced a 70 per cent decline in tourist arrivals in 2020,[61] and an estimated 11.5 million travel and tourism jobs in the region have already been impacted.[62] For example, professional accommodation bookings in Corsica dropped by 75 per cent in March 2020, while Benidorm in Spain registered a 70 per cent decrease in tourism. [63]

UNWTO modelling makes three projections for tourism recovery (see **Figure 2**), and its experts do not expect international tourism to return to pre-COVID levels before 2023.[64] Some European destinations, however, have seen a significant growth in domestic visits: Posio in Lapland, Finland experienced a record number of tourists in summer 2020, and website traffic nearly doubled in July 2020 compared with July 2019.[65]

Tourism sectors in many countries are based on natural assets (e.g. forests, coastlines, wildlife) and are supported by favorable environmental conditions (e.g. clean air and water, lack of pollution) (see **Figure 3**). The World Bank suggests that the environmental impacts of COVID-19 have both short- and long-term implications for the sector, and that when tourism rebounds, positive changes may reverse and negative impacts continue if insufficient efforts are made to address them. [66] There is also a complicated array of implications for tourism's contribution towards the United Nations (UN) Sustainable Development Goals (SDGs) (see **Section 6.3**).

The European Environment Agency has compiled an overview of the environmental impacts of COVID-19,[67] and UNEP conducted a survey to understand the actual impacts on the tourism sector in the pan-European Region in June and July 2021.[68] Responses were received from 135 participants from government, NGOs, tourism businesses, associations and research institutions from 35 countries. The results of this survey, in conjunction with other information sources, are described in the following sections on biodiversity, natural habitats, GHG emissions, air quality and water in relation to tourism and the pandemic.

Figure 2: 2021–2024 scenarios for international tourist arrivals

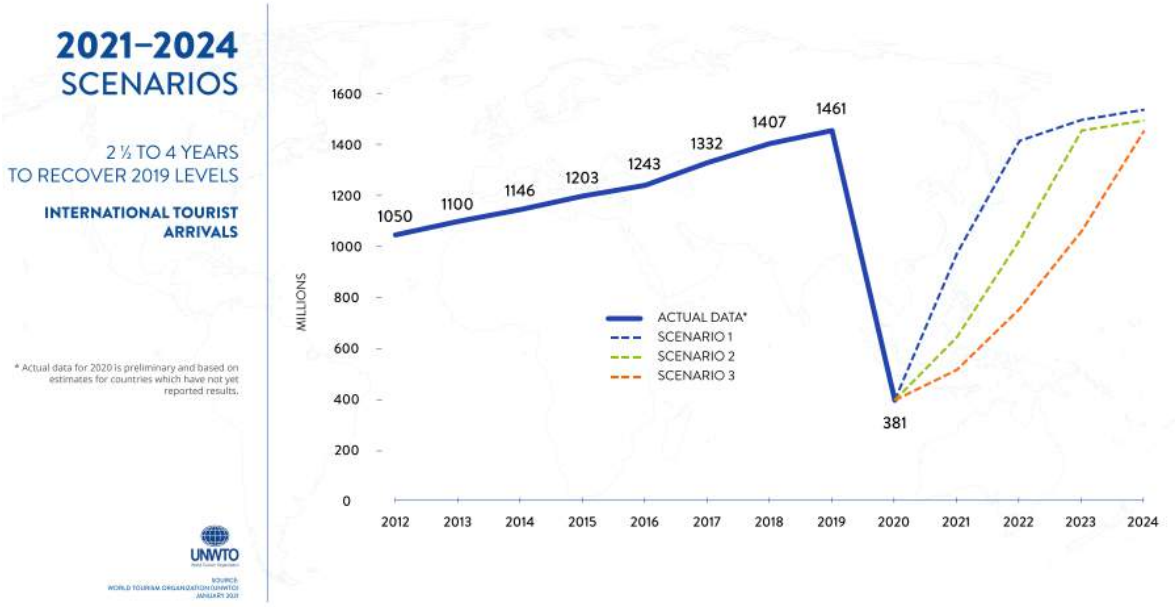


Figure 3: Framework of short- and long-term impacts at the nexus of COVID-19, environment and tourism[69]

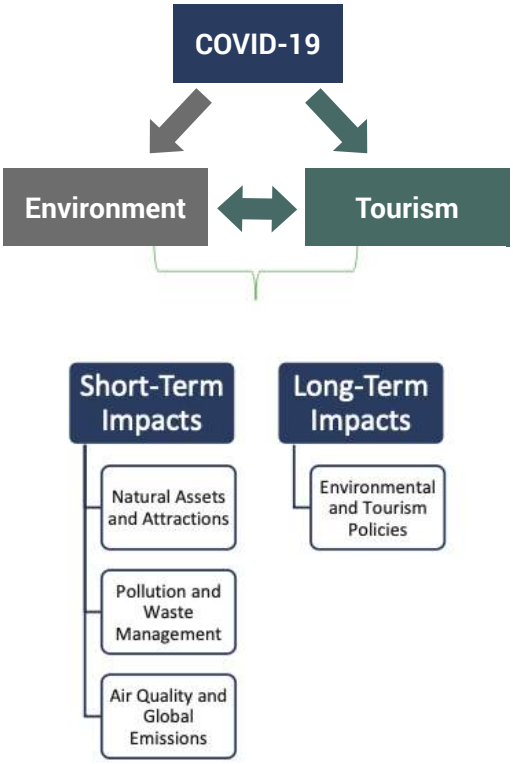


Figure 4: Potential impacts of COVID-19 on achievement of the SDGs[70]

2.3.1 Impacts on biodiversity and natural habitats

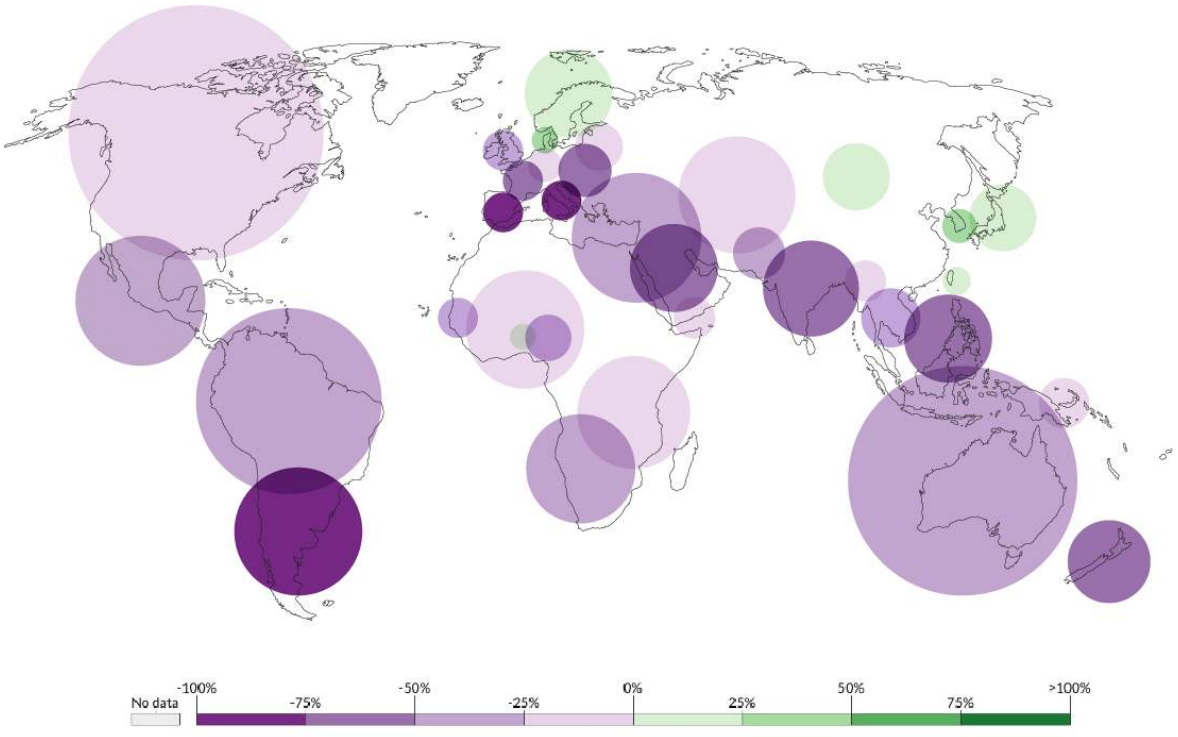
Travel restrictions and lockdowns have been associated with reduced disturbance in urban and remote areas (due to less recreational tourism), giving ecosystems and habitats a chance to recover and providing new spaces for species to occupy.[71] Protected areas in Europe that normally charged visitor fees faced a decline of overall revenue in 2020 compared with the previous year (e.g. Croatia).[72] Rangers in Tusheti, Georgia found that fewer visitors meant more time to focus on biodiversity observations, and they were able to draft plans for new trails, improving signage and other tourism infrastructure.[73]

However, as domestic travel restrictions were lifted, residents rediscovered attractions closer to home, and the summer 2021 saw a surge in domestic tourism or "staycations".[74] The number of visitors to some national parks therefore increased substantially (a 50 per cent increase in the Black Forest National Park in Germany,[75] and doubling of park visitors in Poland[76] and Demark;[77] see **Figure 5**). The type of accommodation sought changed (e.g. higher demand for small summer houses, camper vans, small bed-and-breakfast establishments in previously less promoted and visited regions, instead of larger hotels and popular holiday destinations), as did the model of visitation (e.g. increased agritourism, nature walks and other activities in natural areas, instead of city breaks and museum visits).[78]

Figure 5: Numbers of visitors to parks and outdoor spaces, 4 April 2021 and 1 August 2021[79]

Parks and outdoor spaces: How did the number of visitors change since the beginning of the pandemic? , Apr 4. 2020

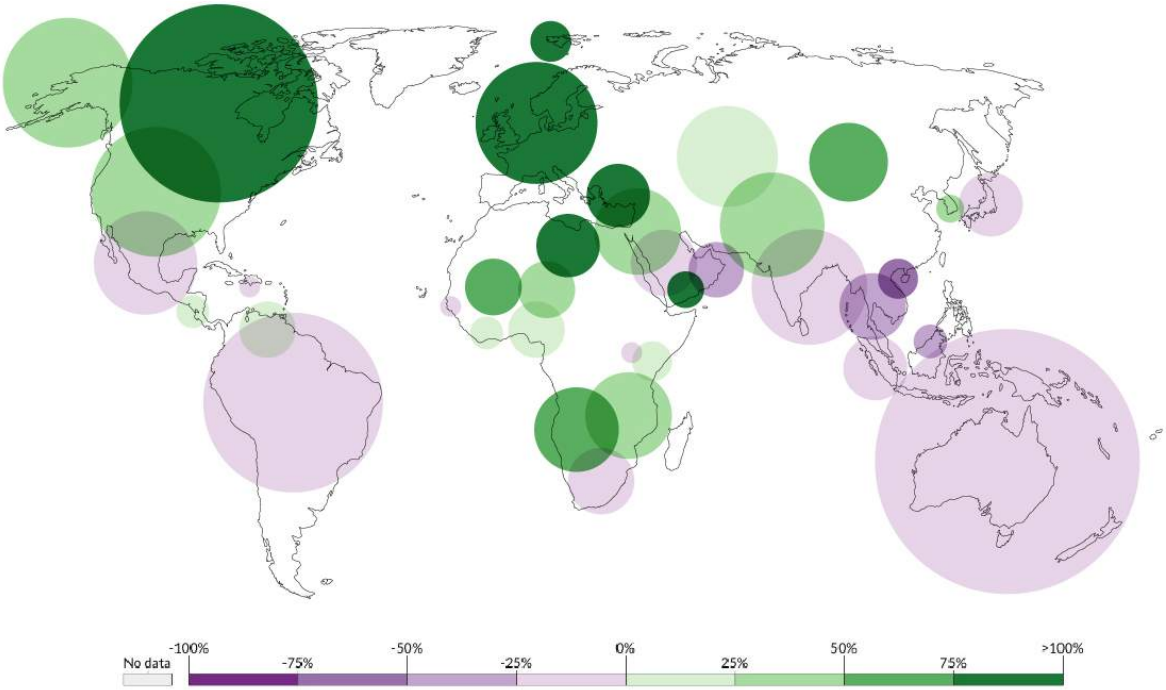
Change in visitor numbers is measured relative to a baseline day; a baseline day is the median value from the 5 week period between Jan 3rd and Feb 6th 2020. This index is smoothed to the rolling 7 day average.



Source: Adapted from Google COVID-19 Community Mobility Trends - Last updated 29 October, 15:02 (London time)
Note: It's not recommended to compare levels across countries; local differences in categories could be misleading.

Parks and outdoor spaces: How did the number of visitors change since the beginning of the pandemic? , Aug 1, 2021

This data shows how the number of visitors to parks and outdoor spaces has changed relative to the period before the pandemic. This includes places like local parks, national parks, public beaches, marinas, dog parks, plazas, public gardens.

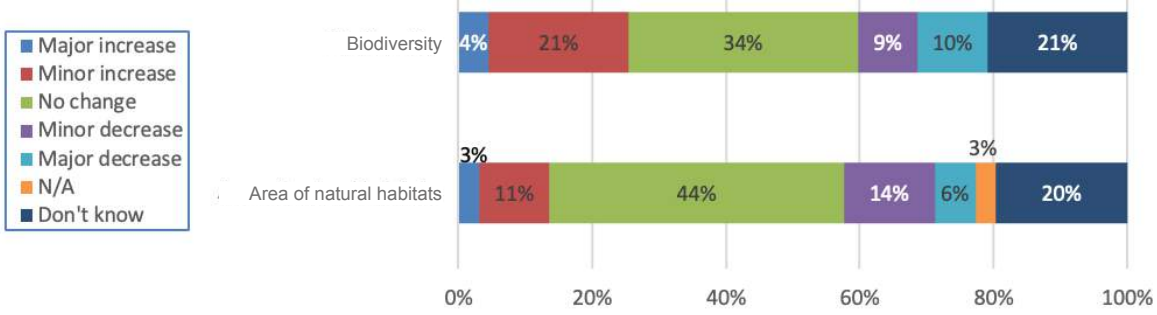


Source: Adapted from Google COVID-19 Community Mobility Trends - Last updated 5 August 2021, 16:36 (London time)
Note: It's not recommended to compare levels across countries; local differences in categories could be misleading.

Increased domestic visitation meant more pollution in natural areas and caused problems for wildlife. In Devon and Snowdonia national parks in the UK camping, wood collection, makeshift toilets and litter increased. Furthermore, emergency powers were used to temporarily ban camping in August 2020.[80] The domestic crowding and associated impacts led to some visitors being turned away, even after travelling hundreds of miles.[81]

Most respondents did not think that changes in tourism had led to changes in biodiversity or natural habitats in the region during the pandemic (see **Figure 6**). However, comments included statements such as: "During the pandemic, domestic tourism increased significantly, as a result of which the nearby natural areas took a large load of the flow of people, which affected the ecosystem in the form of landfills and garbage." and: "In places where tourists are accommodated (mountain gorges, forests, alpine lakes), wild animals were seen during the absence of tourists in 2020 from April to October, the period of restrictions and the Emergency Situation mode – quarantine caused by the COVID-19 pandemic."

Figure 6: How have the following environmental issues changed due to tourism during the pandemic? Biodiversity and habitats



2.3.2. Impacts on greenhouse gas emissions and air quality

The COVID-19 crisis had a direct impact on energy use and GHG emissions at global and EU levels,[82] and led to a 7 per cent reduction in GHG emissions worldwide in 2020 (a fall of 2.4GtCO_2 compared with 2019).[83] The demand for passenger transport decreased due to restrictions on international travel and the reduction in commuting, tourism and business travel. The International Road Transport Union expects a 57 per cent decline in turnover from road passenger transport activity in Europe for 2020 compared with 2019, while the International Air Transport Association reported a 65.2 per cent drop in air passenger kilometres in Europe between January and July 2020 compared with the same period in 2019.[84] However, there are concerns that this dip in CO_2 emissions could be brief, and that the world is still heading for a temperature rise in excess of 3°C this century – beyond the Paris Agreement goals of limiting global warming to well below 2°C and pursuing 1.5°C.[85]

One of the most evident short-term effects of COVID-19 lockdowns and the reduction in road transport was a noticeable improvement in air quality (see **Figure 7**): Including among some of Europe's most polluted and visited cities. The level of reductions varied considerably but reached 70 per cent in urban centres such as Milan and Madrid.[86] However, the relative contribution of tourism to this change is unclear.

Figure 7: Effect of COVID-19 lockdown measures on air quality comparison between expected and actual nitrogen dioxide concentrations (selected countries, April 2020)[87]

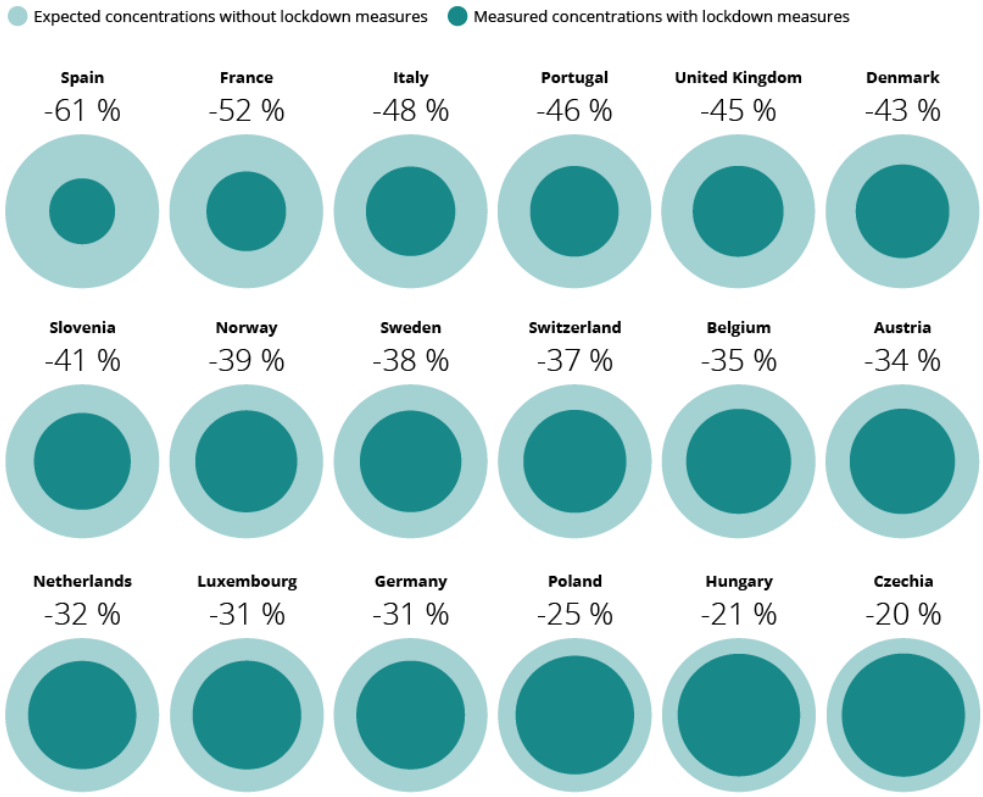
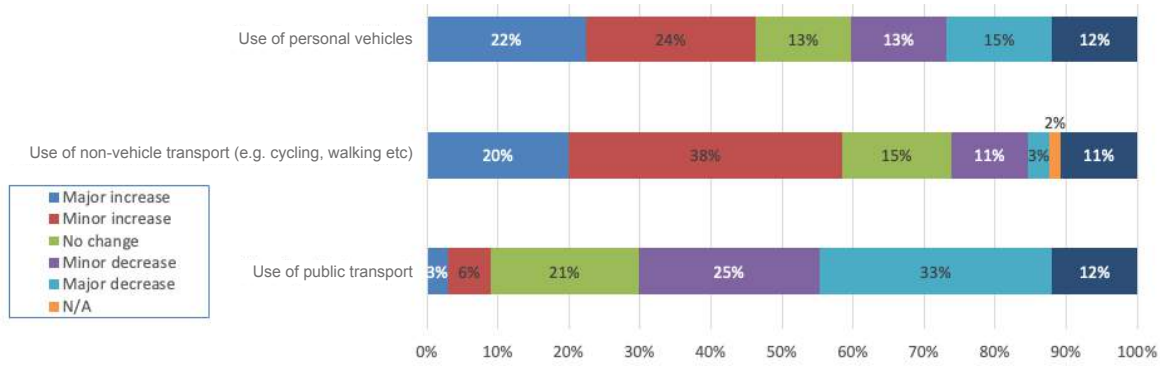


Figure 8: How have the following aspects of the tourism industry changed during the pandemic?
Energy



As for the tourism sector, most survey respondents thought that the use of personal vehicles and non-vehicle transport (e.g. walking and cycling) increased during the pandemic as people moved away from public transport (see **Figure 8)**. Nearly half of respondents thought that air pollution due to tourism had declined (49 per cent).

2.3.3. Impacts on waste and plastic use

Although reduced tourism has led to fewer single-use plastic products (e.g. drinks bottles, room amenities), this has been offset by the surge in take-away products during the pandemic, regardless of tourist activities,[88] and the increased use of PPE, such as masks, gloves, gowns and bottled hand sanitizer.[89] The production, consumption, and disposal of additional single-use plastic products may increase air pollution, GHG emissions, waste and littering.[90] The consumption of common cleaning agents used by laundries, hotels and restaurants declined due to the drastic reduction in tourist traffic at the start of the pandemic.[91] However, although there is no specific evidence, it is assumed that additional cleaning and sanitation measures associated with reopening safely will lead to greater overall use of chemicals. One survey respondent mentioned that, "enterprises are sanitizing more often than before, this entails a slight increase in the formation of liquid waste."

Hyatt introduced accreditation programmes linked to performance-based cleaning, disinfection and infectious disease prevention, and aimed for every Hyatt hotel to train at least one person as a hygiene manager by September 2020.[92] Similarly, Accor partnered with Bureau Veritas to develop a label designed to certify compliance with the appropriate safety standards and cleaning protocols to allow their hotels to reopen.[93] Furthermore, the World Wide Fund for Nature (WWF) and Greenview launched an industry-wide waste measurement methodology, based on a collaboration with Accor, Hilton, Hyatt, IHG Hotels & Resorts, and Marriott International. This provides a consistent way for major brands and individual properties to set meaningful goals to reduce waste, keep it out of landfills and track progress towards those goals over time.[94]

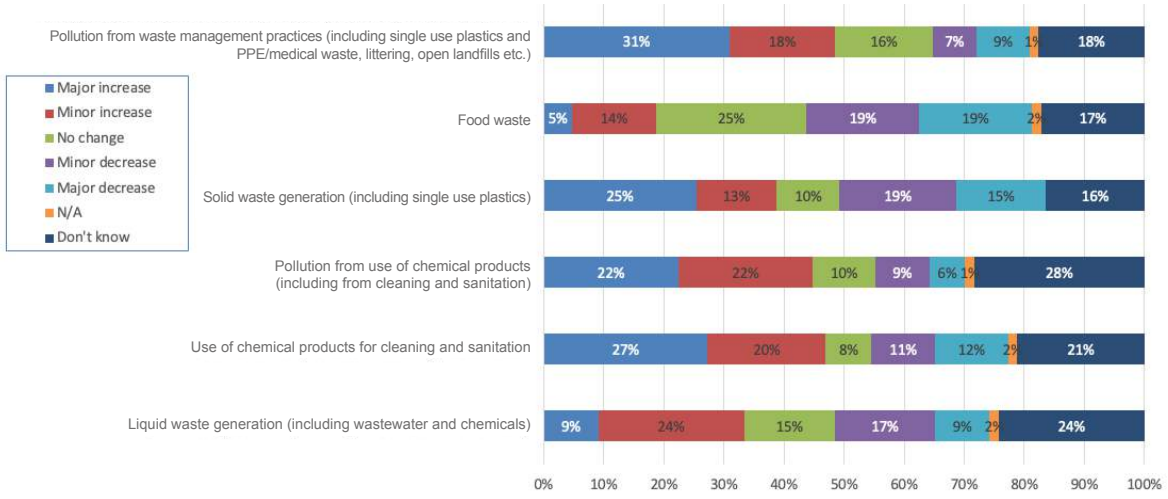
A heightened focus on air travel hygiene has increased the need for in-flight disposable plastic packaging. The International Civil Aviation Organization guidance made it mandatory to wear a mask when travelling by air[95] and some airports are seeing more mask and (potentially infectious) PPE waste than ever before. This adds to the footprint of single-use plastic products and increases the burden of safely handling associated waste. In-flight food servicing has also seen adjustments, including a switch back to more disposable plastics for in-flight meals for hygiene reasons.[96]

Most survey respondents perceived that waste management practices (49 per cent) and chemical use (45 per cent) in tourism, which the hospitality industry struggled to deal with during the pandemic, had caused greater pollution. While a small majority of respondents believed that the levels of solid (39 per cent) and liquid waste (33 per cent) generated during the pandemic had increased due to the use of chemical cleaning and sanitation products, a similar proportion thought it had declined (45 per cent and 26 per cent respectively). Respondents most frequently thought that food waste levels were lower (38 per cent) (see **Figure 9**). Comments from survey respondents included: "The flow of medical waste has increased and the efficiency of municipal and state services has decreased." and: "Some hotels stopped sorting garbage, due to the danger of COVID spreading through garbage, at the same time, a New Environmental Code was introduced ... which will oblige individuals and legal entities to sort waste." Regarding catering, one respondent said: "Most of the restaurants have been closed for on-site catering, [and] many have switched to offering take-away and delivery services using single-use plastic containers. Several large coffee retailers have stopped allowing customers to carry reusable containers, using disposable cups in their place."

2.3.4. Impacts on water

In addition to water pollution caused by waste disposal and wastewater containing increased levels of harmful chemicals, the pandemic had additional implications on water use – at least temporarily. Reported changes in water demand varied across Europe during lockdown. Nearly half of survey respondents (46 per cent) had not noticed any change in water availability in their destinations. However, as destinations reopen, it is possible that heightened operational standards in tourism businesses and travel infrastructure to meet safe, hygienic conditions will lead to increased water consumption.

Figure 9: How have the following aspects of waste generation and chemical use from the tourism industry changed during the pandemic?



3

Implications of COVID-19 for sustainable tourism and the environment

3.1. Demand for mainstreaming sustainable tourism is at a watershed moment

Consumer research is being used to understand how the pandemic has impacted traveller perceptions of the importance of sustainable tourism, in order to predict the types of travel experiences people will desire in the future. This research from several different sources demonstrates that travellers are increasingly interested in sustainable tourism, social well-being, benefiting local economies, adventure and trips to natural destinations[97] (see **Figure 10**).

Consumer research among 29,000 travellers in 30 countries carried out by Booking.com in 2021 suggests that this is a watershed moment for sustainable travel, with 61 per cent of travellers saying that the pandemic has made them want to travel more sustainably in the future, and 49 per cent saying the pandemic has shifted their attitude towards making positive changes in their everyday lives.[98] Their top priorities are recycling, reducing food waste, avoiding single-use plastic products and walking or cycling short distances to avoid using public transport or cars. They are most concerned about excess waste, threats to local wildlife and natural habitats, overcrowding at popular sites and destinations, and GHG emissions.[99]

The survey results support this but are more nuanced. Respondents observed increases in the availability of sustainable tourism products and services due to the pandemic and increases in the consumption of locally produced foods and materials. For example, in Croatia and the Czech Republic, the interest in local products (mostly food) has increased due to the limited movement of people.[100] However, most respondents did not perceive any changes in other environmental practices, such as the reuse and recycling of materials, waste management, energy efficiency – nor any changes in the promotion of socioeconomic benefits, for example involving vulnerable groups, women, youth or entrepreneurs and small businesses in the tourism sector (see **Figure 11**).

Figure 10: Travellers stating that the pandemic has made them want to travel more sustainably in the future[101]

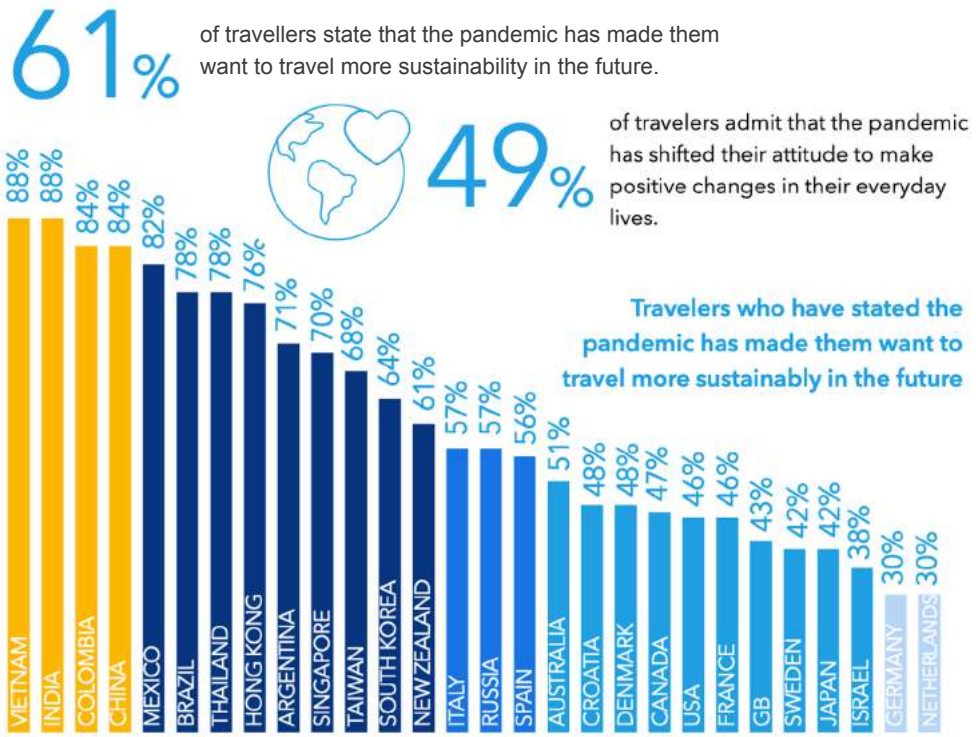
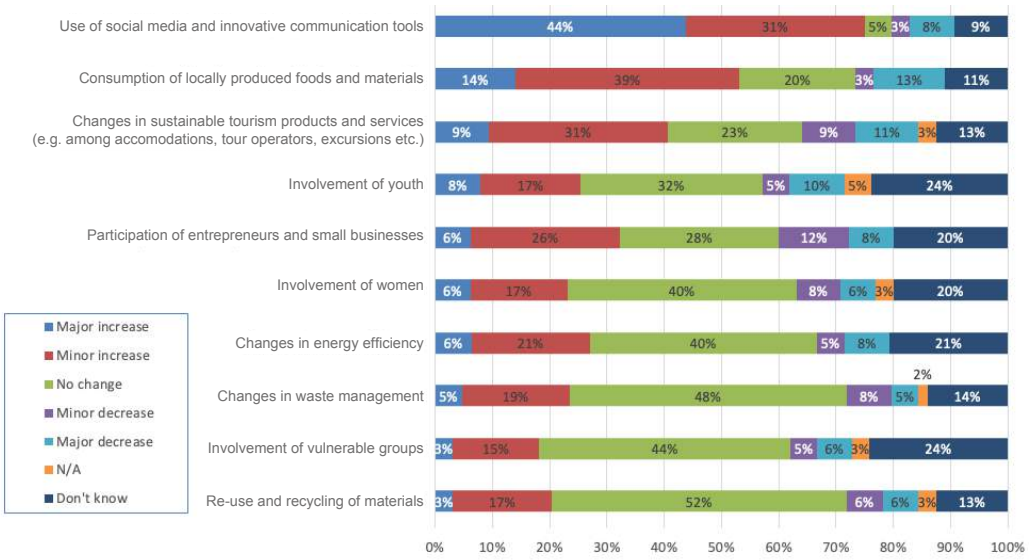


Figure 11: In your experience, has the pandemic presented different opportunities for any of the following for the tourism sector?



For further context, an overview of recent research demonstrating increased demand for sustainable travel is provided in **Box 3**. Collectively, the market research suggests that we are at a critical tipping point for driving sustainable tourism in destinations and across the industry and capitalizing on the sustainability trend. We should take advantage of this pivotal moment to drive sustainable tourism into the mainstream, making it easy and appealing for tourism companies – whether small or large – to make proactive changes.

Box 3: Market intelligence on changing traveller demand for sustainable trips in 2020 and 2021

An **Air Travel Sustainability** survey of 464 people in April 2020 found that 58 per cent of respondents were thinking more about the environment and sustainability now compared with before COVID-19.[102]

Research from **Euromonitor International** in 2020 suggested that domestic adventure, nature, beach wellness, luxury and camping will accelerate; long-haul travel, unsustainable models and mass tourism, corporate business tourism, and mega cruises will decelerate. Sustainability will become a key value proposition and social issues become more balanced with the environment.[103]

A global online survey of 1,764 individuals by **Responsible Tourism Advisor and Solare** in April–May 2020 found that younger respondents had a stronger conviction in favour of sustainable tourism, and all nationalities mostly wished to avoid mass tourism destinations and large cities.[104]

Tripadvisor's analysis of online search data in April 2020 indicated that travellers were more conscious of the impact of their tourism expenditure on local communities and small businesses because of the stories arising about the pandemic's impacts.[105]

In 2021, consumer research undertaken among 29,000 travellers in 30 countries for **Booking.com** found that their desire to take responsibility and action for sustainable practices were at an all-time high.[106] **Tripadvisor's** analysis of online search data in April 2020 indicated that travellers were more conscious of the impact of their tourism expenditure on local communities and small businesses because of the stories arising about the pandemic's impacts.[107]

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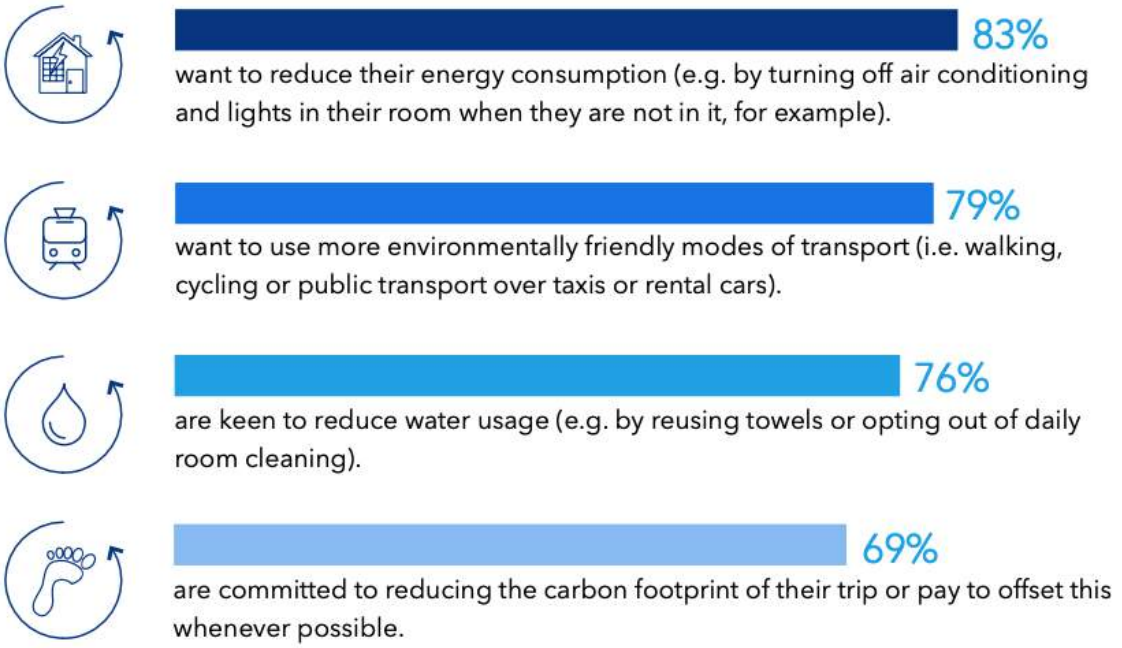


3.2. Financial and technical resources required to advance sustainable practices

As we emerge from the COVID-19 pandemic and resume travelling, both financial and technical support are required to improve the sustainability of tourism. The survey revealed that financial support for capacity-building to develop new sustainable tourism practices and products was rated most important (on average), closely followed by nature conservation (e.g. funding for monitoring, protection and anti-poaching). Financial support was also prioritized to provide visitors with environmental education and to establish mechanisms that promote local community income from tourism (see **Figure 12**). Survey respondents were concerned about high interest rates charged by banks and micro-finance

institutions (32–34 per cent), which made them unfeasible unless they could be combined with grant financing.

Furthermore, destinations require technical support to identify potential new tourism services and products, and to share best practices and examples of innovations that support sustainable tourism amid the COVID-19 pandemic.[109] A survey respondent noted that: "Entrepreneurs most of all need advanced training on sustainable tourism, since only enterprises of large international hotel brands are aware of the sustainability/SCP concept. [Large hotel brands represent] only 0.5 per cent of the market, other local enterprises need additional training ... the culture of doing business needs to be changed. Most entrepreneurs pursue only one goal to make money and are not interested in wider social responsibilities. More training, exchange of experience, examples of sustainable tourism application in other countries, [on] how it works in practice is needed." Recent efforts by Online Travel Agents in the Travalyst Coalition – namely Booking.com and Google – aim to provide transparency and comparability of operators with sustainable practices.[110]

Across Europe, governments and DMOs have made available millions of euros to address sustainable tourism challenges (see **Table 1**).

Figure 12: In your opinion, where is financial support most required to enhance the sustainability of the tourism sector in the post-pandemic period? *(1 most important, 8 least important)*

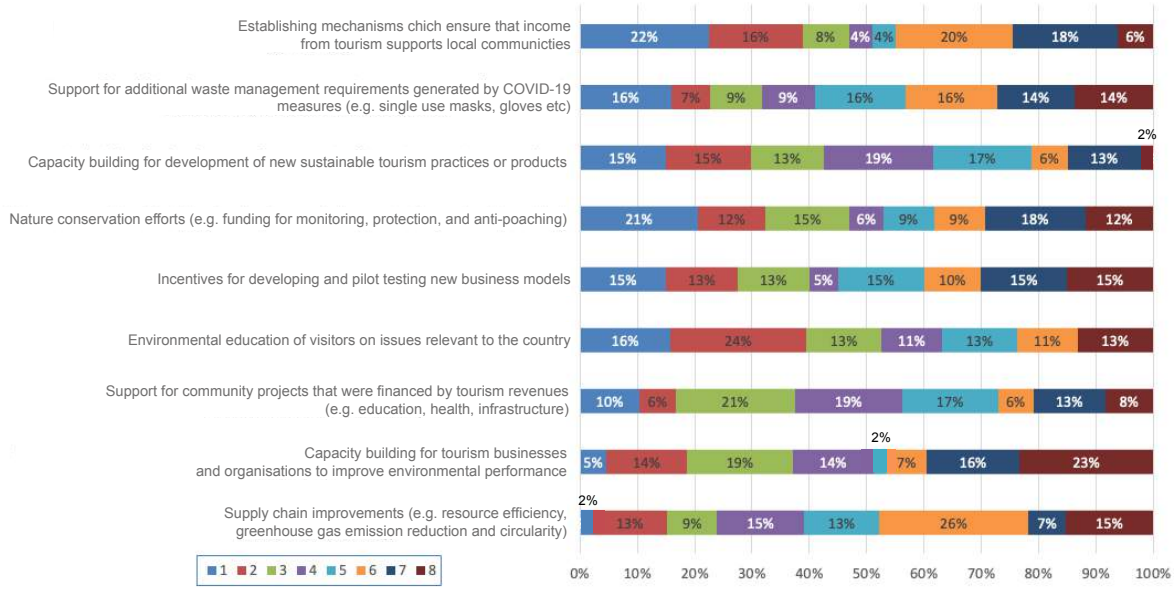
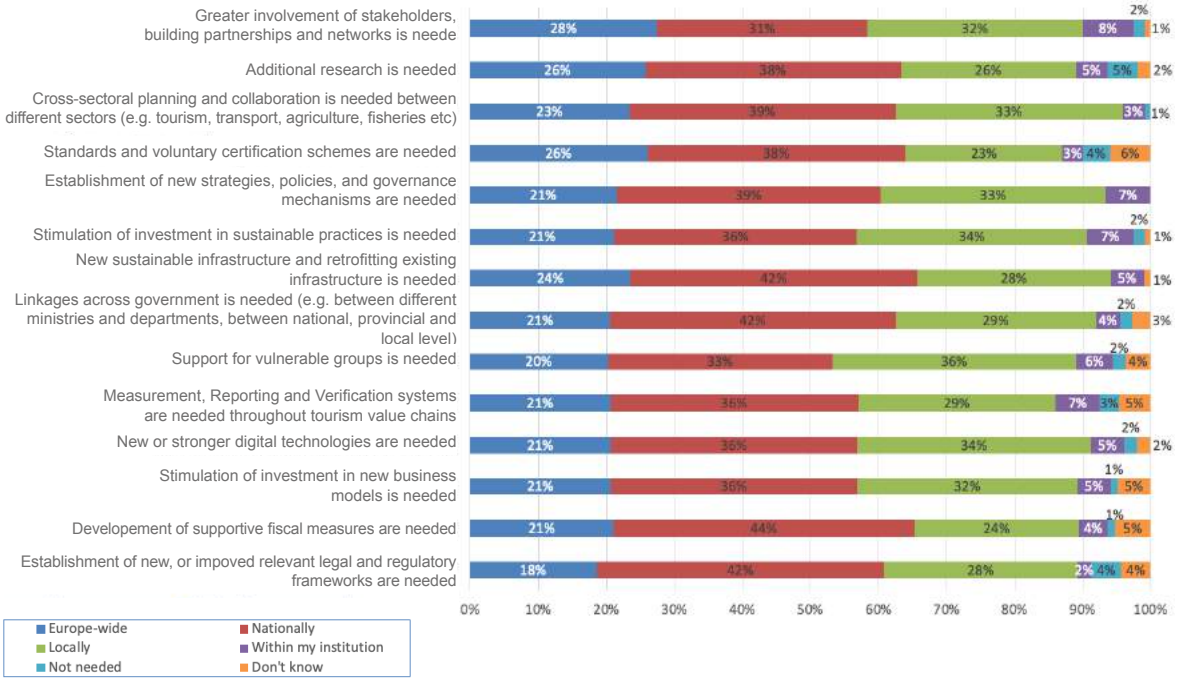


Table 1: What financial resources are currently available to address the tourism sector's sustainability challenges?[111]

Institutions providing finance	Value (EUR)	Target group(s) for the funding	Sustainability challenges being addressed
Croatia: Ministry of Tourism and Sports, Environmental Protection and Energy Efficiency Fund (selected projects) - National Recovery and Resilience Plan	290 million	Local government, accommodation, infrastructure, tour operators, education, digitalization, etc.	Helping tourism stakeholders recover from the COVID-19 crisis; investing in new knowledge and more sustainable forms of tourism according to a "do no harm principle"; tackling circularity and fostering resource efficiency; and ensuring the progress of digital data exchange, including feasibility of tourism sustainability information for all stakeholders and indicators
Czech Republic: Ministry of Industry and Trade and Ministry of the Environment	Not specified	Focus on the liquidity of SMEs in tourism (accommodation, gastronomy, tour operators, tour guides, spa resorts, etc.)	Waste management, reuse and recycling of materials, sustainable tourism (agritourism, camping, cycling, nature walking etc.), maintenance and marking of pedestrian and cycle routes/trails
Kazakhstan: SWITCH-Asia SUSTOUKA project, funded by the EU through the SWITCH-Asia programme	1.55 million	Micro, small and medium enterprises (MSME) in the tourism sector and tourist accommodation, local governments, financial institutions	Training and implementation of sustainable consumption practices by MSMEs and tourist accommodation, facilitating access to green finance, involving politicians in shaping sustainable consumption and production policies, etc.
Malta: The Government of Malta, Malta Enterprise, Measures and Support Division	Not specified	Whole tourism industry, open to several enterprises	Green and digital sustainability challenges
Norway: Innovation Norway, local governments/ municipalities, counties and others	135 million	Groups e.g. tour operators, smaller and larger tourism enterprises, events, meetings, incentives, conferences and exhibitions, food providers and services. Initial packages were purely for survival, now increasingly related to development and restarting.	Climate change (changing products and marketing for closer markets), environmental certifications, sustainable destinations programme, nature conservation, etc.
Portugal: Turismo de Portugal (public institution)	600 million	MSMEs, any business, accommodation, tour operators, local government, government agencies, projects, events organizations, etc.	Promotion of the use of treated wastewater, recovery of public buildings in nature reserves to be explored by private business
Tajikistan: Credit organization of Tajikistan	50–100 per applicant	Tourism companies	Equipment, infrastructure, construction, energy efficiency, etc.

Survey respondents were asked what type of policy interventions were needed to make the tourism sector more environmentally sustainable over the next decade and at which level a measure was needed: whether Europe-wide, nationally, in their local area or within their institution. Responses suggest that all the interventions are needed nationally, locally and Europe-wide (see **Figure 13**).

Figure 13: Requirement for policy interventions to make tourism more environmentally sustainable over the next decade



Source: 'The UN Sustainable Development Goals' — https://sdgs.un.org/goals

The following sections describe the 10 policy measures proposed in the survey, including benefits, examples and relationship with the 17 SDGs.

4

Policy recommendations for the next decade

4.1. Strengthen policy, regulatory and institutional frameworks to prevent future crises

Description:[112] Reopening the tourism sector will require both horizontal and vertical policy coordination, as well as engagement with the private sector, so that policies can be established to support future recovery and build a more sustainable and resilient tourism economy.[113] Policies, strategies and plans established can be applied by the public sector (at all levels of government) and also by the private sector. Improved legal frameworks are also needed, recognizing the importance of aligning national, local and regional measures.

Benefits: Policy interventions can address the sector's structural problems, avoiding a return to pre-pandemic challenges associated with tourism management (e.g. overtourism). They can be used to advance key priorities, such as encouraging new business models, embracing digitalization and promoting connectivity.[114] Coherent strategy and policy frameworks ensure a coordinated sector-wide approach and demonstrate governmental support that tourism value chain actors require. They help countries ensure that sector growth is sustainable, spread the benefits and address inequalities to improve the resilience of economies. Long-term strategies and policies (focusing on promoting quality employment and job creation, skills development, entrepreneurship, innovation, effective investment and integrated regional development) are integral to achieving sustainable and inclusive tourism growth.[115]

Climate and biodiversity targets and new legal, regulatory and institutional frameworks are essential to measure progress in terms of reporting and alignment to the SDGs. They can require actors to align with standards set under national sustainability strategies and mandate the internalization of environmental damage costs. Improved regulatory frameworks can also help reduce inequalities and regulate use of natural resources, with tighter nature and heritage conservation measures within countries strengthening their protection from tourism.[116] Strengthening institutional frameworks can make them more effective, accountable, transparent and participatory.[117]

Examples:

- **Switzerland** Tourism developed a participative sustainable tourism strategy to create a movement engaging all tourism players in Switzerland to develop themselves. The process and order of activities included in the sustainability strategy was revised in response to the COVID-19 crisis.[118]

- **Croatia** is drafting a new sustainable tourism strategy and projects (e.g. Sustainable Tourism Satellite Accounts and the Tourism Sustainability Portal) to process and display data and indicators that measure tourism sustainability.[119]

- **France**'s Occitanie region has developed an ambitious sustainable tourism policy and plans linked to the SDGs, with measures that help reduce carbon emissions (e.g. developing more "soft mobility" with car-free offers, bike parking, charging stations, etc.).[120]

- **Norway** released a new national tourism strategy in May 2021, focusing on rebuilding the industry in a better, more sustainable

way to help solve the climate crisis. The strategy calls for a more integrated perspective on tourism development. Under the strategy, the industry commits to a 50 per cent reduction in its climate emissions by 2030 (based on 2019 levels), and a 10 per cent reduction in annual transport emissions.[121]

- In **Finland**, the city of Helsinki's marketing strategy and priorities were renewed to reconcile the current situation with future challenges, while keeping focus on digital innovations and sustainability. The city of Espoo's DMO updated its tourism strategy for a post-COVID-19 environment and launched a Sustainable Growth Road Map 2020–2030, focusing on sustainability, inclusiveness, digitalization, and tourism innovation. With the help of COVID-19 emergency funding and the support of the Posio municipality, companies in Lapland have adapted their products to address necessary safety measures as part of the sustainability strategy and the Sustainable Travel Finland programme.[122]

- **France** Corsica's DMO, Corsica Tourism, has established a recovery strategy that includes short- and long-term measures. In the short term, measures include providing financial support for tourism MSMEs, regulating short-term rentals and strengthening the equity capital of tourism businesses (creating tourism property). Long-term measures will support the development of projects to promote cultural heritage through the national tourism development agency (Atout France) and create a specific mechanism for the sustainability of seasonal employment and training of human capital. Sustainability measures include enhancing the preservation of maritime areas in the nautical sector, supporting tourism accommodation to adopt eco-responsible practices and creating a high-end and eco-responsible accommodation chain, through a shared label and platform.[123]

- The **Association of British Travel Agents (ABTA)** released "Tourism for Good: A road map for rebuilding travel and tourism" in 2020. With reference to the SDGs, the road map outlines actions to address environmental issues (e.g. climate change, waste, water), destination management (e.g. local benefits, infrastructure planning, safeguarding culture and the natural environment), human rights and animal welfare. The road map relates to ABTA members, destinations, customers, the wider tourism industry and the UK Government.[124]

- In June 2021, the **European Parliament** approved a climate law that obligates Member States to be climate neutral by 2050. However, there are concerns that achieving such transformation requires financing and that everyday living costs will therefore increase.[125]

- In the **Russian Federation and Belarus,** researchers propose supplementing and amending the Federal Law Concerning the Fundamental Principles of Tourist Activities in the Russian Federation and the Law of the Republic of Belarus Concerning Tourism to include definitions of sustainable tourism and recognition that tourism activity development should minimize environmental impacts.[126]

- In **Spain, Benidorm** has developed a Smart Destination+ Safe Benidorm Plan in response to the COVID-19 pandemic, with the aim of consolidating its image as a safe destination, while continuing to promote the sustainability of tourism in the municipality. The plan includes actions under pillars of: (1) mitigating the environmental impact of tourism; (2) improving infrastructure, signage, accessibility and sustainability of tourist resources; (3) developing tourism management, intelligent planning and diversification of tourism products; and (4) enhancing health and safety with risk management programmes and health protocols. Benidorm's short-term response to the crisis included the enlargement of pedestrian areas, digital

regulation of access to beaches, real-time monitoring of COVID-19 cases (through water analysis) and establishing health labels for tourism businesses.[127]

4.2. Stimulate supportive fiscal measures and disable harmful ones, including fossil fuel subsidies

Description:[128] Sound fiscal policies can play a key role in countries' recovery efforts by removing inefficiencies in public expenditure and raising additional fiscal revenue that can be directed towards immediate COVID-19 relief measures. This revenue can support medium- to long-term investments and planning for a more sustainable, resilient and inclusive future. COVID-19 has forced governments to implement large-scale stimulus measures to prevent the public health crisis becoming a socioeconomic catastrophe.[129] Fiscal measures should: (1) encourage, incentivize and reward practices that support green and inclusive economic development, and discourage activities that are polluting, emission-intensive or harmful to nature; and (2) apply a coordinated approach to avoid contradictory measures (e.g. by adjusting erratic, rigid regulations that create barriers to entry for green innovators wanting to introduce new sustainable tourism products, processes or organizational models; or removing environmentally harmful subsidies, such as those to outdated technologies).[130]

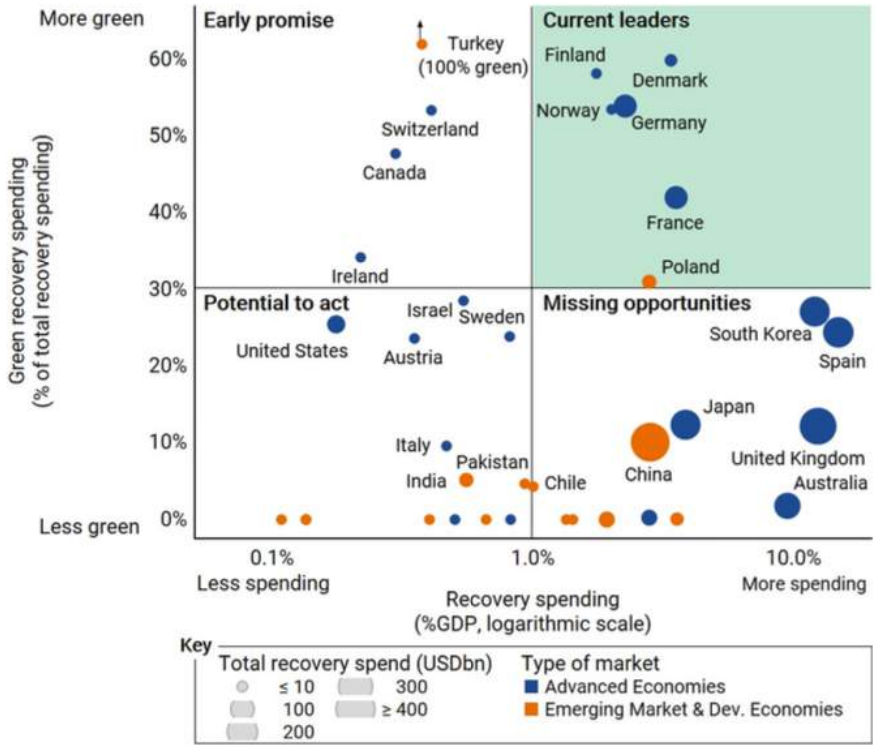
Through green fiscal policies and financial instruments (and removing harmful agricultural and fossil fuel subsidies), governments should also encourage the conservation of biodiversity, natural ecosystems and landscapes in ways that strengthen climate resilience and ensure a long-term sustainable use of tourism's environmental resource base. For instance, supporting nature-based climate solutions and carbon sinks may have significant economic, social and environmental benefits for countries that rely on tourism.

While the sheer scale and speed of fiscal responses have been significant, analysis of recent stimulus measures by selected major economies shows that the majority of public resources are going towards business-as-usual activities and sectors, with a notable lack of consideration for environmental sustainability.[131] A recent HSBC report calculated that European governments have provided the continent's airlines with nearly EUR 26.6 billion in assistance throughout the coronavirus crisis. A report from the Green Fiscal Policy Network suggests that policies to incentivize reducing GHG emissions and air pollution and to support natural capital in the tourism sector have little impact. It is possible that incentives to increase long-distance travel (which is emissions intensive) could increase the industry's overall GHG effects.[132]

Benefits: Public sector intervention aims to preserve tourism's potential for economic development and social inclusion, internalize the cost of climate impacts, and balance out actions that lead to overinvestment in polluting technologies and underinvestment in low-carbon, climate-resilient or resource-efficient technologies.[133]

Figure 14 shows the relative size and green characteristics of recovery spending, demonstrating that within the United Nations Economic Commission for Europe (UNECE), Denmark, Finland, Germany, France, Norway and Poland were 2020's global leaders, while Switzerland and Ireland showed early promise, but Spain and the UK missed opportunities. Sweden, Austria and Italy were among the weakest performers, but have potential to act.[134]

Figure 14: Green recovery spending as a percentage of total recovery spending versus recovery spending as a percentage of GDP[135]



Examples:

- In **Austria**, the klimaaktiv mobil programme provides EUR 80 million in subsidies to ease green mobility transition (e-mobility, mobility management, promoting bicycle and pedestrian traffic, and flexible public transport and car-sharing). The programme supports firms, local governments and civil associations by providing up to 20 per cent of project funding costs. While the coverage of the initiative is wider than tourism, it offers a funding bonus to incentivize regional mobility projects led by tourism associations.[136]

- In **Spain**, an eco-tax of EUR 2 per night was introduced on all overnight stays in the Balearic Islands in 2016, including in hotels, cruise ships, holiday rentals and campsites. The tax revenue is used to finance investments to maintain and improve the quality of tourism on the islands and better manage the territorial and environmental impact, among other things.[137]

- Carbon conditionalities associated with the **Austrian Airlines** bailout require a domestic emissions reduction of 50 per cent by 2030, a total emissions reduction of 30 per cent by 2030 (compared with 2005 levels), fuel efficiency improvements to lower carbon footprints per passenger and a modal shift from short distance flights to rail travel where practicable.[138]

4.3. Support investment and finance for sustainable tourism , including sustainable mobility, local governance and development of sustainable tourism products

Description: Investment and financing have an important role to play in supporting the transition to low-carbon, resource-efficient and socially inclusive tourism development. To promote access to finance for sustainable tourism investment projects, direct public intervention includes grants and subsidized loans with environmental criteria. These can be used to support tourism firms with sustainable project proposals in the start-up and early stages, and businesses willing to incorporate sustainable practices into their daily operations.[139]

Both traditional and innovative finance mechanisms exist that integrate tourism intrinsic characteristics (i.e. seasonal flows), from standard debt finance to equity and hybrid instruments.[140] Private sector investment can be leveraged by better connecting tourism projects with available green and other financing instruments (e.g. traditional and innovative finance mechanisms).[141] Financing the transition to a more sustainable model of tourism development faces a set of challenges, including the suitability of available finance instruments, information on the impact of green investment in tourism, (dis)incentives to adopt green business practices and the policy framework[142] (See **Box 4**).

Benefits: Appropriate investment in sustainable tourism practices can offer environmental and social benefits, as well as opportunities to generate significant returns, notably in the areas of energy, water, waste and biodiversity.[143]

Examples:

- The **EU's** Recovery and Resilience Facility[144] aims to help the EU rebuild after the pandemic and improve the resilience and sustainability of the economy. The facility makes available EUR 672.5 billion in loans and grants to support reforms and investments undertaken by Member States, and to mitigate the economic and social impact of the pandemic and ensure better preparedness for green and digital transitions. Targets that are applicable to the tourism sector include reducing CO_2 emissions by 55 per cent by 2030 and creating clean public transport and charging stations[145] (See **Table 1**).

Box 4: Financial instruments for sustainable tourism development[289]

Public instruments:

Direct: includes creating or investing in companies that introduce processes or services to reduce negative environmental impacts while increasing productivity.

Indirect: includes subsidized loans or grants, market-based loans (targeting green lending, alternative loan structures and property-linked efficiency loans), (partial) credit guarantees and insurance for green assets.

Private instruments:

Market: includes debt finance (loans, green bonds, mini bonds), equity and hybrid instruments (mezzanine finance, crowdfunding), and fintech innovations in the finance sector that reduce transaction and borrowing costs (blockchain, learning algorithms, smart contracts).

Impact investment: includes blended finance, positive impact finance, microfinance and rewards-based crowdfunding.

- In **Italy**, an in-kind support initiative was introduced in 2014 to encourage the repurposing of state-owned cultural heritage sites for tourism. The initiative grants concession rights free of charge to organizations or individuals willing to bear the investment costs to transform these sites into tourism facilities. The aim is to encourage walking, cycling and other human powered itineraries along cycle paths and historical-religious cultural routes, to grow tourism and promote regional development.[146]

- The Tourist Site Protection Fund in **Iceland** provides capital aimed at ensuring tourist safety, protecting Iceland's natural environment and developing new attractions to spread tourism more evenly throughout the country. Grants provide funding for 80 per cent of the total project cost, with a standard duration of one year. In 2017, the allocated budget was ISK 600 million. The fund has supported 750 projects since its creation.[147]

- The **Turkish Development and Investment Bank** provides financing and consultancy services for green building investment in the tourism sector. It funds investment in energy, water and waste management, green material usage, and social impact management. The tourism sector makes up 8 per cent of the credit portfolio, with an allocated credit of EUR 309 million and 24 new hotel and renovation investments.[148]

- In the **UK, Triodos Bank** provides loans to sustainable tourism businesses to invest in property purchase and development, on-site renewables, and Green Tourism accreditation. Triodos Bank only lends to businesses that have been or are in the process of being Green Tourism-certified. It provides a 1 per cent interest rate discount for businesses working towards gold certification.[149]

- The Swiss Confederation has committed an additional CHF 20 million budget for 2020–2021 for the recovery of tourism in **Switzerland**, with funds targeted to investments in sustainable tourism.[150]

4.4. Accelerate sustainable infrastructure and transport, and retrofit towards net zero and resource-efficient operations

Description: Infrastructure is responsible for more than 60 per cent of GHG emissions.[151] Moves towards sustainable infrastructure can be accelerated by incentivizing the transition towards low-carbon, climate resilient investments. Integrating environmental and social criteria into tourism policies and programmes, including tourism investment facilitation and promotion activities, supports this.[152] Tourism infrastructure can be decarbonized at the construction phase (e.g. low-carbon materials, local materials and labour) and the operational stage (e.g. retrofitting facilities with solar panels and energy-efficient appliances). These practices can be applied to all infrastructure that supports tourism, including accommodation (e.g. hotels, lodges, cabins), transport (e.g. roads, boardwalks, bridges, railways), visitor experiences (e.g. visitor centres) and support services (e.g. retail and catering facilities).[153]

Table 2: International Energy Agency net zero emission reduction strategies influential for tourism[154]

Tourism Industry Component	NZ Policy Options and Strategies
Air Transportation	• Business and long-haul (>6 hours) leisure air travel held at 2019 levels
	• Regional flights (<1 hour) shifted to high-speed rail where feasible
	• Passenger km increase by 3% year to 2050 (relative to 2020), from 8,5 trillion in 2019 to 14,5 trillion in 2050
	• 50% aviation fuel are sustainable aviation fuels (advanced bio and synthetic) by 2040, reaching 78% by 2050
	• Governments define their strategies for low-carbon fuels in aviation by 2025 at the latest
Marine Transport	• Governments define their strategies for low-carbon fuels in shipping by 2025 at the latest
	• By 2050, hydrogen and ammonia provide more than 60% of total fuel consuption in shipping (domestic and international)
Rail Transportation	• High speed rail replaces short haul flights (15% of flight in 202s, increasing to 17% by 2050)
	• Passenger rail doubles its share of total transport activity to 20% by 2050
	• Rail is rapidly electrified
Bus Transportation Automobile Transportation (including rental, taxies, private)	• 60% new bus sales are electric /hybrid in 2030, 100% by 2050
	• 2030 - Eco-driving and speed limits of 100 km/h introduced; ICE cars phased out in large cities
	• 60% new car sales are electric in 2030, no new ICE sales by 2035
	• Global car fleet is completely electrified by 2050
Hotels/Motels/ Resorts and Other Accomodation	• 2025 - no new sales of commercial/home fossil fuel boilers/heating ready standard
	• 2030 - all new buildings retrofitted to zero-carbon ready in 2040, 85% in 2050
	• 50% existing buildings retrofitted to zero-carbon ready in 2040, 85% in 2050
	• By 2050 natural gas no longer used for building heating
Agriculture	• Sustainable collection of wastes and residues from forestry, agriculture, animal and food industries are upscaled
	• Carbon prices alter transportation options and costs will influence food and beverage supply and costs
Cost of travel	• Carbon prices are introduced by 2025 across all ad advanced economies at USD 75/ tCO2 and rise to USD 130 by 2030 and USD 250 by 2050
	• Variable lower carbon prices are introduced in all emerging and developing economies (respectively reaching USD 200 and 55 by 2050)

ICE = internal combustion engine.
Zero-carbon-ready buildings are highly energy efficient and either use renewable energy directly or uses an energy supply that will be fully decarbonized by 2050.

Benefits: The benefits of sustainable infrastructure include lower operating costs with greater resource efficiency (particularly for energy and water), addressing climate and natural disasters, and reducing GHG emissions and contamination.[155] Smart infrastructure – which combines physical and digital infrastructure – improves the quality, speed and accuracy of decision-making, increasing the operational efficiency of infrastructure while generating cost savings.[156] Investments in quality public transport infrastructure, such as new and improved cycling networks, can make sustainable modes of transport more attractive and safer, especially in the wake of a crisis. Infrastructure can be designed to be resilient to the shocks and stresses it will encounter and less vulnerable to extreme events and disruptions[157] (e.g. floods, fire, etc., as seen increasingly across Europe and globally). Green infrastructure can often lower the cost of infrastructure development

compared with traditional grey infrastructure.[158] To avoid stigmatizing destinations starting at a low baseline of sustainable infrastructure, recognition of the scale and rate of improvement should be highlighted.

Examples:

- In **Germany**, several public initiatives involving private sector co-participation in policy design are in place. These initiatives aim to harness the transition towards energy efficiency in hotel and restaurant businesses, including raising awareness and gathering evidence for the business case for more responsible and sustainable business practices, including investment. The Check-in Energy Efficiency project was launched in 2015 to showcase the economic and social benefits of transitioning towards energy-efficient sources. This project requires hotels to implement at least one investment that will generate bottom-line energy savings of at least 30–50 per cent for heating and electricity – as compared with energy consumption prior to the investment.[159]

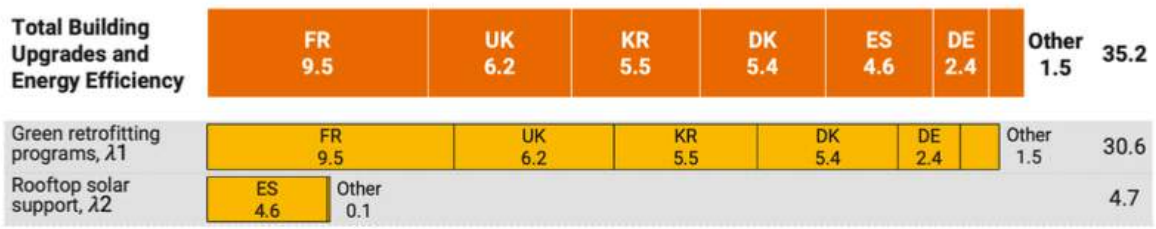
- **Italy** is providing tax credits for the refurbishment and upgrading of buildings in the tourism sector (around USD 180 million per year in 2020 and 2021), without distinct conditions on energy efficiency criteria.[160]

- **France, Demark, Spain** and **Germany** collectively invested USD 28.1 billion in building upgrades and energy efficiency in 2020. Meanwhile, in 2020, investment in cycling and walking infrastructure was USD 2.8 billion in the UK and USD 1.5 billion in Spain (see **Figure 15**).[161]

4.5. Establish monitoring frameworks and systems to measure the sector´s general progress towards sustainability, climate, biodiversity, and nature conservation

Description: Monitoring frameworks and systems are the traditional weakness of tourism sector development. Baseline data, where it exists, on the sustainability performance of the sector, often is patchy or not easily accessible and in some cases the database is incomplete or dated. Establishing monitoring frameworks to measure sustainable performance ensures that data and decision making can be integrated, and effective comparisons can be made. Parties to the United Nations Framework Convention on Climate Change, and the Convention on Biological Diversity are obliged to communicate information on the actions they have taken or plan to take to implement Convention goals to the Conference of the Parties (COP) through their secretariats. The Bali Action Plan introduced the principle of measurement, reporting and verification (MRV) for both developed and developing country Parties in the context of enhancing action to mitigate climate change at the international and national levels.

Figure 15: Total green building upgrades and energy efficiency spending by country and type, 2020[290]



Country key: DE: Germany, DK: Denmark, ES: Spain, FR: France, KR: South Korea, UK: United Kingdom

Table 3: Information to be reported on mitigation actions and their effects[291]

Name of the action	Coverage	Quantative goals / Objectives	Progress indicators	Methodologies / Assumptions	Steps taken / envisaged	Outcomes achieved	Estimated emission reductions
Exemples 1: Decrease GHG emissions by X% by 2050 below 2005 levels	Reduction of GHG emissions (CO2, CH4, HFCS) and enhancement of sinks, to be achieved through a combinaison of measyres in the energy, transport, forestry, agriculture and industrial processes sectors	A set of policies and measures targeting each sector (list key target policies)	Institutional arrangements to implement mitigation Number of policies adopted and implemented for each sector Behavioural changes induced / investment mobilized Emission reductions achieved	Key assumptions and methodologies, the same as those used for the mitigation assessment	Summary of the steps envisaged at the national level and in each sector	Progress achieved to date as per the indicators established (i.e renewable energy policy adopted; energy efficiency standars implemented for new housing, etc.)	Estimated emission reductions achieved to date

Benefits: Establishing accurate monitoring frameworks for measuring sustainability performance and Monitoring Reporting and Verification (MRV) systems for GHG emissions from the tourism sector is important and beneficial given the size of the sector in terms of increased visitor numbers and the associated increases in electricity and fuel emissions, waste, and other emissions derived from accommodations and related services.[162] Verifiable data and indicators of good quality must be the foundation of monitoring frameworks. The data must be S.M.A.R.T (specific, measurable, assignable, realistic, time-bound) and used for improving decision-making and planning, as well as for demonstrating progress or achievement of goals and tasks.

Examples:

- **Montenegro** has an MRV system for GHG emissions from the tourism sector, which is harmonized with the schematic and basic national MRV system. Its preliminary analysis affirmed that the tourism sector was directly responsible for some 3–5 per cent of Montenegro's total national GHG emissions, i.e. 70–100 $ktCO_2$[163]/year, excluding the bunker and other fuels for international cross-border and destinations marketeers interested in insight into the emissions caused by the guests they want to attract. The transport modes covered are aviation, ferries, trains, cars, buses and campers.[164]

- **The Global Sustainable Tourism Criteria** and **the European Union** have established criteria and indicators for monitoring the performance of tourism businesses and destinations for the 3 pillars of sustainability (economic, environmental, socio-cultural). The European Tourism Indicators Systems for Sustainable Destination Management has been tested in more than 100 destinations, including non-EU destinations.[165]

- With the support of the **United Nations Statistics Division (UNSD), UNWTO** has launched the initiative Towards a Statistical Framework for Measuring the Sustainability of Tourism (MST). The aim is to develop an international statistical framework for measuring tourism's role in sustainable development, including economic, environmental and social dimensions. Several European countries have pilot tested the framework.[166]

- As part of **Portugal's Tourism Strategy** 2027, a monitoring system has been developed to respond to the strategy goals, enabling tourism policy evaluation and providing the public and private sector with instruments for decision-making. This includes the development of a set of sustainable tourism performance indicators.[167]

- **France** is adopting an Environmental Footprint method to measure and communicate about the environmental performance of the accommodation sector across its whole lifecycle, relying on scientifically sound assessment methods agreed at an international

level. This method covers environmental impacts, including climate change, as well as impacts related to water, resources and biodiversity. It also enables a comparison of environmental performances between similar companies in the same sector[168].

- **The Alpine Convention**[169] has developed a guide for mountain destinations that want to measure the performance of their tourism sector in terms of sustainable development. A set of indicators has been defined for the mountain sector, including one on biodiversity.

- **The Occitanie region in France** has adopted a monitoring tool 'Green Passport" that oversees the performance of key indicators, and actions undertaken within the region to support a regional sustainable tourism strategy[170]. The monitoring tool is aligned to Sustainable Development Goals and supports more sustainable decision making.

4.6. Engage and partner with tourism stakeholders, and build their capacity to participate effectively

Description: Tourism stakeholders include anyone directly or indirectly affected by tourism (either positively or negatively) at a national, local and regional level. Stakeholder engagement encompasses understanding stakeholder views, consulting them and being accountable to them. It also means incorporating the information gained into decision-making.[171] Stakeholders are affected in different ways by tourism development; some may see an increase in their quality-of-life, others may experience a decrease and still others may experience mixed impacts. Understanding diverse perspectives of stakeholders and how they are affected by tourism development is critical for planning.[172] Stakeholders can be involved through public meetings, workshops, interviews, focus groups and surveys. A failure to engage and consult key stakeholders at the early stages of a sustainable tourism project – with fair representation of women and youth – can lead to catastrophic outcomes and project failure.[173] Partnerships may take different forms, including where partners establish joint venture tourism partnership companies,[174] or informal relationships where different parties collaborate on a task of mutual interest.

Collaboration between government departments and agencies working within the tourism sector, and in different areas of the tourism value chain (e.g. transport, agriculture, fisheries, etc.), are very important. Tourism and tourists depend on many other sectors (e.g. transport, energy, agriculture, etc.) and therefore these sectors and their employees also depend on tourism (e.g. local carpenters building hotels and furnishings; farmers supplying fresh produce to hotel restaurants offering agritourism activities; fishers delivering to restaurants and providing fishing excursions, etc.).[175] Because of these interlinkages, an enabling environment for sustainable tourism investment is needed, which incorporates coordinating actions across different policy areas and between different actors, including those working on tourism, environment and innovation.[176] The European Commission's consultation on the New Industrial Strategy demonstrated how essential cross-stakeholder collaboration would be in achieving 2030 targets.[177]

Benefits: Successful tourism processes identify and engage with stakeholders early on to understand their various concerns and expectations, and work with them to ensure successful long-term operations. Dialogue over environmental, social, political, economic or other concerns can help avoid problems and delays later on.[178] Positive impacts of capacity-building in tourism include spillover effects into local community life, such as the empowerment and enhanced employability of women and youth. Ensuring that stakeholders and partners have

their capacity strengthened can result in improved tourism management, higher revenues, increased customer satisfaction, better perceptions of the destination brand and better policy planning and destination management.[179]

Cross-sectoral, and multisectoral collaboration between agencies should improve efficiency of operations.[180] Notably, there has been a significant increase in the use of electronic forms of communication, teleworking and conferencing during the pandemic. Innovative communication tools have been increasingly used to promote virtual museum visits, tourist destinations and protected areas that cannot be reached due to travel restrictions and venue closures.[181] Low-carbon forms of communication can certainly continue being used once travel restrictions are lifted.

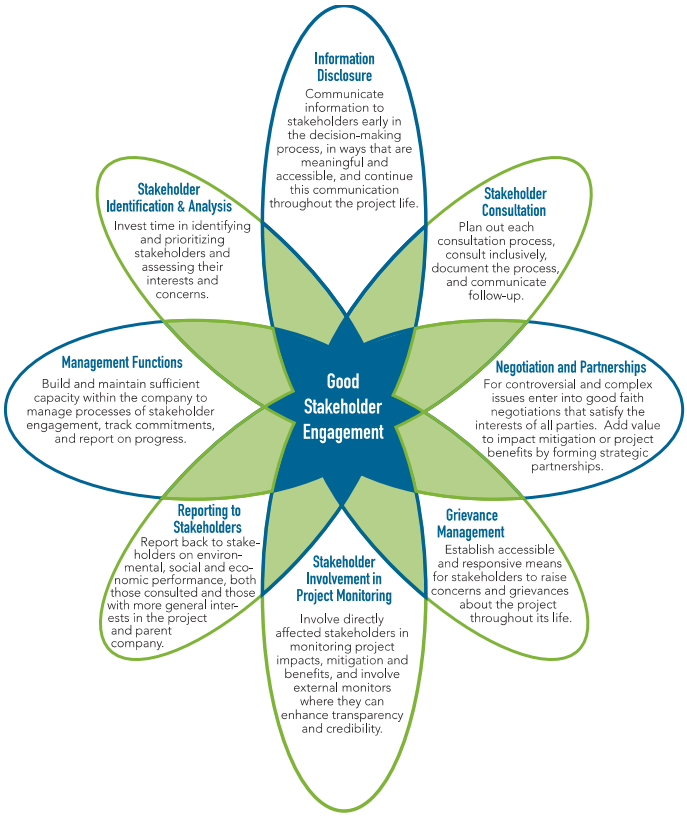
Examples:

- The **EUROPARC Federation** hosts a hub for useful information on training and capacity-building assessments, capacity-building plans, learning opportunities and other useful resources related to capacity-building for protected areas in Europe.[182]

- The **Future of Tourism Coalition** is a movement that aims to place destination needs at the centre of tourism's future, as the world recovers from the COVID-19 crisis. The initiative centres around a set of 13 guiding principles, including using sustainability standards, mitigating climate impacts, closing the loop on resources, and collaborating in destination management.[183] The initiative has 600 signatories.

- **Tourism Declares a Climate Emergency** is a global community of nearly 300 organizations that have committed to establish plans that support halving global emissions by 2030. The signatories share challenges, ideas and solutions to redress climate and biodiversity, and support vulnerable people.[184]

Figure 16: Key elements of stakeholder engagement[292]



- Formulated by UNWTO, UNEP, VisitScotland, Tourism Declares and the Travel Foundation, the **Glasgow Declaration** to the 2021 UN Climate Change Conference (COP26) strongly urges all travel and tourism stakeholders to unite in transforming tourism to deliver effective climate action. They support the global commitment to at least halve emissions by 2030 and reach net zero as soon as possible before 2050.[185] Efforts are required to operationalize these commitments, and confirm the rigour behind plans, actions and levels of achievement.

- The term **"flight shame"** ***(flygskam)*** emerged in **Sweden** after a decade of public debate on the environmental implications of air travel. The energy intensity of flying and its associated high GHG emissions per capita were aspects taken up by climate mitigation advocate Greta Thunberg and other celebrities, who vowed to not fly anymore. In 2019, prior to the pandemic, 23 per cent of Swedes abstained from travelling by air in the past year to reduce their climate impact, and domestic travel flights dropped 3 per cent in 2018.[186]

- In **Turkey**, a joint initiative between the Ministry of Culture and Tourism and the United Nations Development Programme (UNDP) – Future is in Tourism – has been set up to promote local economic development through tourism. The initiative brings together public, private and civil society actors to implement sustainable and community-based tourism projects, and provides the guidance, tools and resources to build capacity for working together to support sustainable tourism development.[187]

- In June 2021, the European project **TouriSME** launched a call for tourism MSMEs in Spain, Italy, Cyprus and France to benefit from a new financial and capacity-building support scheme. This will help to improve their environmental performances in a bid to accelerate the transition to the circular economy.[188]

- In **Spain, Santander City Council** has promoted the Santander City Brain ECO project, with the general objective of creating a city that develops around the SDGs and the concepts of ecosystem and ecology, all combining citizen participation. Themes for citizen comments include tourism, sustainable mobility, smart tourism, circular economy and consumption, local trade and economy, and citizen-friendly urbanism.[189]

- In **Sweden**, the Swedish Agency for Economic and Regional Growth has implemented an initiative to boost sustainable consumption and production. It highlights the benefits of a coordinated approach, driving practical actions tailored to the needs of the five participating regions. With a total budget of EUR 6.4 million over four years, destinations initiated activities to develop more sustainable products and services.[190]

- The **Global Tourism Plastics Initiative** has defined recommendations for the tourism sector to continue taking action on plastic pollution during the recovery from COVID-19. Developed within the framework of the One Planet network's Sustainable Tourism Programme, the Global Tourism Plastics Initiative is a multi-stakeholder partnership to implement SDG 12, led by UNEP and the UNWTO, in collaboration with the Ellen MacArthur Foundation.[191]

- **Travalyst** has established a coalition of the world's leading tourism service providers (including Tripadvisor, Booking.com, Skyscanner, Trip.com), and aims to mainstream sustainable travel globally with the support of experts and organizations.[192]

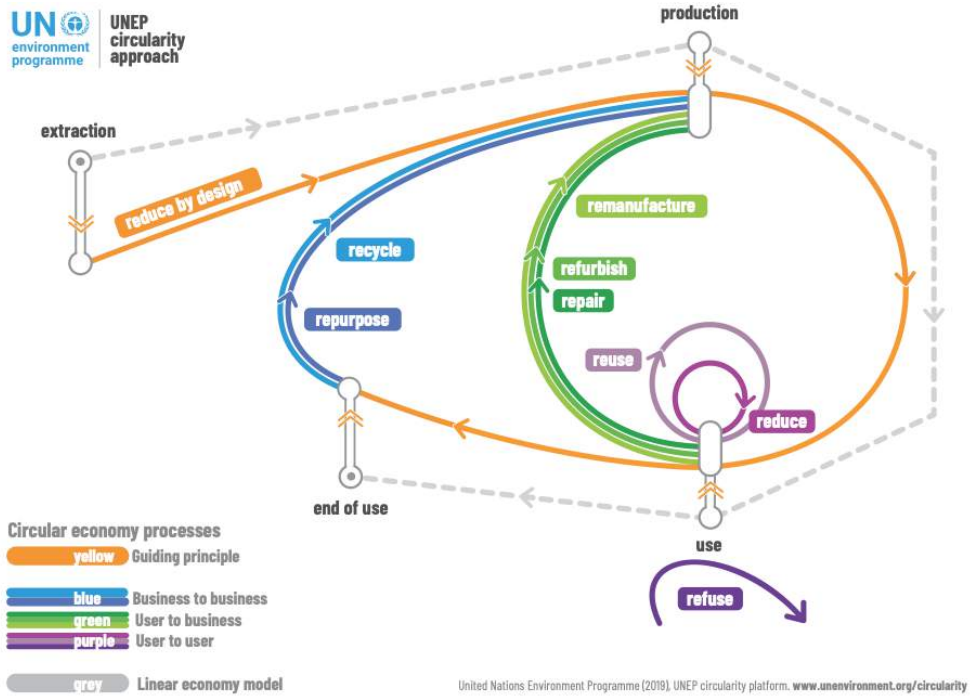
- **Cross-border policies** facilitate sustainable tourism collaborations across the EU and include the Carpathian Convention (strategy for sustainable development of the Carpathian area), the Alpine Convention (Convention on the Protection of the Alps) and the Interreg V-A Slovak-Hungary Cooperation programme.[193]

4.7. Adopt digital, circular, and technological solutions

Description: Digitalization and data-driven solutions are at the core of sustainable infrastructure development and the integration of systems, sectors and stakeholders. COVID-19 has forced regions around the world to mainstream digital tools, smart solutions and anticipate decisions with data.[194] Digital technologies can be critical enablers of the circular economy by tracking the flow of products, components and materials and making the resulting data available for improved resource management and decision-making across different stages of the industry life cycle. The Internet of Things can enable automated location tracking and monitoring of natural capital.[195]

A circular economy is based on reuse, sharing, refurbishment, remanufacturing and recycling. Through these techniques, a closed-loop system can be created in which resource inputs are minimized and low levels of waste are created. The idea is that waste becomes food for the next cycle of production and consumption. A circular economy is the opposite of the classical linear economy models, based on "take, make, dispose."[196] There are many opportunities to convert the linear economy models to circular approaches throughout each of the four key processes of the supply chain. Travel and tourism stakeholders could agree on the application of circular design principles and monitoring excess use of scarce (water and energy) resources. In addition, they could agree on establishing systems to reduce waste and reuse and recycle inputs and supplies used for delivery of travel and tourism products.[197]

Figure 17: UNEP circularity approach[198]



Benefits: The circular economy has potential to significantly optimize resource use, reduce production and consumption related GHG emissions, while at the same time offering competitive advantages for businesses. The circular economy in tourism offers a pathway towards a resilient and sustainable tourism ecosystem because the industry is deeply interlinked with (and dependent on) multiple key resource flows, and asset and commodity value chains in society (e.g. agriculture, food, the built environment and transport). [199] Digital technologies and big data can facilitate several aspects of circular strategies, such as improving waste-to-resource matching in tourism systems using real-time gathering and processing of input-output flows.[200]

Four game changers have been identified that can accelerate the circular transition: (1) make sustainable consumption, production and circularity more central to the multilateral negotiations taking place in the coming months; (2) promote shifts in policies, governance, regulation, infrastructure, investment and business models towards a just and informed transition to circularity; (3) transform economic and financial systems to power the shift to circularity; and (4) invest in knowledge, skills and training to ensure workers have access to decent, safe and attractive job opportunities.[201]

Technology has provided options for innovative travel experiences. Virtual tours offer a range of benefits including: (1) sustaining interest in and promotional presence of destinations (and tourism company offerings); (2) providing engaging and interactive experiences with past and future visitors (e.g. tourists acting as virtual protected area staff to monitor poaching, and entering virtual classrooms); (3) generating revenue to sustain tourism livelihoods and conservation efforts; and (4) reducing the physical impacts of humans on nature.[202] However, virtual travel is not being promoted as a replacement for physical travel in its entirety, but can facilitate an enriched, deeper and more personal connection to tourist sites for society as a whole – especially amid the pandemic while physical travel has become more difficult.[203]

As a caveat, it is important to recognize constraints to entry and participation – including internet access in remote locations, technological literacy and capacity – and to ensure that these tools add value to rather than replace livelihoods (e.g. local tour guides versus virtual guides).[204]

Examples:

- In **Spain**, the Ministry of Energy, Tourism, and the Digital Agenda introduced a grant initiative that allocates EUR 60 million to foster uptake of digitalization and energy efficiency by using information communication technology in local tourism destinations. The first open call for proposals provides financing up to EUR 6 million per project, with co-participation from each firm of about 20–40 per cent of the requested funding amount. The initiative is partially funded by the European Regional Development Fund.[205]

- **Greener Guest** offers a business-to-business marketplace for sustainable alternatives to single-use plastic products, and a knowledge hub with information and tools providing practical advice on plastic reduction and sustainability.[206]

- Innovative digital solutions can be used to promote **virtual visits and experiences** that cannot be accessed physically due to travel restrictions and venue closures,[207] (e.g. Mudejar Architecture in Spain, and Messel Pit Fossil Site in Germany)[208] along with digital restaurant menus and smartphone applications to guide social distancing in busy tourism destinations.

- **Online travel agencies** and peer-to-peer booking sites can be used to curate travel experiences anywhere in the world, using computers or smartphones.[209] For example,

Booking.com's Travel Sustainable Badge, and Google's Go Green initiatives aim to provide transparency and comparability of operators with sustainability practices, helping travellers make informed travel decisions while providing market advantage to sustainable tourism offerings.[210]

- Itineraries can be planned using **mapping platforms** such as Google Street View and Google Maps, while artificial intelligence technology present in mapping services uses global positioning systems to provide information on the shortest or most convenient routes for travellers to take.[211]

- In contrast to these efforts promoting digital technology, the **Vienna Tourist Board** introduced an "anti-hashtag" campaign encouraging visitors to stay offline and see the city without their smartphones or the use of social media, with an accompanying advertisement slogan of **"See Vienna, not #Vienna."**[212] This relates to a growing resistance against technology and media ("techlash") linked with overtourism, as evidenced by phenomena such as "digital detoxing" – a periodic disconnection from social or online media, or strategies to reduce digital media involvement.[213]

4.8. Adopt sustainable procurement and consumer information tools, including sustainability standards and voluntary certification schemes

Description: Sustainable procurement is a process by which public authorities or private corporations seek to balance financial, environmental and social considerations when procuring goods, services or works at all stages of the value transformation cycle, while also considering their costs throughout the entire life cycle. These considerations can be applied to labor and safety standards in the production process, and to energy efficiency performance and innovative characteristics of the purchased products.[214]

Sustainable tourism standards are sets of rules and guidelines that define the requirements of tourism enterprises in delivering sustainability. Certification involves voluntary, third-party assessment of a tourism enterprise to audit its conformity to a standard. Certification bodies verify that requirements of a standard and certification process are fulfilled.[215] Certification demonstrates that a tourism business has opened itself to neutral verification that it is operating as advertised and in accordance with given standards or regulatory measures.[216] Certification bodies can apply to the Global Sustainable Tourism Council (GSTC) to have their standard recognized as complying with the GSTC Criteria, and be accredited to demonstrate that their certification processes comply with international standards and good practices.[217]

Benefits: Transforming tourism value chains to low-carbon and resource-efficient operations requires an increase in sustainable consumption and production practices. Sustainable procurement can play a leading role in helping better manage resources and improving resource efficiency throughout the tourism value chain. By incorporating sustainability requirements into their procurement processes, corporate buyers can convey a strong signal to, and drive markets towards, increased sustainability and help scale up the market for more sustainable products and services.[218]

Where travellers are empowered and willing to make pro-environmental decisions, this can have potential consequences for raw material production, manufacture and service provision, as well as waste management. This also means that consumption could become

a self-reinforcing virtuous cycle of low-carbon consumption, provided that information on product/service characteristics is actually provided and presented to customers in a way that increases the appeal to purchase environmentally "better" products/services.[219]

Certification provides a tool to help tourism enterprises establish easily verifiable sustainable supply chains. **TUI conducted a study and found that hotels with sustainability certifications versus non-certified hotels achieved:**

10%	lower CO_2 emissions per guest night
24%	lower waste volume per guest night
19%	less fresh water use per guest night
15%	less total water use per guest night
23%	higher use of green energy
9%	higher employment rate of national employees, and higher customer satisfaction scores for accommodation overall.[293]

Examples:

- In 2018, 81 per cent of TUI hotels and resorts held a sustainability certification accredited by the **GSTC**. The criteria include biodiversity conservation, energy conservation, GHG emissions, transport and solid waste measurement (reduce, reuse, recycle) in addition to local and efficient procurement.[220]

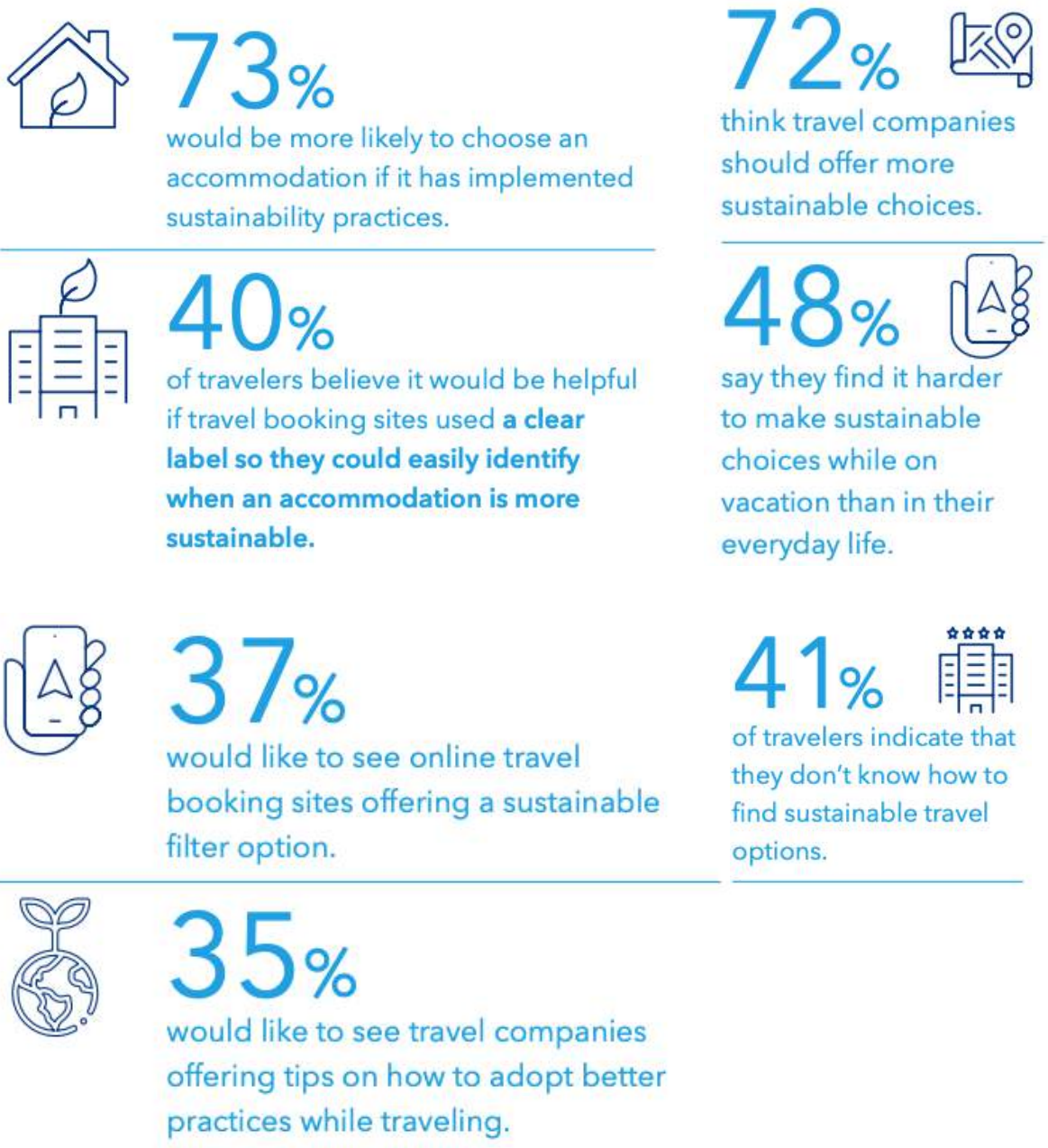
- **Switzerland** tourism plans to focus its sustainable tourism strategy on promoting certified businesses and integrating sustainability into their operations.[221]

- **Viabono** is a German organization developing sustainability certifications, specifically a carbon efficiency label for hotels. The certification depicts information on CO_2 emissions per guest night, detailed for transportation, buildings, food and beverages, print media, cleaning, and other aspects of the operation. The label also lists the overall emissions from the business and ranks it on the basis of its climate impact per bed night in one of six categories. Colour coding allows customers to grasp the hotel's performance at a glance, but detailed CO_2 data also enhances carbon literacy.[222] Consumer information tools and transparent communication materials can raise consumer awareness and inform them about the implications of their choices on environmental issues such as global warming and pollution. These tools could include certification schemes and digital footprint tools for businesses and products and services.

- The tourism sector can contribute to the reduction of emissions and pollution through the adoption of **more sustainable procurement measures,** such as better planning of food procurement, the use of all the ingredients procured and procurement for diets with a lower share of animal-sourced food – reducing overall GHG emissions, the need to raise livestock and land-use pressure. Replacing "cooling appliances" with "cooling services" allows customers to pay for the amount of air conditioning they use, instead of requiring businesses to buy and maintain the equipment. The adoption of this service aims to promote energy efficiency and climate-friendly cooling solutions in the tourism sector, and can integrate criteria such as extended product life, recycling and end-of-life considerations into the procurement process.[223]

- A 2021 **Booking.com** traveller survey showed that the majority of its travellers pledge to seek out accommodation that has reputable third-party sustainability accreditation (see **Figure 18**), but that barriers still remain as nearly half of respondents believe there still are not enough sustainable travel options available in 2021.[224] To help boost the visibility of more sustainable options, Booking.com is showing third-party sustainability certifications and details on a range of 30+ impactful practices in place at hundreds of thousands of properties around the world.[225]

Figure 18: Demand for sustainable tourism among travellers, 2021[226]



4.9. Support vulnerable groups, including women, youth, migrants, ethnic and indigenous communities

Description: Vulnerable groups face a higher risk of poverty and social exclusion than the general population. These groups include people with disabilities, migrants, racial or ethnic minorities, homeless people, ex-prisoners, drug addicts, people with alcohol problems, isolated older people and children. The problems they experience translate into issues such as homelessness, unemployment, low education, and their further exclusion from society.[227] UNWTO has highlighted that vulnerable groups within the sector are among the hardest hit by the COVID-19 pandemic.[228] Youths may be less able to reach remote locations where public transport is limited and private vehicles are required. However, a survey respondent in Tajikistan commented that the pandemic had led to a reduction in labour migration to other countries, meaning that skilled resources were more available locally, and therefore it was possible that opportunities in tourism for vulnerable groups might also decline. As set out in the UNWTO Framework Convention on Tourism Ethics, the tourism sector has a duty to promote the rights of the most vulnerable groups.[229]

Benefits: Supporting the most vulnerable members of society helps them make their own decisions and provide informed consent on any tourism actions that affect them.[230] UNWTO recognizes that gender equality and provision of equal opportunities to women at all levels in the tourism sector would lead to greater benefits for everyone, as inclusive societies and economies are more resilient and better able to respond to economic shocks.[231]

Examples: UNWTO suggests a series of responses for women and people with disabilities amid the COVID-19 pandemic (see **Table 4**), including adopting flexible working conditions to reduce the existing barriers for women to access job opportunities within the tourism sector and increase their retention in the workforce,[232] and ensuring labour inclusion, with workplace adaptations, job design and skill matching to enable access the labour market for all – including those with disabilities.[233]

Table 4: Suggested responses for members of vulnerable groups in tourism amid COVID-19: Women and people with disabilities

Vulnerable group	Responses	Activities
Women in tourism[234]	Develop gender-responsive policies	Engage in effective gender-mainstreaming so that women and men benefit equally, and inequality is not perpetuated Address sexual harassment and other forms of gender-based violence in the tourism sector.
	Ensure decent employment for women in tourism	Target stimulus and aid packages to ensure that people in informal employment are eligible for relief and support measures to avoid adversely disadvantaging the female workforce. Taking into account the digital gender divide, disseminate information on COVID-19 aid and recovery packages for the tourism sector through a variety of communication channels, and especially target mothers, youth and older women. Adopt flexible working conditions to reduce the existing barriers for women to access job opportunities within the tourism sector and increase their retention in the workforce. Women's participation in community-based tourism is high worldwide, but these businesses owned and managed by women could bring even greater benefit to their families and communities if they were entitled to social and legal protection. Establish or strengthen inclusive and gender-responsive social protection systems, including floors, to ensure full access to social protection for all, without discrimination of any kind.
	Develop diverse skills for a post-COVID-19 world	Ensure women in tourism's access to affordable, quality and equitable health care, including sexual and reproductive health care. Develop training programmes targeting women in tourism on IT skills, soft skills, networking and high-level training for women's career progression. Encourage the participation and mentorship of female students and graduates in tourism studies and qualifications at all levels. Diversify women's market access and fair trade.
	Redefine tourism's gender balance and foster diversity	Encourage and improve access for women to decision-making positions within the tourism sector's workforce and public authorities. Governments should reduce legal barriers and increase financial literacy and access to finance to boost women's entrepreneurship. In parallel, existing businesses should look to design and implement recovery programmes that offer opportunities for women's career progression and retention. Raise awareness on diversity and inclusion.
	Improve data collection and measurement for better policies	Governments and the private sector should encourage the systematic collection, production and reporting of reliable data on the tourism sector that is disaggregated by sex.

Vulnerable group	Responses	Activities
People with disabilities[235]	Assistance provided during pandemics	Repatriate passengers without delays. Compromising accessibility entails safety risks. Provide courtesy accessible accommodation. Engage in DMO and disabled peoples' organizations peer support to understand different obstacles for clients with disabilities and the ways to bridge them.
	Adaptation of protocols to different needs	Adapt sanitary protocols and avoid a one-size-fits-all approach as travellers have different abilities. Keep accessibility features across the value chain, including accommodation facilities, restaurants, cultural attractions and venues, and natural settings.
	Inclusive policies in post-COVID-19 tourism	Gather data on accessible tourism. Quality data collected globally would make the Tourism for All business case much more evident. Adjust accessibility policies and strategies to mainstream accessibility in marketing and training programmes. Improve customer service, as tourism service personnel usually lack training on catering for customers with disabilities and therefore lack confidence. Encourage feedback from end users. Apply international standards to ensure the same level of accessibility for tourism products and services worldwide.
	Inclusion of accessibility in business planning	Treat accessibility as a competitive advantage. Designing inclusive experiences produces personalized services and accommodates the widest range of potential visitors.
	Training and labour inclusion for all	Extend professional training by including safety. Ensure labour inclusion; workplace adaptations, job design and skill matching can enable everyone to access the labour market.
	New technologies and social innovation improve accessibility	Innovative technologies should be a lever in making travel easier for all. "Build back better" tourism: Now is the time to finally adopt an inclusive approach to tourism by developing sustainable and accessible solutions.

4.10. Invest in research to support science-based decision-making in tourism

Description: Research can be described as a process of steps used to collect and analyse information to increase understanding of a topic or issue.[236] Fourteen main research topic clusters were observed in three main academic tourism journals between 1974 and 2017, including governing tourism development, sustainable tourism and local communities.[237] According to survey respondents, locally collected data on tourism-related indicators is largely redundant

across Europe, while data aggregated at the regional or provincial level is too general. [238]

Benefits: Tourism research provides the evidence base to support tourism policy, investment, planning and marketing and enables the industry to position itself to respond to changing market conditions.[239] In relation to COVID-19, market research is important because understanding how a tourist psychologically responds to changes can help to better predict their behaviour around destination choice and travel intentions.[240] Organization of meetings, conferences (including online exchange of information) and sharing examples of good practice can support collaboration.[241]

Examples:

- Researchers considered the impact of applying and lifting lockdowns on 14 popular **European National and Nature Parks**. The most important challenges identified were overcrowding, a new visitor profile, problematic behaviour and conflicts between different user groups. New measures have been introduced to tackle these challenges, including information campaigns, traffic management and establishing one-way systems on trails[242]. However, it has been observed that measures to safeguard public health often conflict with other protected area management measures aiming to minimize disturbance to wildlife and ecosystems.[243]

- In **Northern Cyprus**, researchers reviewed the negative impacts of the COVID-19 pandemic on tourism and hospitality operations and how they have coped and responded to these challenges. Findings showed that some operators had been able to adapt, and their actions provide indicators for a sustainable tourism business model.[244]

- Research on the impact of the pandemic on tourism in the **Western Balkans** (comprising Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia, Croatia, Greece, and Turkey) argues that the sector should use the experience of the COVID-19 crisis to become more sustainable and resilient and to support international policies (e.g. the Green Deal).[245]

5

Key messages and recommendations

5.1. Key messages

UNEP conducted a survey to understand the actual impacts of COVID-19 on the tourism sector in the pan-European region in June and July 2021, which received 135 responses from people in government, NGOs, tourism businesses, associations and research institutions in 35 countries.

This report shares information on the environmental context of tourism prior to the pandemic and reviews the implications of COVID-19 for mainstreaming sustainable travel, adequate financing and agency responses. In particular, it considers impacts of changes in tourism on the environment, climate, waste and water. The report recommends 10 policy measures for the next decade to transform tourism development and build a resilient, inclusive, net zero and resource-efficient sector.

Impacts on the environment (see **section 2.3**): The COVID-19 crisis has directly affected energy use and GHG emissions across Europe[246] and led to a 7 per cent reduction in global GHG emissions in 2020.[247] This was associated with a dramatic decline in air travel in Europe in 2020 compared with 2019.[248] There are concerns though that this dip in CO_2 emissions could be brief, and that the world is still heading for a temperature rise in excess of 3°C this century.[249] Most survey respondents thought that the use of personal vehicles and non-vehicle transport (e.g. walking, cycling) increased during the pandemic as people moved away from public transport. Furthermore, nearly half of survey respondents thought that air pollution due to tourism had declined, and indeed air quality has improved in many cities across Europe,[250] but the relative contribution of tourism to this change has not been quantified.

Travel restrictions and lockdowns have also been associated with less disturbance in urban and remote areas (due to less recreational tourism), giving ecosystems and habitats a chance to recover and providing new spaces for species to occupy.[251] Protected areas in Europe that normally charged visitor fees faced a decline of overall revenue in 2020 compared with the previous year (e.g. Croatia).[252] As domestic travel restrictions were lifted, residents rediscovered attractions closed to home, and the European summer of 2021 saw a surge in domestic tourism[253] and overcrowded protected areas. Pollution increased in busy natural areas across Europe, where open defecation and litter proliferated.[254] However, when survey respondents were asked whether there had been changes in biodiversity or the area of natural habitats in the pan-European region, the most frequent responses was "no change" – indicating the importance of ecological monitoring data to establish actual rather than perceived impacts.[255]

Less tourism overall has reduced the demand in total volumes for single-use plastic products for tourism activities (e.g. drinks bottles, room amenities), but this has been offset by the surge of take-away food products in single-use plastic packaging during the pandemic,[256] and the increased use of PPE to meet sanitary standards and protocols for travellers and people quarantining in hotels.[257] This implies that while the overall level of single-use plastic has declined, the amount per visitor has probably increased. The production, consumption and disposal of additional single-use plastic products has potential to lead to increased air pollution and GHG emissions, waste generation and risk of littering.[258] Most survey respondents believed that there had been an increase in the level of solid and liquid waste generated during the pandemic and greater use of chemical products for cleaning and sanitation, but lower levels of food waste. They also thought that waste management practices and chemical use in tourism, which the hospitality industry struggled to deal during the pandemic, had caused greater pollution.[259] Although there is no specific research in this area, it is assumed that additional cleaning and sanitation measures associated with reopening safely will lead to greater overall use of chemicals.

Demand for mainstreaming sustainable tourism is gaining momentum (see **section 2**): Consumer research during the pandemic suggests that we have reached a watershed moment: the majority of travellers say that the pandemic has made them want to travel more sustainably in the future.[260] Travellers are particularly concerned about excess waste, threats to local wildlife and natural habitats, overcrowding at popular sites and destinations, and GHG emissions.[261] This suggests we may be at a turning point in efforts to drive sustainable tourism in destinations and across the industry and capitalize on the sustainability trend – and that we should take advantage of this pivotal moment to drive sustainable tourism into the mainstream. Survey respondents reported increased availability of sustainable tourism products and services due to the pandemic (e.g. virtual tours and locally produced foods and materials). However, most respondents did not think there had been any changes in other environmental practices such as the reuse and recycling of materials, waste management, energy efficiency, nor any changes in the promotion of socioeconomic benefits, for example by involving vulnerable groups, women, youth or entrepreneurs and small businesses in the tourism sector.[262]

Financial and technical resources (see **section 4**): Across Europe, governments and DMOs have made available millions of euros to address sustainable tourism challenges. For example, Croatia is supporting tourism stakeholders to recover from the COVID-19 crisis and invest in more sustainable forms of tourism (e.g. natural tourism), to tackle circularity and foster resource efficiency, and improve digital data exchange.[263] Also, Norway is supporting tourism companies to address climate change by changing products and marketing for closer markets, applying environmental certifications for transparency of sustainable efforts, and supporting nature conservation.[264] Priorities for financial support were identified by survey respondents, including capacity-building for new sustainable tourism practices and products; nature conservation (e.g. funding for monitoring, protection and anti-poaching); providing visitors with environmental education; and establishing mechanisms to ensure income from tourism supports local communities.[265]

5.2. Recommendations to strengthen the tourism sector's preparedness to respond to future risks

The COVID-19 pandemic has exposed the many fragilities of our economies and deepened existing inequalities, while highlighting the need for resilience, innovation and cooperation in our societies[266]. Emergency measures to address the health crisis and its economic fall-out are the immediate priority; but greening recovery efforts can help nations to "build back better" and increase resilience to future crises by ensuring a healthy environment that sustains healthy communities. With increasing demand for sustainable tourism options, we are at the crucial moment to capitalize on emerging opportunities to build a more sustainable and resilient tourism sector.

Ten policy measures have been formulated from the literature and survey responses. UNEP propose the following to support sustainable tourism in the future, and address increasing risks of natural disasters, climate change and pandemics (see **section 4**):

These measures need to be underpinned by efforts to bolster sustainable tourism practices, including to strengthen the enabling environment, use appropriate investment and fiscal measures to stimulate good practices, promote digitalization and use technological advances for the benefit of all, support cohesive destination management and stakeholder involvement, and meaningfully enhance coordination and collaboration.

Six broad recommendations are also suggested to support the policy measures:

1. Strengthen policy, regulatory and institutional frameworks to prevent future crises
2. Stimulate supportive fiscal measures and disable harmful ones, including fossil fuel subsidies
3. Support investment and finance for sustainable tourism, including sustainable mobility, local governance, and development of sustainable tourism products
4. Accelerate sustainable infrastructure and transport, and retrofit towards net zero and resource efficient operations
5. Establish monitoring frameworks and systems to measure the sector´s general progress towards sustainability, climate, biodiversity and nature conservation
6. Engage and partner with tourism stakeholders, and build their capacity to participate effectively
7. Adopt digital, circular, and technological solutions
8. Adopt sustainable procurement and consumer information tools, including sustainability standards and voluntary certification schemes
9. Support vulnerable groups, including women, youth, migrants, ethnic and indigenous communities
10. Invest in research to support science-based decision making in tourism

1. **Strengthen the enabling environment to bolster sustainable tourism practices:** UNECE nations should form a common path in sustainability, while national frameworks and governments at the local level should determine what should be done (i.e. for communities, municipalities, destinations and tourism clusters).[267] Greater emphasis on tourism needs and impacts should be integrated into destination planning, particularly in popular and environmentally sensitive locations. The OECD recommends policy solutions to support sustainable tourism recovery that: (1) rethink tourism success; (2) adopt an integrated policy-industry-community approach; (3) mainstream sustainable policies and practices; (4) develop more sustainable tourism business models; and (5) implement measures to better manage tourism.[268] The tourism sector should align its objectives with the SDGs and climate targets – including signing the Glasgow Declaration and joining Tourism Declares, and formulating practical plans to reduce GHG emissions. Regulations on GHG emissions caused by international air transport can also be used to reduce the transport sector's contribution to global climate change. As short-term inhabitants, tourists are often not a natural part of planning for local infrastructure and services, and there is therefore also a lack of financing instruments for nature conservation and maintenance to address impacts caused by tourists.[269] Strategies are required that boost uptake of circular business models, innovation, sustainable procurement, consumer information tools, sustainable tourism standards and voluntary certification schemes. These strategies must be in alignment with clear targets for the tourism sector.[270]

2. **Use investment and fiscal measures to stimulate sustainable tourism:** Fiscal measures need to be established and strengthened to constrain environmentally harmful activities by tourism firms. Such measures may include congestion prices or taxes,[271] subsidies to encourage the sector to apply sustainable practices more proactively, and the use of state income from nature tourism to mitigate its impacts and support local communities. Coordination is needed to ensure there are no policy distortions (e.g. rigid regulations that create barriers to entry for green innovators, or subsidies for outdated harmful technologies, chemicals or practices).[272] Investment is needed to encourage the integration of tourism businesses into low-carbon and sustainable tourism supply chains, low-carbon transport options, and the construction of resource-efficient tourism infrastructure.[273] Direct public intervention may include grants and subsidized loans with environmental criteria, which can support tourism firms with sustainable project proposals in the start-up and early stages, as well as businesses willing to incorporate sustainable practices in their daily operations.[274] Establishing priority areas for tourism in the EU's Multiannual Financial Framework could be useful to leverage investment for the industry to make the required sustainable shift.[275]

3. **Provide capacity-building and technical training to tourism stakeholders:** Hotels and tourism entrepreneurs across Europe need advanced training on sustainable tourism, including exchanges of experiences and practical workplace examples. To motivate change, this training needs to be coupled with information on the return on investment for sustainability practices, and new market intelligence on the momentum towards sustainable travel established during the pandemic. Make it easy and appealing for tourism companies – whether large or small – to make proactive changes. Share best practice examples between operators and destinations to inspire replication.

4. **Promote digitalization and use technological advances for the benefit of all:** Increasing the uptake and application of digital technologies to improve circular models is of vital importance, particularly relating to energy, waste, water use and nature conservation. Virtual travel experiences need to be capitalized on to sustain interest and promotional presence in destinations, to generate revenue to sustain tourism livelihoods and conservation efforts, and to reduce the physical impacts of humans on nature.[276] Simultaneously, it is critical to recognize the constraints on many to enter and participate in such offers, including internet access in remote locations and technological literacy and capacity, and also ensure that these tools add value to rather than replace livelihoods.[277]

5. **Support cohesive destination management and stakeholder involvement:** Tourism stakeholders in destinations should be included in decision-making that affects them, at the national and local level, as well as transboundary levels. In addition to government and tourism sector representatives, stakeholders from universities, NGOs, civil society, multisector partnerships and residents of tourism destinations need to be included.[278]

6. **Meaningfully enhance coordination and collaboration:** International financing development agencies should align their stimulus packages with sustainable tourism recovery principles. Relevant institutions working on tourism – including United Nations organizations such as UNEP, UNDP, the International Labour Organization, UNWTO and UNECE, and other development agencies such as the OECD and the European Commission – should strive towards building inter-agency coordination mechanisms with other government bodies,

private sector representatives, relevant ministries, and other tourism organizations to integrate sustainability into the tourism sector across pan-European countries. This work can be supported through public-private partnerships, digitalization agendas and evidence on new business models for circularity in tourism.[279] Cooperation can be enhanced through the planning and programming processes of joint projects within national recovery and resilience plans.

Across Europe, locally collected data available for tourism-related indicators are scarce, while data aggregated at the regional and provincial levels are too general. In future, close cooperation with the professional and scientific community, joint initiatives, cooperation with NGOs and use of citizens' science would be beneficial. Previously, climate data on CO_2 emissions have been gathered at the national rather than regional level, but there are gaps in information across the tourism value chain and in tourism destinations that need to be remedied.[280]

These measures comprehensively support the findings of the European Commission's consultation on the New Industrial Strategy and its 27 transition pathway topics across the green transition, digital transition and resilient transition (see **Table 5**), coupled with its targets and milestones.[281]Across Europe, locally collected data available for tourism-related indicators are scarce, while data aggregated at the regional and provincial levels are too general. In future, close cooperation with the professional and scientific community, joint initiatives, cooperation with NGOs and use of citizens' science would be beneficial. Previously, climate data on CO_2 emissions have been gathered at the national rather than regional level, but there are gaps in information across the tourism value chain and in tourism destinations that need to be remedied.[282]

These measures comprehensively support the findings of the European Commission's consultation on the New Industrial Strategy and its 27 transition pathway topics across the green transition, digital transition and resilient transition (see **Table 5**), coupled with its targets and milestones.[283]

Table 5: Mapping UNEP's 10 measures for transforming tourism with transition pathway topics

UNEP's 10 measures for transforming tourism	European Commission's 27 transition pathway topics across the green transition, digital transition and resilient transition[284]
1. Strengthen policy, regulatory and institutional frameworks to prevent future crises.	(1) Governments produce and use sustainable tourism data and indicators to inform policy. (16) A clear regulatory framework for European tourism sharing economy platforms.
2. Stimulate supportive fiscal measures and disable harmful ones, including fossil fuel subsidies.	(8) Tourism benefits are parts of plans to increase biological protection, diversity and conservation.
3. Support investment and finance for sustainable tourism, including sustainable mobility, local governance, and development of sustainable tourism products	(4) Reaching net-zero tourism transport emissions by 2050. (21) Tourism services and facilities accessible to all. (24) Diversified business models support resilience.
4. Accelerate sustainable infrastructure, and transport and retrofit towards net zero and resource-efficient operations.	(5) The tourism industry has renovated energy-efficient buildings. (25) Tourism has adaptive capacity to cope with impacts of climate change.
5. Establish monitoring frameworks and systems to measure the sector´s general progress towards sustainability, climate, biodiversity, and nature conservation.	(3) Organizations measure and report their environmental performance. (11) A European framework for tourism data standards.
6. Engage and partner with tourism stakeholders and partners and build their capacity to participate effectively.	(10) Consumers purchase green products. (18) Digitally equipped tourism SMEs and workforce. (19) DMOs have become collaborative innovation organizations. (27) Training and upskilling/reskilling options available for tourism workforce.
7. Adopt digital, circular, and technology solutions.	(6) Circularity for plastics in tourism is common practice. (7) Tourism/hospitality organizations reduce food waste. (13) A digital European tourism market information space. (14) Digitalized and virtual tourism experiences. (15) A smart European tourism destination. (17) Digital destination innovation hubs.
8. Adopt sustainable procurement and consumer information tools, including sustainability standards and voluntary certification schemes.	(2) Governments adopt national sustainable tourism schemes. (9) Organizations apply green procurement standards.

UNEP's 10 measures for transforming tourism	European Commission's 27 transition pathway topics across the green transition, digital transition and resilient transition[284]
9. Support vulnerable groups, including women, youth, migrants, ethnic and indigenous communities	(20) Tourism has positive social impact on visited communities. (23) Tourism supports residents and visitors alike. (26) Tourism allows for positive career paths, a high quality of work and well-being of employees.
10. Invest in research to support science-based decision-making in tourism.	(12) A European shared tourism data space network. (22) Peer learning database of best practices, including learning experiences.

This report aims to inform a transition pathway to a more sustainable economy. The analysis will be used to prepare background and participant information papers for the forthcoming EfE Ministerial Conference in Nicosia from 5–7 October 2022 to promote green solutions that help Europe to build back better from the pandemic and other crises.[285] Further steps needed include an assessment of costs and benefits, listing actions per type of stakeholder and establishing the likelihood of implementation of the actions.

6

Annexes

6.1 Approach

The scope of this study is the pan-European region; however, when pan-European data are not available, EU and EFTA data are used to show trends and the current status.

6.1.1. Literature review

The literature review included materials freely available on the internet in relation to responses to COVID-19 and tourism, particularly across Europe. In particular, this report incorporates materials from the EU website, UNEP, academic journal articles and media reports available online, and in various resource directories.[286]

6.1.2. Survey

Based on the topics that UNEP wished to explore, a structured questionnaire was developed to collect relevant information.

The electronic survey used SurveyMonkey as a platform, and was distributed between 17 June and 23 July 2021. The questionnaire was circulated widely across the pan-European region in English and Russian, via social media (LinkedIn), and through the International Union for Conservation of Nature and Natural Resources (IUCN) World Commission on Protected Areas Tourism and Protected Areas Specialist Group (WCPA TAPAS Group). The questionnaire was also sent to the EfE mailing list, which consists of UNECE member countries, civil society networks and international and regional organizations. The questionnaire is available online here.

There were 135 usable responses from across 35 countries in the UNECE region (see **Table 7**). Women comprised 44 per cent of respondents, followed by men 38 per cent, and 13 per cent who did not report their gender.

Table 7: Number of survey respondents from countries across Europe

Country	No. responses	Country	No. responses	Country	No. responses
Albania	2	Holy See	1	Republic of Moldova	4
Andorra	1	Hungary	3	Romania	6
Austria	1	Iceland	1	Russian Federation	6
Azerbaijan	3	Italy	5	Serbia	2
Bosnia and Herzegovina	1	Kazakhstan	3	Slovakia	7
Bulgaria	3	Kyrgyzstan	11	Sweden	1
Croatia	4	Malta	4	Switzerland	1
Czech Republic	6	Montenegro	2	Tajikistan	7
France	3	North Macedonia	2	Ukraine	3
Georgia	2	Norway	3	UK	3
Germany	1	Poland	7	Uzbekistan	2
Greece	2	Portugal	2		

Most respondents were from government authorities, departments or institutions (35 per cent), NGOs (29 per cent) and tourism or business associations (11 per cent). Other respondents included intergovernmental agencies, consultants and the media.

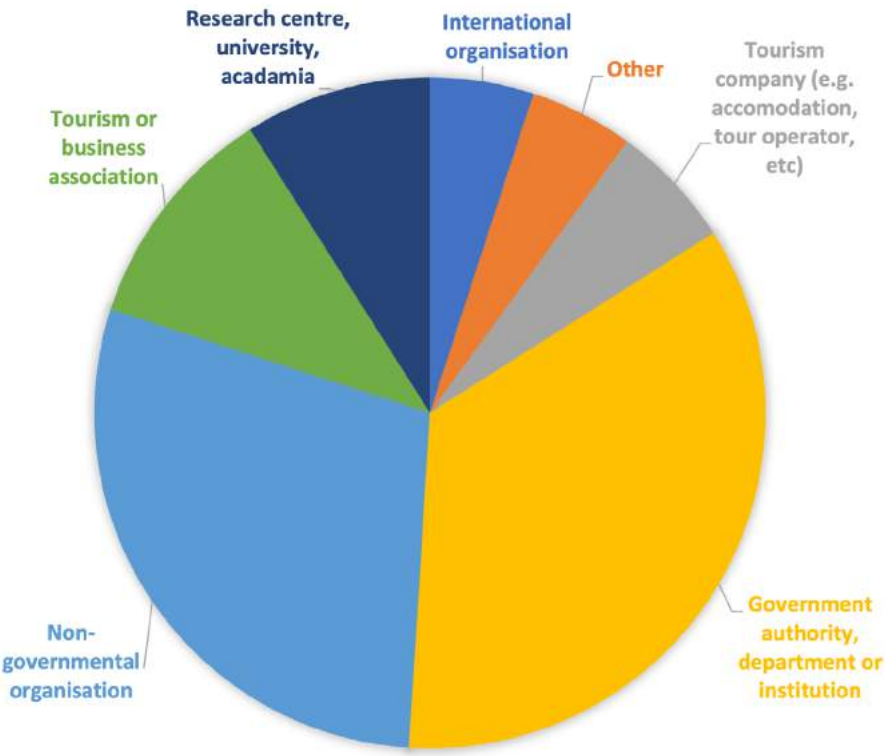
6.1.3. Peer review

The draft report was circulated by UNEP for peer review and received comments from experts and representatives of pan-European countries. The following people provided comments on the guidelines: Xavier Font, University of Surrey; Tim Fairhurst, European Tour Operators Association; and Nicholas Bonvoisin, UN Economic Commission for Europe.

6.1.4. Limitations

In interpreting findings from the survey, it is important to recognize the difficulty in discerning the extent to which environmental impacts observed during the pandemic are directly caused by tourism, by contrast to other sectors or pressures. Furthermore, the rating scales used in the questionnaire were subjective, rather than asking for data. Therefore, the survey data are anecdotal in nature, and based on responses from people who completed the questionnaire. Furthermore, distribution of the questionnaire took place in English and Russian only, not in all working languages of the pan-European region, which will also have impacted on the level of response.

Figure 19: Number of survey respondents from different types of institution



6.2. Additional graphs from survey results

Figure 20: How have the following aspects of the tourism industry changed during the pandemic? (Q5)

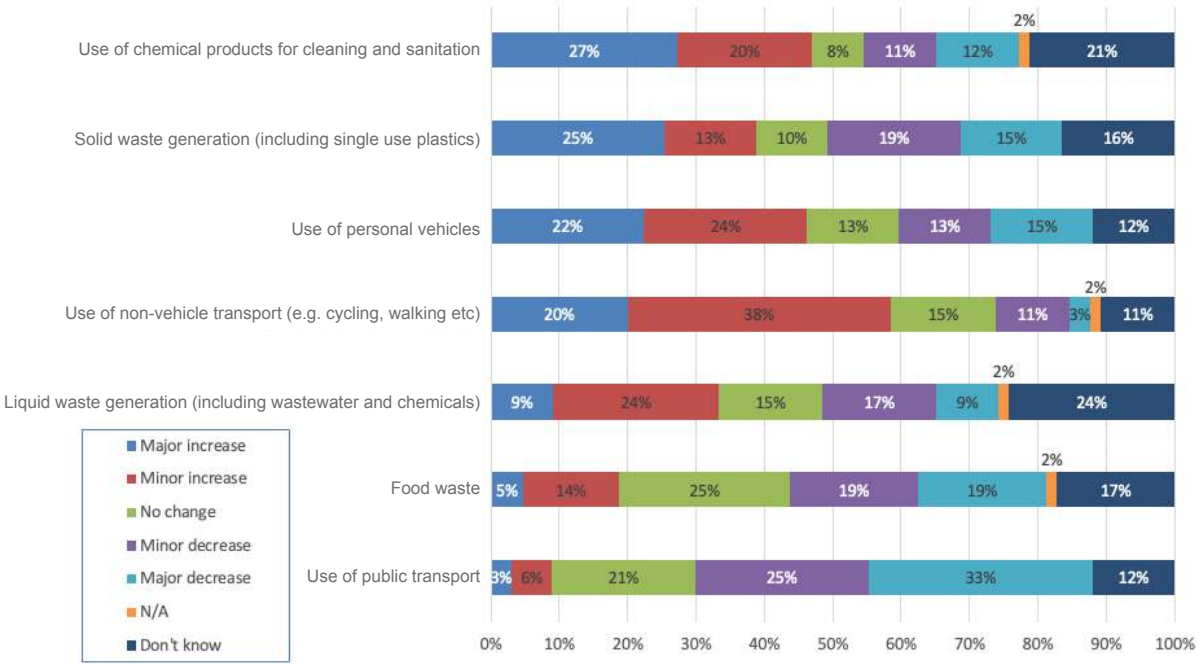


Figure 21: What assistance is required in the country to address the sustainability challenges generated by COVID-19? (1 being most important; 5 being least important) (Q9)

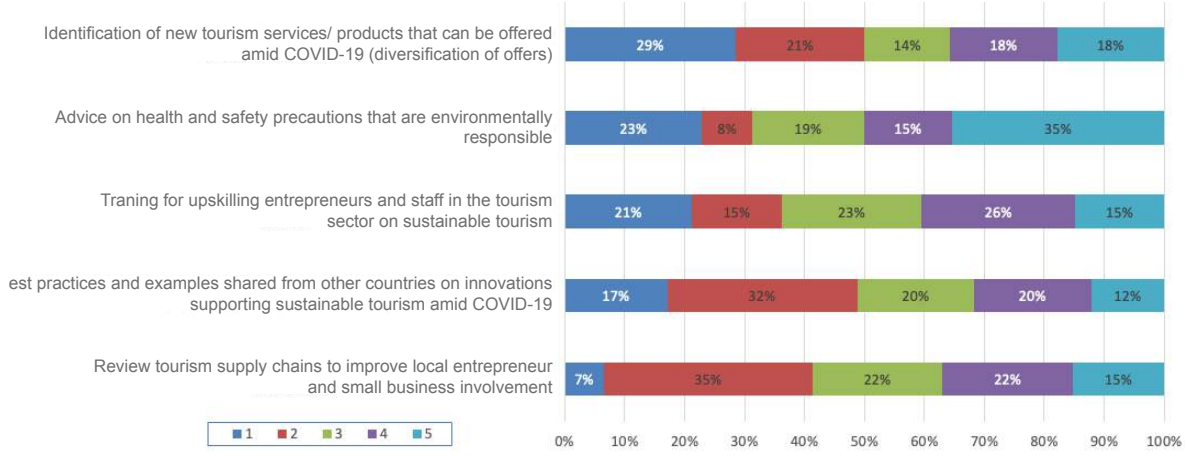


Figure 22: Establishment of new strategies, policies and governance mechanisms are needed (Q11)

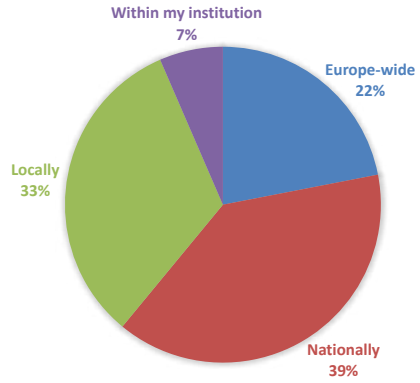


Figure 23: Establishment of new or improved relevant legal and regulatory frameworks are needed (Q12)

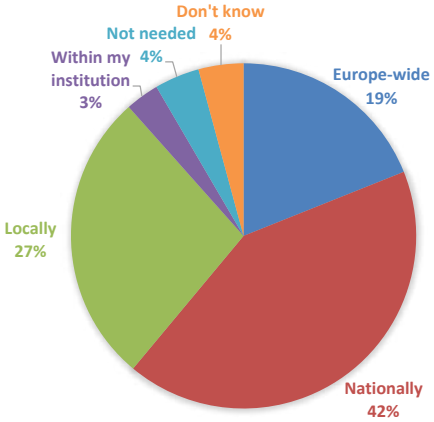


Figure 24: Development of supportive fiscal measures are needed (Q13)

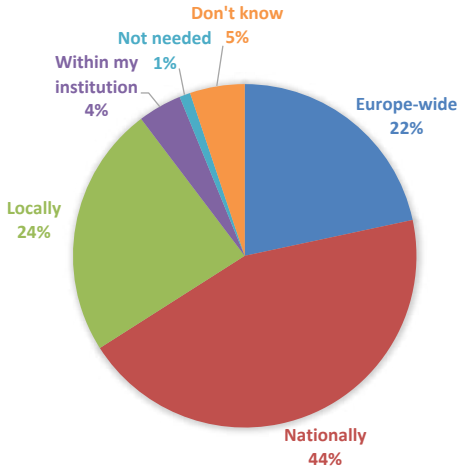
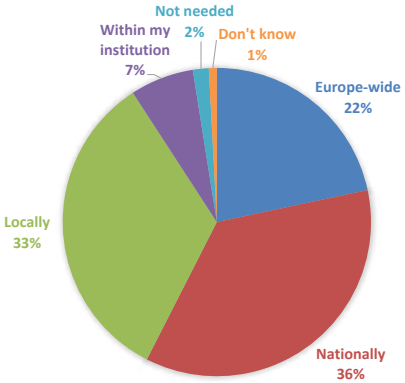


Figure 25: Stimulation of investment in sustainable practices and new business models is needed

Investment in sustainable practices (Q15)



Investment in new business models (Q16)

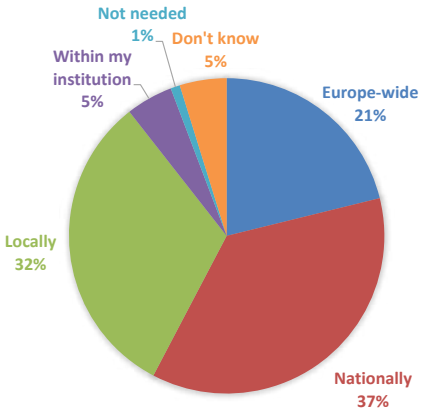


Figure 26: New sustainable infrastructure and retrofitting existing infrastructure is needed (Q14)

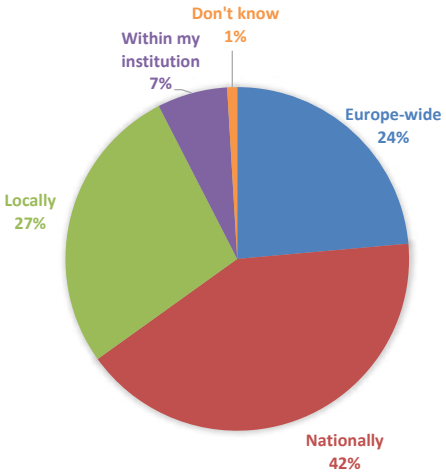


Figure 27: Measurement, reporting and verification systems are needed throughout tourism value chains (Q17)

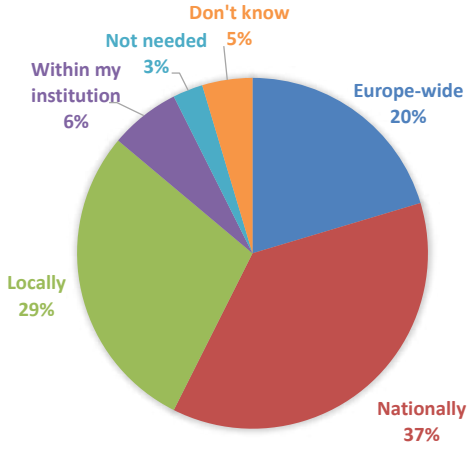


Figure 28: Greater involvement of stakeholders, building partnerships and networks is needed (Q18)

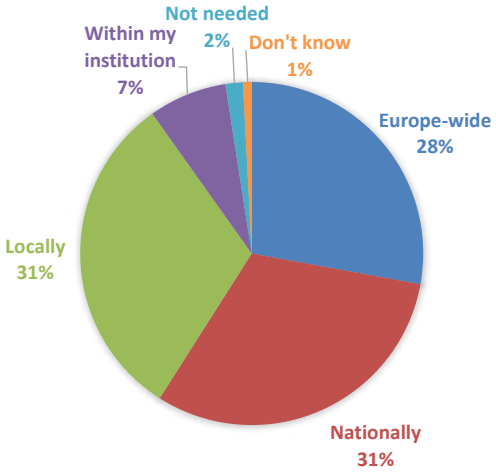


Figure 29: New or stronger digital technologies are needed (Q19)

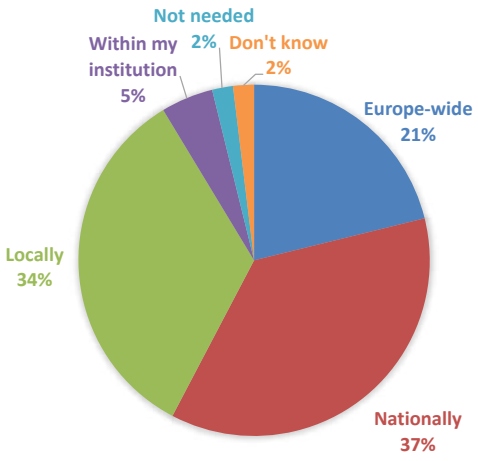


Figure 30: Standards and voluntary certification schemes are needed (Q22)

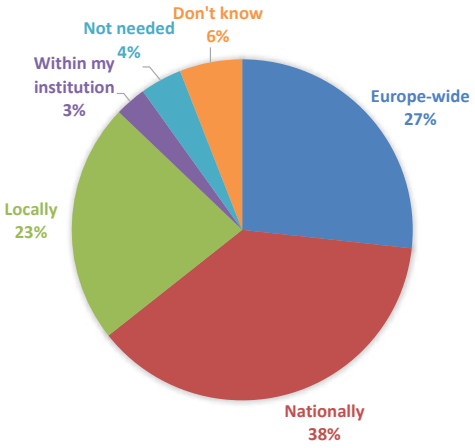


Figure 31: Support for vulnerable groups is needed (Q23)

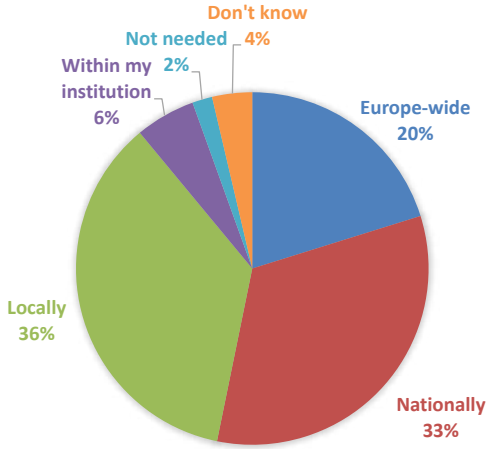


Figure 32: Additional research is needed (Q24)

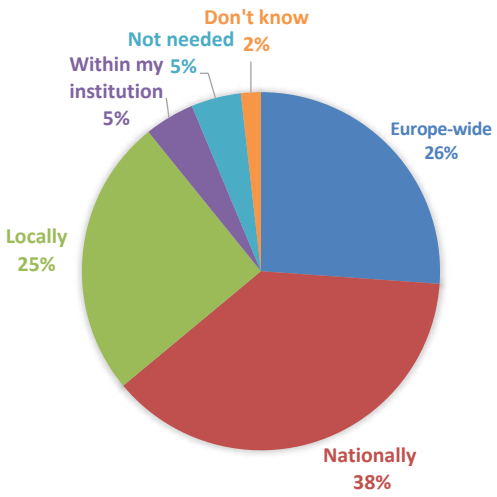
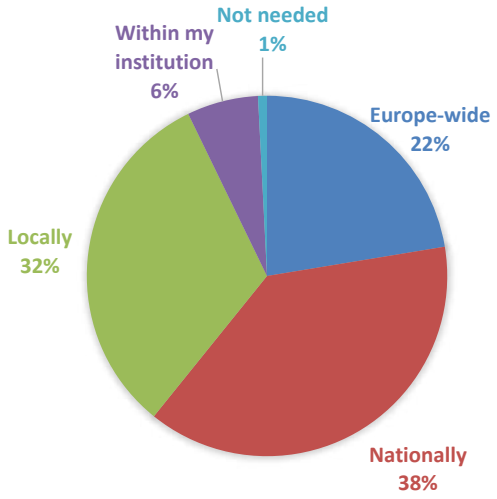
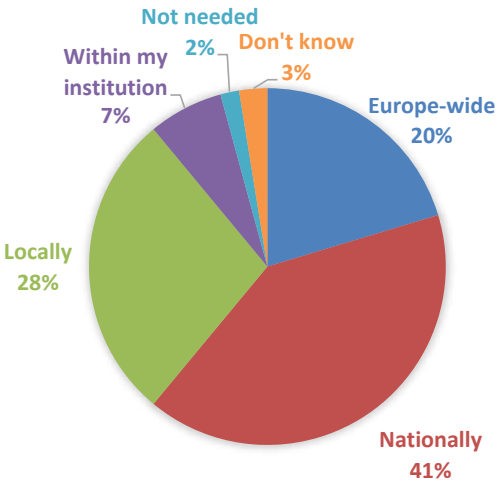


Figure 33: Collaboration and linkages are needed

Cross-sectoral planning and collaboration is needed between different sectors (e.g. tourism, transport, agriculture, fisheries, etc.) (Q20)



Linkages across government is needed (e.g. between different ministries and departments, between national, provincial and local level) (Q21)



6.3. Detailed SDG targets for policy measures

Strengthen policy, regulatory and institutional frameworks to prevent future crises

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Policy and institutional coherence

17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence
17.14 Enhance policy coherence for sustainable development.
17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development

Goal 10. Reduce inequality within and among countries

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

16.6 Develop effective, accountable and transparent institutions at all levels

16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels.16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.

Stimulate supportive fiscal measures and disable harmful ones, including fossil fuel subsidies

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Finance

17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection

17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries

17.3 Mobilize additional financial resources for developing countries from multiple sources.
17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress

17.5 Adopt and implement investment promotion regimes for least developed countries

Stimulate investments and finance for sustainable tourism, including sustainable mobility, local governance, and development of sustainable tourism products

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency, and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.a. Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

Accelerate sustainable infrastructure and transport and retrofit towards net zero and resource efficient operations

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and

transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

Target 11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

Establish monitoring frameworks and systems to measure the sector's general progress towards sustainability, climate, biodiversity and nature conservation

Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products

Goal 12. Ensure sustainable consumption and production patterns

12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Data, monitoring and accountability

17.18 By 2020, enhance capacity-building support to developing countries ... to increase significantly the availability of high-quality, timely and reliable data . . .

17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

Engage and partner with tourism stakeholders, and build their capacity to participate effectively

Goal 13. Take urgent action to combat climate change and its impacts

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

16.6 Develop effective, accountable and transparent institutions at all levels

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Capacity-building

17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation

Multi-stakeholder partnerships

17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

Adopt Digital, circular and technological solutions

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Technology

17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed

17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology CE practices are also strongly linked to SDG 12 (responsible consumption and production) and can have an additional beneficial impact on related goals, such as SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy), and SDG 15 (life on land).[287]

Adopt sustainable procurement and consumer information tools, including sustainability Standards and voluntary certification schemes

Goal 12. Ensure sustainable consumption and production patterns

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products

Support for vulnerable groups, including women, youth, migrants, ethnic and indigenous communities

The declaration for the SDGs pledges that no one will be left behind on the collective journey to end poverty, eradicate hunger and combat inequalities.[288]

Goal 1. End poverty in all its forms everywhere

1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day

1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

Goal 5. Achieve gender equality and empower all women and girls

5.1 End all forms of discrimination against all women and girls everywhere

5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws

5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Invest in Research to support science-based decision making in tourism

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

References

1 Reuters, "Europe", Reuters COVID-19 tracker. Available at https://graphics.reuters.com/world-coronavirus-tracker-and-maps/regions/europe/ (accessed on 11 October 2021) Data does not include 5 Central Asian countries.

2 United Nations World Tourism Organization, "2020: A year in review". Available at https://www.unwto.org/international-tourism-and-covid-19 (accessed on 3 December 2021). Data does not include 5 Central Asian countries

3 Statista, "Total contribution of travel and tourism to employment in Europe from 2012 to 2020 (in million jobs)", Travel, Tourism and Hospitality database. Available at https://www.statista.com/statistics/617583/travel-and-tourism-employment-contribution-europe/ (accessed on 3 December 2021).

4 Anabela Marques Santos and others, *Behavioural Changes in Tourism in Times of Covid-19* (Luxembourg, Publications Office of the European Union, 2020). Available at https://op.europa.eu/en/publication-detail/-/publication/7174abf8-e80a-11ea-ad25-01aa75ed71a1/language-en.

5 European Environment Agency (EEA), "Air pollution goes down as Europe takes hard measures to combat coronavirus", 23 November 2020. Available at https://www.eea.europa.eu/highlights/air-pollution-goes-down-as.

6 Robert McSweeney and Ayesha Tandon, "Global Carbon Project: Coronavirus causes 'record fall' in fossil-fuel emissions in 2020", CarbonBrief, 11 December 2020. Available at https://www.carbonbrief.org/global-carbon-project-coronavirus-causes-record-fall-in-fossil-fuel-emissions-in-2020.

7 International Road Transport Union (IRU), *COVID-19 Impact on the Road Transport Industry: Update November 2020* (Geneva, 2020). Available at https://www.iru.org/resources/iru-library/covid-19-impact-road-transport-industry-update-november-2020; International Air Transport Association (IATA), *Air Passenger Market Analysis, July 2020* (Montreal, 2020). Available at https://www.iata.org/en/iata-repository/publications/economic-reports/air-passenger-monthly-analysis---july-2020/; EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic* (Copenhagen, 2020). Available at https://www.eea.europa.eu/publications/covid-19-and-europe-s/covid-19-and-europes-environment.

8 United Nations Environment Programme (UNEP), *Emissions Gap Report 2020* (Nairobi, 2020). Available at https://www.unep.org/emissions-gap-report-2020.

9 EEA, "Air pollution goes down as Europe takes hard measures to combat coronavirus".

10 EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic*.

11 Jansen Baier, "Studies debunk 'nature is healing' narrative from 2020 lockdowns", Mongabay, 1 September 2021. Available at https://news.mongabay.com/2021/09/studies-debunk-nature-is-healing-narrative-from-2020-lockdowns/.

12 Ante Mandić, "Protected area management effectiveness and COVID-19: The case of Plitvice Lakes National Park, Croatia", *Journal of Outdoor Recreation and Tourism*, in press, corrected proof (June 2021). Available at https://doi.org/10.1016/j.jort.2021.100397.

13 Ashifa Kassam, Lorenzo Tondo and Ana Salvá, "Locals rediscover streets and beaches in resorts absent of foreign tourists", The Guardian, 28 August 2020. Available at https://www.theguardian.com/world/2020/aug/28/europe-holiday-resorts-foreign-tourists-magaluf-staycationers.

14 Patrick Barkham, "'The worst of human nature': UK staycationers' trail of destruction", The Guardian, 14 August 2020. Available at https://www.theguardian.com/environment/2020/aug/14/uk-staycations-countryside-coast-visitors-trail-of-destruction; Will Fyfe, "Covid: 'Dark days' for tourism in Wales, but some 'silver lining'", BBC News, 17 October 2020. Available at https://www.bbc.com/news/uk-wales-54562701; Steven Morris, "'The whole place was a toilet': Dartmoor reels from camping boom", The Guardian, 6 September 2020. Available at https://www.theguardian.com/environment/2020/sep/06/the-whole-place-was-a-toilet-dartmoor-reels-from-covid-camping-boom.

15 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

16 Adapted from UNEP, *Rethinking Single-Use Plastic Products in Travel & Tourism – Impacts, Management Practices and Recommendations* (Nairobi, 2021). Available at https://wedocs.unep.org/bitstream/handle/20.500.11822/36324/RSUP.pdf.

17 EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic*.

18 Ibid.

19 Change reference to: United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

20 Booking.com, *Sustainable Travel Report 2021* (Amsterdam, 2021). Available at https://globalnews.booking.com/bookingcoms-2021-

sustainable-travel-report-affirms-potential-watershed-moment-for-industry-and-consumers/.

21 Ibid.

22 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

23 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

24 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

25 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

26 UNEP, Building Back Better: the Role of Green Fiscal Policies, Policy Brief (2020) available at https://wedocs.unep.org/handle/20.500.11822/32923

27 Xavier Font and others, Tourism transition pathway, October 2021, European Commission.

28 UNEP, *Green Economy: Driving a Green Economy Through Public Finance and Fiscal Policy Reform* (Geneva, 2010). Available at https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Driving_a_GE_through_public_finance_and_fiscal_policy_reform_UNEP.pdf.

29 UNEP, "Understanding circularity". Available at https://buildingcircularity.org (accessed on 6 December 2021).

30 Economic Commission for Europe, Report of the Committee on Environmental Policy on its twenty-sixth session (ECE/CEP/2020/2). Available at https://unece.org/sites/default/files/2021-02/ece.cep_.2020.2.e_advance_unedited.pdf.

31 Ibid.

32 Ibid.

33 See Annex 1 for the method.

34 World Travel & Tourism Council (WTTC), *A Net Zero Roadmap for Travel & Tourism: Proposing a New Target Framework for the Travel & Tourism Sector* (London, 2021). Available at https://wttc.org/Portals/0/Documents/Reports/2021/WTTC_Net_Zero_Roadmap.pdf.

35 UNWTO and UNEP, *Climate Change and Tourism – Responding to Global Challenges*, (Madrid, UNWTO, 2008). Available at https://doi.org/10.18111/9789284412341.

36 Helena Rey and Maëlys Nizan, "Why sustainable tourism matters", Green Industry Platform, 18 October 2019. Available at https://www.greenindustryplatform.org/blog/why-sustainable-tourism-matters.

37 Sustainable Hospitality Alliance, *Global Hotel Decarbonisation Report: November 2017* (2017). Available at https://sustainablehospitalityalliance.org/resource/global-hotel-decarbonisation-report/.

38 One Planet Network, "Glasgow Declaration: Climate Action in tourism". Available at https://www.oneplanetnetwork.org/sustainable-tourism/glasgow-declaration (accessed on 6 December 2021).

39 World Travel & Tourism Council (WTTC), A Net Zero Roadmap for Travel & Tourism: Proposing a New Target Framework for the Travel & Tourism Sector (London, 2021). Available at https://wttc.org/Portals/0/Documents/Reports/2021/WTTC_Net_Zero_Roadmap.pdf.

40 ECE/CEP/2020/2.

41 UNWTO and International Transport Forum, Transport-Related $C0_2$ Emissions of the Tourism Sector: Modelling Results (Madrid, UNWTO, 2019). Available at https://www.e-unwto.org/doi/epdf/10.18111/9789284416660.

42 WTTC, A Net Zero Roadmap for Travel & Tourism: Proposing a New Target Framework for the Travel & Tourism Sector.

43 Based on Lenzen et al. (2018), Skift (2021) World Resource Institute (2018) and adapted by Accenture, WTTC and UNEP (2021); cited in WTTC, A Net Zero Roadmap for Travel & Tourism: Proposing a New Target Framework for the Travel & Tourism Sector.

44 UNEP, "Tourism to tackle plastic pollution with new commitment", 29 January 2020. Available at https://www.unep.org/news-and-stories/story/tourism-tackle-plastic-pollution-new-commitment.

45 Ibid.

46 45 Oakdene Hollins, Responsible Hospitality Partnership and WRAP, Overview of Waste in the UK Hospitality and Food Service Sector (2020). Available at https://wrap.org.uk/sites/default/files/2020-10/WRAP-Overview%20of%20Waste%20in%20the%20UK%20Hospitality%20and%20Food%20Service%20Sector%20FINAL.pdf.

47 46 Sustainable Hospitality Alliance, Global Hotel Decarbonisation Report: November 2017.

48 R.E.A. Almond, M. Grooten and T. Petersen, eds, *Living Planet Report 2020: Bending the Curve of Biodiversity Loss* (Gland, World Wide Fund for Nature (WWF), 2020). Available at https://f.hubspotusercontent20.net/hubfs/4783129/LPR/PDFs/ENGLISH-FULL.pdf; Christopher H Trisos, Cory Merow and Alex L. Pigot, "The projected timing of abrupt ecological disruption from climate change", *Nature*, vol. 580 (April 2020). Available at https://doi.org/10.1038/s41586-020-2189-9.

49 R.E.A. Almond, M. Grooten and T. Petersen, eds, *Living Planet Report 2020: Bending the Curve of*

Biodiversity Loss.

50 Jonathan A. Patz and others, "Unhealthy landscapes: Policy recommendations on land use change and infectious disease emergence", *Environmental Health Perspectives*, vol. 112, No. 10 (April 2004). Available at https://doi.org/10.1289/ehp.6877.

51 Marc Hockings and others, "Editorial essay: COVID-19 and protected and conserved areas", *Parks*, vol. 26, No. 1 (May 2020). Available at https://parksjournal.com/wp-content/uploads/2020/06/Hockings-et-al-10.2305-IUCN.CH_.2020.PARKS-26-1MH.en_-1.pdf.

52 Yu-Fai Leung and others, eds, *Tourism and Visitor Management in Protected Areas: Guidelines for Sustainability*. Best Practice Protected Area Guidelines Series No. 27 (Gland, International Union for Conservation of Nature and Natural Resources (IUCN), 2018). Available at https://portals.iucn.org/library/node/47918.

53 Organisation for Economic Co-operation and Development (OECD), *Managing Tourism Development for Sustainable and Inclusive Recovery*, OECD Tourism Papers 2021/01, (Paris, 2021). Available at http://dx.doi.org/10.1787/b062f603-en.

54 WTTC, "EU 2020 annual research: Key highlights (2019 data)". Available at https://wttc.org/Research/Economic-Impact.

55 Tourism Manifesto, *Call for Action: Accelerate Social and Economic Recovery by Investing in Sustainable Tourism Development* (Brussels, 2021).

56 UNWTO, *International Tourism Highlights, 2020 Edition* (Madrid, 2021).

57 UNWTO, "100% of global destinations now have COVID-19 travel restrictions", 28 April 2020.

58 UNWTO, "COVID-19 response: 96% of global destinations impose travel restrictions", 17 April 2020.

59 UNWTO, "2020: A year in review" (see footnote 2).

60 Ibid.

61 UNWTO, "UNWTO World Tourism Barometer". Available at www.unwto.org/unwto-world-tourism-barometer-data (accessed on 6 December 2021).

62 WTTC, "Recovery scenarios 2020 and economic impact from COVID-19. November 2020 projections". Available at https://wttc.org/Research/Economic- Impact/Recovery-Scenarios.

63 Adapted from OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery*.

64 UNWTO, "2020: A year in review" (see footnote 2).

65 Adapted from OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery*.

66 Ibid.

67 EEA, "COVID-19 and the environment: explore what we know", 11 May 2021. Available at https://www.eea.europa.eu/post-corona-planet/explore.

68 Details of the survey approach and respondents can be found in the Annex, in section 0

69 Wendy Li and others, COVID-19, Environmental Impacts, and Implications for Tourism, Tourism for Development, World Bank (2021). Available at https://www.oneplanetnetwork.org/sites/default/files/from-crm/Environmental%2520impacts%2520of%2520COVID.pdf.

70 Adapted from UNEP, "COVID-19 response toolkit". Available at https://www.oneplanetnetwork.org/sustainable-tourism/covid-19-response-toolkit (accessed on 15 September 2021)

71 EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic* (Copenhagen, 2020).

72 Ante Mandić, "Protected area management effectiveness and COVID-19: The case of Plitvice Lakes National Park, Croatia", *Journal of Outdoor Recreation and Tourism* (see footnote 12).

73 Marta Mills, "Covid-19 impacts on nature conservation in Georgia", Travindy, 9 July 2020.

74 Ashifa Kassam, Lorenzo Tondo and Ana Salvá, "Locals rediscover streets and beaches in resorts absent of foreign tourists", The Guardian, 28 August 2020.

75 See Anna Spenceley and others, "Tourism in protected and conserved areas amid the COVID-19 pandemic", *Parks*, vol. 27 (March 2021).

76 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

77 Dehui (Christina) Geng and others, "Impacts of COVID-19 pandemic on urban park visitation: a global analysis", *Journal of Forestry Research*, vol. 23 (April 2021). Available at https://doi.org/10.1007/s11676-020-01249-w.

78 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

79 Our World in Data, "Parks and outdoors places: How did the number of visitors change since the beginning of the pandemic?" Available at https://ourworldindata.org/grapher/change-visitors-parks-covid.

80 Patrick Barkham, "'The worst of human nature': UK staycationers' trail of destruction"; Will Fyfe, "Covid: 'Dark days' for tourism in Wales, but some 'silver lining'"; Steven Morris, "'The whole place was a toilet': Dartmoor reels from camping boom" (see footnote 14).

81 Sarah Marsh, "Tourist hotspots busy despite coronavirus warnings", The Guardian, 17 May

2020. Available at https://www.theguardian.com/world/2020/may/16/tourist-hotspots-busy-despite-coronavirus-warnings.

82 EEA, "Air pollution goes down as Europe takes hard measures to combat coronavirus", 23 November 2020.

83 Robert McSweeney and Ayesha Tandon, "Global Carbon Project: Coronavirus causes 'record fall' in fossil-fuel emissions in 2020", CarbonBrief, 11 December 2020.

84 IRU, *COVID-19 Impact on the Road Transport Industry: Update November 2020* (Geneva, 2020); IATA, *Air Passenger Market Analysis, July 2020* (Montreal, 2020); EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic* (Copenhagen, 2020).

85 UNEP, *Emissions Gap Report 2020* (Nairobi, 2020).

86 EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic*.

87 EEA, *Air quality in Europe – 2020*, forthcoming report cited in EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic*.

88 UNEP, *Rethinking Single-Use Plastic Products in Travel & Tourism – Impacts, Management Practices and Recommendations* (Nairobi, 2021).

89 EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic*.

90 Ibid.

91 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

92 Hyatt Global Care and Cleanliness Commitment https://www.hyatt.com/info/global-care-and-cleanliness-commitment, (accessed on March 2022)

93 International Medical Travel Journal (IMTJ) Team, "Safety and cleanliness programmes for tourism", Laing Buisson News, May 2020. Available at https://www.laingbuissonnews.com/imtj/news-imtj/safety-and-cleanliness-programmes-for-tourism/.

94 WWF, "WWF and Greenview unveil methodology to measure waste across hotel chains", 2 September 2021. Available at https://www.worldwildlife.org/press-releases/wwf-and-greenview-unveil-first-of-its-kind-methodology-to-measure-waste-across-hotel-chains.

95 International Civil Aviation Organization (ICAO), "Guidance for air travel through the COVID-19 public health crisis", 3rd edition, 10 March 2021. Available at https://www.icao.int/covid/cart/Pages/CART-Take-off.aspx.

96 UNEP, "Use of disposable plastics and community infection of COVID-19 in Asia and the Pacific: Impact on plastics leakage on waterways and rivers", Technical paper, 23 August 2021.

97 Caroline Bremner, "Travel and tourism: Embracing transformation to move beyond coronavirus", video, 13 August 2020. Available at https://hub.wtm.com/travel-and-tourism-embracing-transformation-to-move-beyond-coronavirus/; Caroline Bremner, "Travel 2040: Sustainability and digital transformation as recovery drivers", webinar. Available at https://go.euromonitor.com/wb-video-travel-2020-travel-2040.html (accessed on 5 October 2020); Laura Begley Bloom, "Coronavirus travel: This country wants to charge you $3,000 to visit (including the cost of your potential funeral", Forbes, 24 June 2020. Available at https://www.forbes.com/sites/laurabegleybloom/2020/06/24/coronavirus-travel-cambodia-charging-visit-funeral/#8f37bbc2b7d8.

98 Ibid.

99 Ibid.

100 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

101 Booking.com, Sustainable Travel Report 2021 (Amsterdam, 2021).

102 Publicis Sapient and Skift, "What can COVID-19 teach the airline industry about sustainability", Skift, 13 May 2020.

103 Caroline Bremner, "Travel 2040: Sustainability and digital transformation as recovery drivers".

104 F. Thomas, "Traveling after COVID". Responsible Tourism Advisor (RTA) and Solare (2020). Available at https://sustainability-leaders.com/sustainable-tourism-priorities-2021/ (accessed on 26 October 2020).

105 Personal communication: James Kay, Tripadvisor, email, August 2020.

106 Booking.com, *Sustainable Travel Report 2021* (Amsterdam, 2021).

107 Personal communication: James Kay, Tripadvisor, email, August 2020.

108 Booking.com, *Sustainable Travel Report 2021* (Amsterdam, 2021).

109 UNWTO, "Healing solutions for tourism challenge". Available at https://www.unwto.org/healing-solutions-tourism-challenge?fbclid=IwAR1aMpmmQH7LhX8SLeNPCAdWaZrlWaYSHUC0xISRtlKuUhUVFSAkcEwzM18 (accessed on 6 October 2020).

110 Booking.com, "Booking.com launches first-of-its-kind travel sustainable badge to lead industry in showcasing a wider variety of sustainable stays", 15 November 2021. Available at https://globalnews.booking.com/bookingcom-launches-first-of-its-kind-travel-sustainable-badge/; Julia Eskins, "Google is now helping travellers go green", Bloomberg, 22 September 2021. Available at https://www.bloomberg.com/news/

articles/2021-09-22/google-search-adds-eco-certified-check-for-finding-sustainable-hotels.

111 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

112 Policies are sets of ideas or plans that are used as a basis for making decisions, and on which laws rest. These may include long-term tourism policy documents or white papers. Strategies provide specific and actionable targets to achieve the policy goals and statements. They may include medium-term (e.g. 3–5 year) tourism growth plans. Source: Mike Fabricius, "Guidelines for tourism policy formulation in developing countries", in *Handbook for Sustainable Tourism Practitioners: The Essential Toolbox*, Anna Spenceley, ed. (Cheltenham, Edward Elgar, 2021). Available at https://www.e-elgar.com/shop/gbp/handbook-for-sustainable-tourism-practitioners-9781839100888.html.

113 OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery* (see footnote 52).

114 Ibid.

115 OECD, *Policy Statement: Tourism Policies for Sustainable and Inclusive Growth* (Paris, 3 October 2017). Available at https://www.oecd.org/cfe/tourism/OECD-Policy-Statement-Tourism-Policies-for-Sustainable-and-Inclusive-Growth.pdf.

116 Adapted from survey responses.

117 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

118 Adapted from OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery*.

119 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

120 Destination Occitanie, *Plan d'actions 2021–2022 tourisme durable* [2021–2022 Action Plan for Sustainable Tourism] (Montpellier, 2021). Available at https://pro.tourisme-occitanie.com/uploads/sites/10/2021/09/pa_tourisme_durable_2021b_compressed1.pdf.

121 Innovation Norway, *National Tourism Strategy 2030: Big Impact, Small Footprint* (Oslo, 2021). Available at https://assets.simpleviewcms.com/simpleview/image/upload/v1/clients/norway/Nasjonal_Reiselivsstrategi_engelsk_red_c59e62a4-6fd0-4a2e-aea1-5e1c6586ebc6.pdf.

122 Adapted from OECD, Managing Tourism Development for Sustainable and Inclusive Recovery.

123 Ibid.

124 ABTA – The Travel Association, Tourism for Good: A Roadmap for Rebuilding Travel and Tourism (2020).

125 Euronews, "European Parliament gives final approval to EU's 2050 climate neutrality target", 24 June 2021.

126 Vitali Maksimeniuk and Roza Timakova, "Revisiting the notion of 'sustainable tourism' for legal regulation purposes in Russian Federation and Republic of Belarus", *E3S Web of Conferences*, vol. 208 (November 2020). Available at https://doi.org/10.1051/e3sconf/202020806004.

127 Adapted from OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery*.

128 Fiscal policies refer to the use of government spending and tax policies to influence economic and macroeconomic conditions, including the aggregate demand for goods and services, employment, inflation, and economic growth. Source: Adam Hayes, "Fiscal policy", Investopedia, 21 October 2021. Available at https://www.investopedia.com/terms/f/fiscalpolicy.asp.

129 OECD, "Tourism GDP", OECD data. Available at http://data.oecd.org/industry/tourism-gdp.htm (accessed on 6 December 2021).

130 Adapted from OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018* (Paris, 2018).

131 Oxford Economic Stimulus Observatory, "Draft methodology document v2, 17th November 2020" (UNEP, International Monetary Fund, German Agency for International Cooperation, 2020).

132 Tourism Economics, European Tourism: Trends & Prospects – Quarterly Report (Q3/2021) (Brussels, European Travel Commission, 2021)

133 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

134 Adapted from Brian J. O'Callaghan and Erin Murdock, *Are We Building Back Better? Evidence from 2020 and Pathways to Inclusive Green Recovery Spending* (Geneva, UNEP, 2021). Available at https://www.unep.org/resources/publication/are-we-building-back-better-evidence-2020-and-pathways-inclusive-green.

135 Brian J. O'Callaghan and Erin Murdock, *Are We Building Back Better? Evidence from 2020 and Pathways to Inclusive Green Recovery Spending*.

136 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

137 Ibid.

138 Transport & Environment, "Austrian Airlines' bailout 'climate conditions' explained, 30 June 2020.

139 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

140 Ibid.

141 Ibid.

142 Ibid.

143 Ibid.

144 European Commission, "Questions and answers: Commission presents next steps for €672.5 billion Recovery and Resilience Facility in 2021 Annual Sustainable Growth Strategy", 17 September 2020. Available at https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_1659.

145 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

146 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

147 Ibid.

148 Ibid.

149 Ibid.

150 Adapted from OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery* (see footnote 52).

151 Zia Qureshi, "Could infrastructure investment help tackle climate change?", World Economic Forum, 25 February 2016. Available at https://www.weforum.org/agenda/2016/02/could-infrastructure-investment-help-tackle-climate-change/.

152 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

153 Anna Spenceley, *Tools and Resources for Nature-based Tourism* (Washington, D.C., World Bank Group, 2020). Available at http://hdl.handle.net/10986/34433.

154 Daniel Scott and Stefan Gössling, "Destination net-zero: What does the international energy agency roadmap mean for tourism?", *Journal of Sustainable Tourism*, ahead of print. Available at https://doi.org/10.1080/09669582.2021.1962890 .

155 Sarah Murray, *The Critical Role of Infrastructure for the Sustainable Development Goals* (London, The Economist Intelligence Unit, 2019).

156 Ibid.

157 Ibid.

158 Environmental Defense Fund, *Unlocking Private Capital to Finance Sustainable Infrastructure* (2017). Available at https://cadmusgroup.com/papers-reports/unlocking-private-capital-to-finance-sustainable-infrastructure/

159 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

160 Italy, *Comunicato stampa del Consiglio dei Ministri n. 61* (Rome, 2020). Cited in UNEP, *Emissions Gap Report 2020* (Nairobi, 2020).

161 Brian J. O'Callaghan and Erin Murdock, *Are We Building Back Better? Evidence from 2020 and Pathways to Inclusive Green Recovery Spending*.

162 Factor CO_2, EQO and UNDP, MRV System for GHG Emissions from Tourism Sector in Montenegro: December 2015. Available at https://lowcarbonmne.me/files/slike/MRV_Report.pdf.

163 Kilotons of carbon dioxide.

164 Norway, "CO2 calculation – a part of future market planning?", 19 November 2020. Available at https://www.mynewsdesk.com/visitnorway/pressreleases/co2-calculation-a-part-of-future-market-planning-3052169.

165 European Commission, "European Tourism Indicators System for sustainable destination management" https://ec.europa.eu/growth/sectors/tourism/offer/sustainable/indicators_en

166 https://www.unwto.org/standards/studies_experiences

167 http://www.turismodeportugal.pt/en/Turismo_Portugal/Estrategia/Estrategia_2027/Pages/default.aspx

168 https://librairie.ademe.fr/consommer-autrement/4096-projet-de-pre-deploiement-de-l-affichage-environnemental-des-hotels.html

169 https://www.alpconv.org/fr/home/

170 https://pro.tourisme-occitanie.com/actions-du-crtl/strategies/plan-d-actions-2021/

171 Carolin Lusby, "Consultation approaches in sustainable tourism", in *Handbook for Sustainable Tourism Practitioners: The Essential Toolbox*, Anna Spenceley, ed. (Cheltenham, Edward Elgar, 2021).

172 Lisa C. Chase, Benoni Amsden and Rhonda G. Philipps, "Stakeholder engagement in tourism planning and development", in *Handbook of Tourism and Quality-of-Life Research*, Muzaffer Uysal, Richard Perdue and M. Joseph Sirgy, eds. (Dordrecht, Springer, 2012).

173 Carolin Lusby, "Consultation approaches in sustainable tourism".

174 See Anna Spenceley, Susan Snyman and Paul F.J. Eagles, *Guidelines for Tourism Partnerships and Concessions for Protected Areas: Generating Sustainable Revenues for Conservation and Development*, Report to the Secretariat of the Convention on Biological Diversity and IUCN (Convention on Biological Diversity, 2017).

175 United Nations Environment Programme (2022). Transforming tourism in the pan-European region

for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

176 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

177 Xavier Font and others, Tourism transition pathway, October 2021, European Commission

178 Anna Spenceley and others, *An Introduction to Tourism Concessioning: 14 Characteristics of Successful Programs* (Washington, D.C., World Bank Group, 2016). Available at http://eeinwisconsin.org/Files/eewi/2016/105316-WP-PUBLIC-Tourism-Toolkit-19-4-16.pdf.

179 Louise Twining-Ward and others, "Tourism Theory of Change: a tool for planners and developers", in *Handbook for Sustainable Tourism Practitioners: The Essential Toolbox*, Anna Spenceley, ed. (Cheltenham, Edward Elgar, 2021).

180 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

181 Also see Anna Spenceley, *Virtual Protected Area Experiences in Africa: Status and Potential for Post-COVID-19 Resilience* (European Union, 2021).

182 See EUROPARC Federation, "Capacity-building in Europe". Available at https://www.europarc.org/tools-and-training/capacity-building/ (accessed on 6 December 2021).

183 Future of Tourism, "Guiding Principles". Available at https://www.futureoftourism.org/guiding-principles (accessed on 8 December 2021); Future of Tourism, "The future of tourism is at stake". Available at https://www.futureoftourism.org (accessed on 8 December 2021).

184 See https://www.tourismdeclares.com.

185 See https://www.oneplanetnetwork.org/sites/default/files/2021-11/GlasgowDeclaration_EN_0.pdf.

186 UNEP, *Consumer Information Tools and Climate Change: Facilitating Low-Carbon Choices in Tourism, Buildings and Food Systems – Guidance for Policy Makers and Business Leaders* (2019). Available at https://www.oneplanetnetwork.org/sites/default/files/from-crm/consumer_information_tools_and_climate_change.pdf.

187 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

188 Association of Cities and Regions for Sustainable Resource Management, "Tourism SMEs in four EU countries called to benefit from a new financial and capacity-building support scheme for winning back their markets", 24 June 2021. Available at https://acrplus.org/en/online-resources/media/press-releases/2985-tourism-smes-in-four-eu-countries-called-to-benefit-from-a-new-financial-and-capacity-building-support-scheme-for-winning-back-their-markets.

189 OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery* (see footnote 52).

190 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

191 UNWTO, *Recommendations for the Tourism Sector to Continue Taking Action on Plastic Pollution During COVID-19 Recovery* (2020).

192 Travalyst, *The Re-emergence of Travel: A Travalyst View* (2021). Available at https://travalyst.org/the-re-emergence-of-travel/.

193 Daniela Beck, *Inventory of Policies Related to Sustainable Tourism* (Interreg, Danube Transnational Programme, 2018).

194 UNEP, Rethinking Single-Use Plastic Products in Travel & Tourism – Impacts, Management Practices and Recommendations (Nairobi, 2021).

195 Eivind Kristoffersen and others, "The smart circular economy: A digital-enabled circular strategies framework for manufacturing companies", *Journal of Business Research*, vol. 120 (November 2020). Available at https://doi.org/10.1016/j.jbusres.2020.07.044.

196 Ellen MacArthur Foundation, *Towards the Circular Economy Vol. 1: An Economic and Business Rationale for an Accelerated Transition* (2013). Available at https://ellenmacarthurfoundation.org/towards-the-circular-economy-vol-1-an-economic-and-business-rationale-for-an.

197 Jos Van der Sterren, "Sustainable supply chains in travel and tourism: towards a circular approach", in *Handbook for Sustainable Tourism Practitioners: The Essential Toolbox*, Anna Spenceley, ed. (Cheltenham, Edward Elgar, 2021).

198 UNEP, "Understanding circularity". Available at https://buildingcircularity.org (accessed on 6 December 2021).

199 Stefán Einarsson and Fabrice Sorin, *Circular Economy in Travel and Tourism: A Conceptual Framework for a Sustainable, Resilient and Future Proof Industry Transition* (CE360Alliance, 2020).

200 Eivind Kristoffersen and others, "The smart circular economy: A digital-enabled circular strategies framework for manufacturing companies".

201 A. Anderson, cited in Anon, "World Circular Economy Forum" (hosted virtually by Canada), 13–15 September 2021.

202 Anna Spenceley, *Virtual Protected Area Experiences in Africa: Status and Potential for Post-COVID-19 Resilience*.

203 Tom van Nuenen and Caroline Scarles, "Advancements in technology and digital media in tourism", *Tourist Studies*, vol. 21, No. 1 (March 2021). Available at https://doi.

org/10.1177/1468797621990410; Anna Spenceley, *Virtual Protected Area Experiences in Africa: Status and Potential for Post-COVID-19 Resilience*.

204 Anna Spenceley, *Virtual Protected Area Experiences in Africa: Status and Potential for Post-COVID-19 Resilience*.

205 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in *OECD Tourism Trends and Policies 2018*.

206 Travalyst, *The Re-emergence of Travel: A Travalyst View*.

207 Tom van Nuenen and Caroline Scarles, "Advancements in technology and digital media in tourism"; Anna Spenceley, *Virtual Protected Area Experiences in Africa: Status and Potential for Post-COVID-19 Resilience*; Anna Spenceley, *The Future of Nature-based Tourism: Impacts of COVID-19 and Paths to Sustainability* (Gland, Luc Hoffmann Institute, 2021). Available at https://luchoffmanninstitute.org/future-nature-based-tourism-report/; Conde Nast Traveller, "'Dream now, travel later', is Switzerland's message for you", video, 7 May 2020. Available at https://www.cntraveller.in/story/dream-now-travel-later-switzerlands-message/; Tourism Ireland, "Tourism Ireland invites prospective visitors to dream of future adventures on the island of Ireland", 1 May 2020. Available at https://www.tourismireland.com/Press-Releases/2020/May/Tourism-Ireland-invites-prospective-visitors-to-dr.

208 See UNESCO, "Exploring World Heritage from home with UNESCO". Available at https://en.unesco.org/covid19/cultureresponse/exploring-world-heritage-from-home-with-unesco (accessed on 22 November 2021).

209 Tom van Nuenen and Caroline Scarles, "Advancements in technology and digital media in tourism"

210 Booking.com, "Booking.com launches first-of-its-kind travel sustainable badge to lead industry in showcasing a wider variety of sustainable stays", 15 November 2021; Julia Eskins, "Google is now helping travellers go green", Bloomberg, 22 September 2021.

211 Tom van Nuenen and Caroline Scarles, "Advancements in technology and digital media in tourism".

212 Julia Buckley, "Vienna is urging tourists to ditch Instagram for a hashtag-free visit in a new tourism campaign", inews, 9 October 2020. Available at https://inews.co.uk/inews-lifestyle/travel/vienna-ins-tagram-holiday-tourism-campaign-hashtag-free-unhashtag-222507; L.A. Siegel and others, "Does social media help or hurt destinations? A qualitative case study", *E-Review of Tourism Research*, vol. 17, No. 4, cited in Tom van Nuenen and Caroline Scarles, "Advancements in technology and digital media in tourism".

213 Tom van Nuenen and Caroline Scarles, "Advancements in technology and digital media in tourism".

214 UNECE, *Sustainable Procurement Recommendation No. 43: Minimal Common Sustainability Criteria for Sustainable Procurement Processes to Select Micro, Small and Medium sized Enterprise Suppliers* (Geneva, 2019). Available at https://unece.org/DAM/trade/Publications/ECE_TRADE_451E_CF-Rec43.pdf.

215 Adapted from *GSTC Accreditation Manual: Requirements for GSTC Accreditation of Sustainable Tourism Certification Programmes, Version 2, 28 October 2011*.

216 Randy Durband, "Establishing sustainability standards in tourism", in *Handbook for Sustainable Tourism Practitioners: The Essential Toolbox*, Anna Spenceley, ed. (Cheltenham, Edward Elgar, 2021).

217 GSTC, "GSTC for certification schemes and standard owners". Available at https://www.gstcouncil.org/for-certification-bodies/ (accessed on 8 December 2021).

218 Claire Thiebault, *Transforming Tourism Through Sustainable Procurement* (Paris, UNEP, 2019). Available at https://www.oneplanetnetwork.org/sites/default/files/transforming_tourism_through_sustainable_procurement_2019.pdf.

219 UNEP, *Consumer Information Tools and Climate Change: Facilitating Low-Carbon Choices in Tourism, Buildings and Food Systems – Guidance for Policy Makers and Business Leaders* (2019).

220 GSTC, "GSTC industry criteria for hotels". Available at https://www.gstcouncil.org/gstc-criteria/gstc-industry-criteria-for-hotels/ (accessed on 8 December 2021).

221 Adapted from OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery* (see footnote 52). Also see https://www.myswitzerland.com/en/planning/about-switzerland/sustainability/swisstainable-service-providers/.

222 UNEP, *Consumer Information Tools and Climate Change: Facilitating Low-Carbon Choices in Tourism, Buildings and Food Systems*.

223 Claire Thiebault, *Transforming Tourism Through Sustainable Procurement*.

224 Booking.com, *Sustainable Travel Report 2021* (Amsterdam, 2021).

225 Booking.com, "Booking.com's 2021 Sustainable Travel Report affirms potential watershed moment for industry and consumers", 3 June 2021.

226 Booking.com, *Sustainable Travel Report 2021* (Amsterdam, 2021).

227 European Union, *Inclusion of Vulnerable Groups*. Available at https://ec.europa.eu/employment_social/2010againstpoverty/extranet/vulnerable_groups_en.pdf (accessed on 9 December 2021).

228 UNWTO, "COVID-19: Sociocultural impact: COVID-19 and vulnerable groups". Available at https://www.unwto.org/covid-19-inclusive-response-vulnerable-groups (accessed on 6 December 2021).

229 Ibid.

230 Hannah Reid, "Why listen to and support the most vulnerable?", International Institute for Environment and Development, 2 October 2015. Available at https://www.iied.org/why-listen-support-most-vulnerable.

231 UNWTO, *Inclusive Recovery Guide – Sociocultural Impacts of Covid-19*, Issue 3: Women in tourism (Madrid, 2021). Available at https://doi.org/10.18111/9789284422616.

232 Ibid.

233 UNWTO, *Inclusive Recovery Guide – Sociocultural Impacts of Covid-19*, Issue 1: Persons with disabilities, (Madrid, 2020). Available at https://www.e-unwto.org/doi/epdf/10.18111/9789284422296.

234 UNWTO, Inclusive Recovery Guide – Sociocultural Impacts of Covid-19, Issue 3: Women in tourism.

235 UNWTO, *Inclusive Recovery Guide – Sociocultural Impacts of Covid-19*, Issue 1: Persons with disabilities.

236 J.W. Creswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 3rd ed. (Upper Saddle River, N.J., Pearson, 2008).

237 Andrei P. Kirilenko and Svetlana Stepchenkova, "Tourism research from its inception to present day: Subject area, geography, and gender distributions", *PLoS ONE*, vol. 13, No. 11 (November 2018).

238 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

239 See Australia, Australian Trade and Investment Commission, "Latest research: About tourism research". Available at https://www.austrade.gov.au/australian/tourism/news-research-and-publications/research (accessed on 8 December 2021).

240 Adapted from Queensland Government, "The role of research in bringing back tourism", 9 June 2020. Available at https://www.dtis.qld.gov.au/news/our-stories/2020/june/the-role-of-research-in-bringing-back-tourism.

241 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

242 James McGinlay and others, "The Impact of COVID-19 on the management of European protected areas and policy implications", *Forests*, vol.11, No. 11 (November 2020). Available at https://doi.org/10.3390/f11111214.

243 James McGinlay and others, "The Impact of COVID-19 on the management of European protected areas and policy implications", *Forests*, vol.11, No. 11 (November 2020). Available at https://doi.org/10.3390/f11111214.

244 Murude Ertac and Erel Cankan, "Creating a sustainable tourism model in North Cyprus during the uncertainty of the Covid-19 pandemic", *Worldwide Hospitality and Tourism Themes*, vol. 13, No. 4 (May 2021). Available at https://doi.org/10.1108/WHATT-02-2021-0033.

245 Peter Nientied and Dritan Shutina, *Tourism in Transition, the Post COVID-19 Aftermath in the Western Balkans* Co-PLAN Resilience Series, 2 (2020). Available at http://www.co-plan.org/wp-content/uploads/2020/05/Tourism-in-Transition-the-post-COVID-19-Aftermath-in-the-Western-Balkans.pdf.

246 EEA, "Air pollution goes down as Europe takes hard measures to combat coronavirus", 23 November 2020.

247 Robert McSweeney and Ayesha Tandon, "Global Carbon Project: Coronavirus causes 'record fall' in fossil-fuel emissions in 2020", CarbonBrief, 11 December 2020.

248 IRU, *COVID-19 Impact on the Road Transport Industry: Update November 2020* (Geneva, 2020); IATA, *Air Passenger Market Analysis, July 2020* (Montreal, 2020); EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic* (Copenhagen, 2020).

249 United Nations Environment Programme, *Emissions Gap Report 2020* (Nairobi, 2020).

250 EEA, "Air pollution goes down as Europe takes hard measures to combat coronavirus".

251 EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic* (Copenhagen, 2020).

252 Ante Mandić, "Protected area management effectiveness and COVID-19: The case of Plitvice Lakes National Park, Croatia", *Journal of Outdoor Recreation and Tourism* (see footnote 12).

253 Ashifa Kassam, Lorenzo Tondo and Ana Salvá, "Locals rediscover streets and beaches in resorts absent of foreign tourists", The Guardian, 28 August 2020.

254 Patrick Barkham, "'The worst of human nature': UK staycationers' trail of destruction"; Will Fyfe, "Covid: 'Dark days' for tourism in Wales, but some 'silver lining'"; Steven Morris, "'The whole place was a toilet': Dartmoor reels from camping boom" (see footnote 14).

255 United Nations Environment Programme (2022). Transforming tourism in the pan-European region

for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

256 UNEP, *Rethinking Single-Use Plastic Products in Travel & Tourism – Impacts, Management Practices and Recommendations* (Nairobi, 2021).

257 EEA, *COVID-19 and Europe's Environment: Impacts of a Global Pandemic*.

258 Ibid.

259 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

260 Booking.com, *Sustainable Travel Report 2021* (Amsterdam, 2021).

261 Booking.com, *Sustainable Travel Report 2021* (Amsterdam, 2021).

262 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

263 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

264 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

265 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

266 UNEP, Building Back Better: the Role of Green Fiscal Policies, Policy Brief (2020) available at https://wedocs.unep.org/handle/20.500.11822/32923

267 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

268 OECD, *Managing Tourism Development for Sustainable and Inclusive Recovery* (see footnote 52).

269 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

270 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

271 OECD, "Chapter 3: Towards investment and financing for sustainable tourism" in OECD Tourism Trends and Policies 2018.

272 Ibid.

273 Ibid.

274 Ibid.

275 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

276 Anna Spenceley, *Virtual Protected Area Experiences in Africa: Status and Potential for Post-COVID-19 Resilience*.

277 Ibid.

278 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

279 ECE/CEP/2020/2, pp. 4-7

280 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

281 Xavier Font and others, Tourism transition pathway, October 2021, European Commission.

282 United Nations Environment Programme (2022). Transforming tourism in the pan-European region for a resilient and sustainable post-COVID world. Paris. Annex A. Survey respondents.

283 Xavier Font and others, Tourism transition pathway, October 2021, European Commission.

284 Ibid.

285 ECE/CEP/2020/2.

286 See Anna Spenceley, "COVID-19 and sustainable tourism: Information sources and links", 2 April 2020. Available at https://annaspenceley.wordpress.com/2020/04/02/covid-19-and-sustainable-tourism/.

287 Tom van Nuenen and Caroline Scarles, "Advancements in technology and digital media in tourism" (see footnote 201).

288 Hannah Reid, "Why listen to and support the most vulnerable?", International Institute for Environment and Development, 2 October 2015.

289 Ibid.

290 Ibid.

291 EU4Climate, "Measurement, reporting and verification".

292 Adapted from International Finance Corporation (IFC), *Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets* (Washington, D.C., 2017), pp. 13, Available at https://www.ifc.org/wps/wcm/connect/affbc005-2569-4e58-9962-280c483baa12/IFC_StakeholderEngagement.pdf?MOD=AJPERES&CVID=jkD13-p.

293 Randy Durband, "Establishing sustainability standards in tourism", in *Handbook for Sustainable Tourism Practitioners: The Essential Toolbox*.

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