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**REPORT ON THE IDENTIFICATION OF
KEY CHALLENGES & BEST PRACTICES**

SUSTAINABLE EU TOURISM

Shaping the Tourism of Tomorrow



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Together with:



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1 Introduction

The main objective of Task 2.2 consists of two sub-tasks. The first is to identify, collect and assess the **key challenges** faced by urban, rural, mountain, coastal and island destinations. The second is to identify **best practice destinations** that have already implemented successful strategies and measures to mitigate or prevent risks and negative impacts of tourism, and to describe and assess these measures and evaluate their applicability in similar destinations. The main **outputs of Task 2.2** are accordingly the identification of **31 key challenges** and their main contributing factors and stakeholders affected, as well as **50 case studies** presenting best practice solutions in different spatial contexts (from urban to rural and from coastal to mountainous), including a set of replicable solutions and recommendations on how to successfully respond to different types of tourism-related challenges. The 50 selected best practice cases are subjected to a deeper analysis and subsequently analysed using a **comparative case study approach** to examine similarities, differences and patterns between cases with a common focus. The research approach consisted of the following three steps:

1. **Scoping** (Activity 2.2.1): Based on the extensive review of secondary sources, the first step was to identify and briefly describe challenges and potential best practice cases.
2. **Selection** (Activity 2.2.2): Based on the diagnostic model presented in Deliverable 2.1 and the survey results in Work Package 1, 31 key challenges were identified and 50 best practice cases on the most important challenges were selected using the selection criteria defined in the report D2.1.
3. **Additional data collection and comparative analysis** (Activity 2.2.3): Additional data was collected through desk research and interviews to supplement the knowledge of selected cases. The cases were analysed, including a cross-comparison of the cases.

This document consists of **four parts**: First, the methodological approaches for identifying challenges and best practices as well as for developing the factsheets are presented (Chapter 2). Based on a comprehensive literature review, the main challenges were identified and described, including a summary of the solution approaches identified in the best practice analysis (Chapter 3). Chapter 4 provides a comparative analysis of the 50 best practice case studies from across Europe, including success factors and obstacles encountered during implementation. Experiences and recommendations from the perspective of the destinations round off this chapter. The summary and final conclusions are presented in chapter 5. Finally, the 50 best practice factsheets are presented in a structured and printable format in the Appendix.

2 Methodological approach

2.1 Methodology for identifying the challenges

The research design is based on a mixed-methods approach that includes both quantitative and qualitative research methods. This chapter provides a detailed overview of the methodological approach applied.

The identification and assessment of the key challenges refers to the diagnostic model, that has been developed within deliverable 2.1 (D2.1) and with close reference to the impact chain mechanism described by the Driving Forces – Pressures – State – Impacts – Responses (DPSIR) framework originally used by the European Environment Agency for the development of environmental indicators (European Environment Agency, 1999). This diagnostic model for the recognition of key challenges comprises the following impact chain elements: driving forces, pressures and potential risks, state, impacts of tourism, challenges and opportunities and solution approaches (for more details, please see deliverable report 2.1). With regard to the impact chain mechanism, the challenges can be derived from basically all of the chain elements, thus forming the “contributing factors” of the challenges. Following the systematic of the diagnostic model, the analysis and assessment grid, which has been elaborated as a tool for the identification and collection of key challenges in D2.1, has now been applied.

In the scope of activity 2.2.1 (Scoping), further desk research and literature review have been conducted to get an overview of possible challenges, which tourism destinations nowadays have to face and which they need to address for building resilience and sustainable development. The literature review started with the preliminary literature list that has already been elaborated and provided in the context of the project proposal. This list has been further enhanced and expanded in the course of the implementation of Work Package 2.2. The final list of

the literature collected is attached in Annex 1. It includes appropriate digital/internet sources, academic papers, “grey” literature, studies, as well as strategic policy documents, repositories and sustainable/smart tourism promotion actions, industry reports, practitioner-generated and institutional documents, collections of use cases or good practices and other non-academic literature.

Following the systematic of the diagnostic model for the identification of key challenges developed in D2.1 which comprises the impact chain elements Driving Forces, Pressures and risks, State, and Impacts for the recognition of the key challenges (see Figure 1, Report on D2.1), an analysis and assessment grid has been elaborated as a tool for the identification and collection of key challenges (Figure 1).

Figure 1: Assessment grid for the collection of key challenges

Category (based on 4 sustainability dimensions)	Key challenges and opportunities	Driving forces	Pressures and risks	Destination characteristics (State) / Key facts tourism situation	Impacts (positive/negative)	Solution Approaches (Measures taken to improve tourism sustainability and implementation of risk management Conducting risk and vulnerability assessment Assessing climate change risks and	Type of destination				Main stakeholders affected			
							Urban	Rural	Coastal	Island	Mountain	visitors	local industry players	global tourist players
Environmental dimension	Outdoor activities no longer possible in some regions Decline in attractiveness and quality of experience Decline in demand >	Climate change issues: - Raising temperatures - Decreasing precipitation - Increasing of extreme weather events	Heat stress Droughts and water scarcity Changes in demand Health impairments Changes of ecosystems and re-vegetation of	High dependency on specific, climate sensitive tourism segments, e.g. water-based tourism or other nature-based activities Dependency of destination on natural resources								X	X	X

To identify and analyse the key challenges and their determinants, all relevant information was extracted from the literature sources and collected in the assessment grid, thus creating a comprehensive scientific knowledge base for the selection of challenges. Identifying the challenges using literature sources proved to be an iterative process that fed back into the results and information from the best practice mapping and the DMO survey. (Scientific) databases such as google-scholar and research gate were primarily used for the literature search. For each of these databases, at least the abstract and introduction and, if necessary, the article was reviewed to determine whether it was relevant for further evaluation.

The key challenges were extracted from a list of 50 challenges in total collected from literature, case studies and survey to Destination Management Organisations (DMO) across Europe. The decisive factor for the identification as a key challenge was the frequency with which the respective challenges were mentioned, whereby the 30 most frequently mentioned challenges were included in the set of key challenges.

Based on the literature review, the preliminary list of challenges provided in the proposal and in D2.1 has been revised and restructured. In contrast to what was suggested in the proposal, the key challenges are clustered along the four sustainability dimensions, thus the economic, ecological, socio-cultural and institutional dimension, the latter referring to the destination’s governance. This categorisation seems to be the most appropriate and practicable.

An overview of the key challenges selected relating them to their contributing factors can be found in Annex 2.

2.2 Methodology for identifying best practices and developing the factsheets

The creation of the 50 best practice factsheets, from initial research to suitable best practices to the finished factsheets, was characterized by the following work steps and milestones:

- 1) **Scoping:** Potential best practice cases were recorded and documented through a comprehensive analysis of resources based on the criteria laid down in the diagnostic model (*mid-February to beginning of May 2024*). As a result, 272 best practice cases were documented and briefly described in the best practice inventory (*beginning of May 2024*).
- 2) **Selection:** All cases in the inventory were assessed based on the selection criteria defined in the diagnostic model. The suitable cases from the inventory were supplemented by suitable cases from the survey (*beginning of May to mid-June 2024*). As a result, 114 best practice cases were recorded in a preliminary best practice set and ranked according to their degree of suitability. From these, 50 cases were selected that cover all major challenge categories and achieve a balanced representation of the five destination types and the geographical distribution within Europe as well as a variety of solution approaches (*mid-June 2024*).
- 3) **Analysis and additional data collection:** The information documented in the secondary sources of the selected cases was analysed and supplemented with information from online interviews with representatives of the destinations (*mid-June – mid-August 2024*).
- 4) **Organisation and creation of factsheets:** The collected data formed the basis for the creation of the factsheets, which were then subjected to a multiple review process (*mid-June – mid-August 2024*).

2.2.1 Desktop research and identification of potential best practice cases (Activity 2.2.1)

Based on the diagnostic model developed in D2.1, extensive desk research was carried out to gain a comprehensive overview of possible case studies. In addition to literature resources, case studies available on official websites of tourism and/or city/destination coalitions and organisations that encourage the exchange of best practices among cities and regions in the context of sustainable tourism and resilience of EU destinations were also used (for ex. NECStouR, GSTC, European Destination of Excellence (EDEN) initiative, the European Capital of Smart Tourism competition, the project on unbalanced tourism, the Smart tourism destination project, the UNWTO best tourism villages, etc.). An **overview of the best practice sources** used can be found in Annex 3. The desk research lasted from *mid-February to early May 2024* and the results were recorded in an **inventory for best practices** of 272 case studies.

All relevant information of the 272 cases was extracted from the sources and collected in the assessment grid, thus creating a comprehensive overview and knowledge base for the selection of best practice cases. Table 1 shows the categories of the assessment grid for the inventory of the case studies, which correspond to those of the main challenges.

Table 1: Assessment grid for the case study inventory

Destination characteristics					Key challenges in the destination	Results	Selection criteria for best practices			Sources	
Destination	NUTS Level (2/3)	Country	Region	Type of destination	Key facts tourism situation and development (case description)	Description of key challenges	Description of solution approaches (measures taken)	Transferability to other destinations	Level of innovation (in terms of technology & data)	Case Study available (data availability)	General sources and further information
				Urban/ Rural/ Coastal/ Island/ Mountain				0=fail, ... 5=excellent	0=fail, ... 5=excellent	0=fail, ... 5=excellent	

2.2.2 Selection of 50 suitable best practice case studies (Activity 2.2.2)

Based on the selection criteria described in D2.1, 50 cases that covered the identified challenges were selected based on a comprehensive set of criteria. The selection was carried out in an iterative process simultaneously with the analysis and additional data collection for best practice cases (see 2.1.3).

The *comprehensive set of criteria* for the selection of the best practice cases to be further analysed is composed of one obligatory criterium (criteria that must be fulfilled), a composite score and a balanced representation of specific criteria (see Table 2). The most important criterium was the existence of successful solution approaches followed by the replicability of the solution approaches, data availability and level of innovation which will be integrated as important aspects to be considered. In addition, it was sought to achieve a balanced representation of the five destination types and geographical distribution within Europe and the diversity of key challenges and solution approaches.

Table 2: Selection criteria for best practice case studies

Obligatory Criteria	Criteria for the composite score *)	Criteria which need to be balanced
Existence of successful solution approaches	Replicability potential 0.40 Data availability 0.40 Level of innovation (in terms of technology & data) 0.20	Destination type Geographical distribution within Europe (by country/if necessary, by region (Northern, Western, Central, Southern, Southeastern, Southwestern, Eastern Europe) Key challenges Solution approaches

The *“Replicability potential”* is assessed by the level of complexity and stakeholder involvement, and the required resources (financial and human resources) and political willingness, through a 5-point Likert scale¹. *“Data availability”* refers to the amount of information available for the case and refers to the number of sources available and the depth and breadth of information they contain². The *“Level of innovation”* of solutions is assessed on the basis of the use of innovative technologies and the number of documentations in relevant sources³.

Each selected case focuses on **one key challenge** faced by the destination and the respective solutions that were found and implemented. This provides insight into different approaches to solving the problem and offers educational and informative lessons that other destinations can benefit from. In addition to the key challenge, other challenges that were addressed by the solutions were identified, with 2-6 additional challenges addressed per case study.

¹ (1 = very difficult; level of complexity and stakeholder involvement very high, required resources and political willingness very high; 2 = difficult; level of complexity and stakeholder involvement high, required resources and political willingness is high); 3 = effort necessary, one or two of the assessment criteria require a very high level of effort; 4 = some effort necessary, one or two of the assessment criteria require a high level of effort; 5 = easy to replicate, none of the assessment criteria require a high level of effort).

² A 5-point scale was used: 1 = only one source with little information, 2 = 1-2 sources with basic information on solutions; 3 = 1-2 sources with descriptions of the solutions and basic tourism-specific information (e.g. number of arriving tourists); 4 = 2-3 sources with descriptions of the solutions and context-specific information; 5 = more than 3 sources with detailed descriptions of the solutions and influencing factors).

³ A 5-point Likert scale is used (1 = not innovative in terms of approach (solution has already been documented many times), no innovative technology used; 2 = low innovation level in terms of approach (solution has already been documented many times) or innovative technology; 3 = medium innovation level; 4 = high innovation level; 5 = very innovative in terms of approach (solution is novel and has been not documented so far) and technology (e.g. AI, KI).

After compiling the inventory of 272 cases, in the beginning of May 2024 a **preliminary set of best practice cases** was selected based on the total score of the selection criteria. The total score threshold to select a best practice case for the preliminary set was 4, with no single criterion allowed to have a score below 3. This resulted in a preliminary set of 93 cases that met the thresholds and minimum criteria. In order to rank them according to their suitability, one of three suitability levels (1=very suitable, 2=very suitable, 3=suitable) were assigned. The results of the **destination survey** were available in mid-May 2024. In this survey, destinations were able to name, among other things, successfully implemented measures to improve the tourism sustainability and resilience of their destination. The 244 records were screened for possible suitability cases, i.e. destinations that had identified innovative solutions in the survey, and 28 suitability cases were additionally included in the set of possible best practice cases, some of which were already included in the inventory. The result was an overall list of 114 potential best practice cases, with the cases ranked by suitability levels. The final selection of the 50 best practice cases was made to cover all key challenge categories and to achieve a balanced representation of the five destination types and geographical distribution within Europe, as well as a diversity of solution approaches, with cases with high suitability being considered first. 28 cases come from the desk research, 9 from the survey and 13 case studies were found in both the desk research and the survey.

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2.2.3 Additional data collection, analysis and creation of the factsheets (Activity 2.2.3)

To illustrate the preventive and mitigating measures that the destinations have successfully implemented to address the key challenges of tourism, the 50 selected cases were further analysed and described in detail (mid-June to mid-August 2024).

The analyses were based on the researched secondary material, which was supplemented by additional information from interviews with representatives of the destinations. These **interviews** offered opportunities to collect data that are contextualised and individualised. The project team carried out 54 interviews with a selected pool of interviewees identified through the survey, desk research or by direct contact with the DMO in the selected destinations. Information and knowledge of other representatives of the destinations (e.g. statistics departments, strategy development, specific project staff etc.) were included in the data collection through the interviewees, therefore a total of over 100 representatives were involved in the collection of data and information for the factsheets.

Interviewees were mainly representatives of DMOs, but also authorities and private companies to understand the success factors and challenges of the measures implemented in the destination. The format of the interviews was semi-structured to allow the respondent to express him/herself freely. The interview sessions lasted from 30 minutes up to one hour and were scheduled online. Interviews were generally held in English language, with exceptions of interviews held in German and Spanish managed directly by the project core team. To systematically capture interview findings, a **data collection template** was used to list essential information about the respondent and the key topics and questions discussed (see Annex 4 Data collection template).

Based on the minutes of the interviews and additional information from secondary research, the **factsheets** were prepared in a predetermined design and based on the information and analyses collected. This first version of the factsheets was submitted to the destinations for review and any additions and consent for publication was obtained. The version approved and revised by the destinations was subjected to internal quality control before being accepted as the final version.

Some of the 50 selected case studies had to be replaced during the data collection and analysis process for various reasons. Destination representatives were either not reachable by email or phone or had to be discarded after the interviews (e.g. Alpbachtal, Porvoo, Velenje) because they were found to be unsuitable (measures were only planned and not yet implemented, were not innovative enough or repeated measures from destinations already covered).

The data collection was an iterative process subject to constant monitoring to ensure that destinations were well distributed geographically, all destination types were evenly represented, and all challenges were covered.

2.2.4 Organisation and development of the factsheets

Best practices were developed from a “**learning history**” perspective, by clearly demonstrating the actions implemented to successfully overcome challenges. Following this approach, information regarding all the above dimensions collected through the survey (WP1), desk research and targeted interviews (WP2), was systematised and summarised to convey clear messages. The factsheets contain the elements presented in Table 3.

Table 3: Structure of the factsheet for selected best practices

Elements	Values
Case Classification	
Type of Destination	Urban, Coastal, Mountain, Rural, Island, Mixed (for bigger territories such as regions, provinces or federal states with different types of destinations).
Territorial Level	NUTS 2, NUTS 3, NUTS <3
Size of the Tourist Area	in km ²
Population	Number of population.
Type of Tourism	Ecotourism; Adventure; Mountain; Rural; Coastal, maritime and inland water; Sports; Cultural; City; Business; MICE; Gastronomy; Educational; Health and wellness; Cruise.
Organisation of tourism	DMO or other tourism organisations in the destination.
Main Stakeholders Affected	Local authorities/government; Local residents; Tourists; Accommodations; Restaurants and bars; Event organisers; Other tourism service providers; Local farmers and producers; Local businesses; Technology providers; Research and Development (R&D) organisations; Transport companies
Key Challenge Categories	<p>This dimension focuses on presenting the main challenge(s) the destination faced before implementing problem-solving processes.</p> <p>Economic challenges: Creating local added value through tourism; Growth-oriented mindset of destination stakeholders; Dependence of the local economy on tourism; Seasonality of tourism; Changing consumer preferences towards more sustainability; Insufficient use of new and advanced technologies in tourism; Spatial and temporal concentration of visitors; Increase in the cost of living due to tourism; Deterioration and congestion of infrastructure including commercial gentrification; Deterioration of the destination image.</p> <p>Social challenges: Lack of qualified and skilled workers; Poor working conditions in the tourism industry; Insufficient or declining acceptance of tourism; Displacement and marginalisation of the local population; Accessibility and inclusivity of services and facilities; Maintenance and conservation of cultural heritage sites.</p> <p>Environmental challenges: Climate protection and climate change mitigation; Adaptation to climate change; Water scarcity and pollution; Waste production and pollution; Degradation and loss of biodiversity; Sustainable and smart mobility solutions.</p> <p>Governmental challenges: Appropriate local tourism strategies and policies to accelerate the transition to sustainable and resilient tourism; Lack of community participation in tourism activities; Lack of stakeholder management (multi-level, cross-sectoral); Lack of visitor participation in tourism development; Resilience building and crisis management; Lack of awareness of sustainability and resilience among tourism stakeholders; Lack of knowledge and skills of tourism stakeholders; Limited financial resources to support sustainability activities in tourism; Measurement and monitoring of sustainable tourism.</p>
Additional Challenges Categories Covered	See Key challenge classification.
Solutions Categories	<p>This dimension presents the solutions to overcome the problems encountered.</p> <p>Adoption of a tourism strategy and monitoring framework; Stakeholder participation and management; Laws and regulations; Certification; Promotional campaigns; Digital solutions;</p>

	Capacity building; Investments in infrastructure and product development; Research and innovation.
Case Description and Solutions	
Context and background	Short description of the tourism situation including significance (arrival, overnight numbers, share of GDP, employment), tourism characteristics.
Key challenge Description	Short description of challenges and/or barriers encountered, available opportunities and related issues.
Implementation and solutions	Mechanisms put in place to overcome afore-mentioned challenges and barriers including links for further information.
Replicability potential	Overall replication potential of the solution and identification of replicability factors.
Costs and funding sources	Costs or budget for the implementation of solutions and funding sources.
Results and Learnings	
Success factors and barriers regarding the implementation	Key success factors and enabling conditions, barriers.
Results and impact	This dimension shows the results and effectiveness of the implemented solutions in the destination.
Takeaways	Lessons learnt from the implementation and recommendations for destinations in similar situations, shared by the respective destinations.
Useful links	Links to further documentation of the solutions.
Contact person	Details for contacting the destination for further information (Contact person, position, email-address).

The best practice factsheets are delivered in the same design on three pages in both printable and digital form (see Appendix 1).

3 Analysis and mapping of key challenges at destination level

This chapter presents the **31 key challenges**, which have been identified by the literature review, the desktop research of the best practices as well as by the survey results. They are all clustered according to the **four sustainability dimensions** (economic, ecological, socio-cultural and institutional) and are described in detail to provide a profound and common understanding of them. Furthermore, they are related to their contributing factors (drivers, pressures and risks, impacts) and actors impacted and they are also linked to literature sources. **Each challenge also summarises the corresponding solutions that have been identified in the 50 best practices.**

3.1 Challenges related to the economic dimension of tourism

3.1.1 Creating local added value through tourism

The creation of **local added value** is a **central goal of sustainable tourism destinations** and sustainable regional development, as it seeks to maintain the benefit of tourism in the destination by involving local people and having them participate in the respective economic activities, while also supporting the environment.

Tourism has a great potential to generate added value in a destination, also contributing to the economic diversification of rural regions. This potential is a result of different features of the tourism industry.

Firstly, **tourism creates employment and income** that cannot be outsourced to other countries and despite its local nature, brings **foreign currency** into the country, as the “tourism product” can only be consumed at site.

Secondly, tourism has **many cross-sectoral linkages (horizontal and vertical) with other economic sectors**, such as agriculture, retail and transportation. This interconnection leads to **multiplier effects** that amplify the economic impact of tourism on a region or country across various sectors of the economy (Truyols, 2023; Partale, 2022; Strasdas et al., 2016). In fact, handicrafts, tour guide services, catering, maintenance, food supplies, cleaning and various other activities are enhanced by the presence of tourism which thus leads to a strengthening of the regional value chains.

Thirdly, the structure of the tourism sector, made up predominantly of micro, small and medium-sized enterprises in different sectors, leads to a distribution of income among **many companies** and people (Partale, 2021; Beyer, 2014). By encouraging and promoting local supply chains, tourism businesses **reduce their reliance on imports and retain a larger share of economic benefits** within the community. Additionally, the creation of job opportunities for local residents fosters economic empowerment. Providing incentives for local businesses such as start-up funding, training, and market access can motivate local residents to launch their own tourism-related activity. This overall approach not only supports local producers but also contributes to economic resilience and diversification and enhances the authenticity of the tourist experience (ibid., Hospitality Institute, d.n.).

Summing up, tourism is an important driver of regional economic development. However, **in many tourism destinations**, regional value chains are still underdeveloped and the **potential of generating local economic value through tourism is not fully tapped yet**. This is mainly because of the complexity of the process, which involves a variety of elements, actors and interests. According to UNDP (2017), the absence of a properly defined framework could lead to a lack of coordination of the actions and activities with the destination. Besides, limited capacities of the value chain actors might also be a reason for underdevelopment of tourism value chains.

Creating efficient organisational structures and designing efficient processes and interfaces between value chain actors is crucial to enable the development of local value chains. This involves the **networking of many different actors** and their services, an aspect that can be handled well by **efficient destination management organisations** (Partale, 2022; Beyer, 2014). In addition, cooperation and competition between companies also promote innovation (Luongo 2023). Furthermore, a consistent development of local value chains should focus on their positive effects in ensuring a **high level of sustainability** and thus the region’s resilience to crises. Therefore, not only economic aspects should be considered but also social aspects, human rights and ecological issues.

The potential of tourism in a destination is often strongly related with the attractiveness of its landscapes and cultural heritage. Accordingly, the **valorisation of the cultural heritage** and the **valorisation of the natural heritage** of a destination can be part of a sustainable local value creation with impacts on the revitalisation of cultural values and customs, of cultural identity and on the increased awareness of biodiversity conservation and the sustainable use of natural resources (Partale, 2022; Beyer, 2014). However, high numbers of visitors can increase pollution, causing damage to ecosystems and wildlife. Therefore, attention is required to **limit the pressure on these cultural and natural resources** (Peeters et al. 2018). A wide-spread example of the valorisation of the natural heritage of a destination is agro-tourism, which can foster vertical linkages within the value chain and present a more community-inclusive model for development of tourism (UNDP, 2017).

The solutions analysed in the best practices show that tourism is very well suited to generating and increasing added value in the destination by integrating other sectors into the tourism value chain. Interestingly the two best practices analysed address the challenge with two different approaches. The city of Turin has repurposed old industrial areas into cultural and tourist sites and integrated technological innovations such as AI, VR and robots to improve the visitor experience. It also focused on promoting local cuisine through initiatives such as the slow food movement and street markets. This holistic approach linked tourism development with urban planning and improved the quality of life of residents while improving the tourist experience through digitalisation and sustainable practices. In contrast, Lika, a rural region, focused on leveraging its traditional cultural assets, including family farms and local cuisine, to increase its added value. The introduction of a regional quality label for local products and the support of local producers through workshops and consultations were key strategies. The success of this approach was based on strong networking, clear communication and low-barrier support for local stakeholders. The best practices analysed have shown that key elements are a comprehensive and intensive cross-sector cooperation in the destination, a well-functioning coordination body (often the DMO) that operates efficient, and continuous stakeholder management. A clear positioning and vision of the destination as well as quality assurance measures such as certifications and capacity building among stakeholders, who are often SMEs with little knowledge and skills, support the increase in local added value through tourism.

3.1.2 Growth orientated mind-set of destination stakeholders

For decades, the **primary rationale for tourism** development was **increasing the number of tourist arrivals and overnight stays** in a destination. Many tourism destinations have **long pursued a growth "at all costs" strategy**, often resulting in significant environmental, socio-cultural, and ecological degradation.

Growth "at all costs" entails the following key aspects (Lim & Fisher, 2024):

Economic Expansion:

- **Maximising Revenue:** Prioritising activities and investments that drive immediate revenue growth.
- **High Visitor Numbers:** Focusing on increasing the volume of tourists to the destination.

Infrastructure Development:

- **Rapid construction and capacity expansion:** Building new hotels, resorts, attractions, and other tourism-related infrastructure quickly to accommodate more visitors.
- **Modernisation:** Upgrading existing facilities to attract higher-spending tourists.

Aggressive Marketing and Promotion:

- **High-Impact Campaigns:** Implementing large-scale marketing campaigns to attract a global audience.
- **Discounts and Incentives:** Offering promotions and incentives to attract more tourists.

Collaboration with Investors:

- **Attracting Investment:** Working closely with investors to fund large-scale tourism projects.
- **Public-Private Partnerships:** Engaging in partnerships to accelerate development.

Besides some **potential benefits**, such as the significant **short-term economic gains** from increased tourist spending, **job creation** and **enhanced infrastructure**, unsustainable growth-oriented mind-set entails environmental degradation, **pressure on resources** (increased demand for water, energy), **cultural erosion** as

well as **reduction of quality of life for local residents**. The longer-term environmental, social, and economic challenges can ultimately undermine the destination's appeal and viability.

Many stakeholders involved in tourism development continue to **prioritise the traditional business model** that emphasises **quantity over quality** and economic gains over socio-cultural and environmental considerations. This is due to the fact that the **success of a destination** is still largely measured by the **number of overnight stays and visitors' total expenditure**, as reflected in the statistical data routinely collected for tourism at national, regional, and local levels.

Due to the intrinsic nature of the tourism product being often unique and a public good, there is a spontaneous **overutilisation of tourism assets**, whether they are natural or cultural, touristic facilities, infrastructure, or public spaces. Spontaneous market forces do not automatically induce optimal allocation of destination assets, but rather maximise their utilisation for economic gain. This is what might be called the '**tragedy of tourism commons**', to paraphrase Hardin (1968). It has proven to be very difficult to keep popular destinations from following a similar, devastating development path and to embrace a radically different model (Camatti et al, 2021), even when local economic gains from certain tourism niches, such as cruise tourism, are often limited, while the negative impacts on local populations and ecosystems are significant.

Moreover, many destinations still rely on **top-down governance methods**, which hinder their ability to achieve sustainable development. Even the strictest sustainability criteria and new governance models have proven insufficient without a fundamental change in the mindset of tourism stakeholders (Camatti et al., 2021).

Without **sustainable** and less harmful forms of tourism that **balance economic benefits with social, cultural, and environmental impacts**, unbalanced tourism destinations risk losing their environmental stability, authenticity, liveability, and positive image or reputation as a tourism destination. If the prevailing growth-oriented mindset in tourism development does not change, many destinations are likely to lose the very qualities that attract tourists: their unique and authentic environmental and cultural heritage (Brenner, 2019).

In recent years, as the unsustainability of traditional tourism models became increasingly evident, there have been promising yet cautious **efforts to shift towards more sustainable tourism development**. These initiatives focus on alternative goals and development paths that **emphasise the quality of tourism experiences** over sheer quantity, while also pursuing broader social and environmental objectives. There is a need to **rebalance the 'growth paradigm,'** where success is measured not only by visitors' numbers but also by the value that tourism brings to a destination, considering profitability, local employment, and fair wages as well as the conservation of natural and cultural heritage and local residents' quality of life (Peeters et al., 2018). In pursuing sustainable development, a more holistic approach is required, with the active involvement of **tourism's diverse stakeholders**.

To achieve this, it is crucial to shift the focus to **qualitative growth**, offering a higher quality of services and products that increase local economic added value and does not leave a negative socio-cultural or environmental footprint. In the best scenario, tourism can also contribute to the preservation of natural and cultural heritage and to a better quality of life of the local population. Such an approach balances desired economic outcomes—such as generating localized economic added value, tax revenues, and employment—with the social, cultural, and environmental sustainability needed for long-term success (Capocchi, 2019).

The adoption of new tourism strategies is required, as well as measurement and monitoring frameworks. Yet policymakers often struggle to make tough decisions due to political pressure from vested interests within the tourism sector. Shifting the policy focus from quantitative to qualitative tourism development, through **participatory decision-making** and emphasising long-term institutional and behavioural changes, may prove more effective. While sustainability advocates call for **imposing strict quantitative limits** on tourism, economic development needs require more comprehensive and sensitive policies that **balance economic benefits with long-term sustainability**, thus promoting qualitative growth. The **role of organisations and public-private governance** is key in achieving a new model of tourism development based on sustainable and qualitative growth. **Participatory policymaking** through initiatives such as tourism clusters, tourism improvement districts, or tourist associations can serve several purposes (Brenner, 2019):

- Creating a common vision for qualitative growth and identifying upgrades that would enhance competitiveness in promising market segments with high local value added.
- Mobilising the investment required for competitive and sustainable improvements.

- Identifying and openly discussing prevailing institutional patterns, recognising the need for institutional changes, and potentially fostering institutional and behavioural changes through both top-down and bottom-up approaches.
- Discussing, agreeing upon, and legitimising "hard" regulatory actions, such as banning undesirable visitor behaviour and implementing quantitative limits on harmful tourism phenomena.

The solutions analysed in the best practices shift the focus of tourism development from quantitative to qualitative growth and follow a strict sustainability approach. To achieve this change, innovative sustainable tourism strategies, including measurement and monitoring frameworks, implemented with strong involvement of local stakeholders, form the basis. Capacity building, especially among small and medium-sized enterprises, digital solutions and innovations by research and development organisations support this transformation process.

3.1.3 Dependence of the local economy on tourism

The **dependence of a local economy on tourism**, also known as **tourism dependency**, refers to the extent to which the economic stability and growth of a region relies on tourism-related activities. In regions where tourism is a major economic driver, a substantial portion of income, employment, and investment is tied to the influx and expenditure of tourists. Generally, higher tourism dependency correlates with greater support for tourism development. Residents who rely more on tourism income tend to recognise its benefits, show positive attitudes toward further tourism development, and are less critical of its negative impacts.

Characteristics of economic dependence on tourism include a **high contribution to GDP**, **high share of employment** in the tourism sector, **revenue generation** through various tourism services (e.g. accommodation, attractions) and **foreign exchange earnings**.

Tourism can stimulate the **overall economic growth**, encouraging investment in infrastructure such as roads, airports, and public services that benefit both tourists and residents (Westedcom, 2023). Further, it can lead to significant employment opportunities, reducing local unemployment rates and increasing household incomes. It can also create entrepreneurial opportunities, from running hotels and restaurants to offering tours and selling crafts. Moreover, tourism can lead to the preservation and promotion of cultural heritage, as tourists often seek authentic experiences and cultural sites (BMZ, n. D.). However, a heavy reliance (**overdependence**) on tourism **makes the local economy vulnerable to external shocks and disturbances** such as political instability, natural disasters, health crises, and global economic downturns (**economic vulnerability**) (classace.io).

When a country or region relies heavily on a single industry for its economic stability, it faces significant risks. If that industry falters, the social consequences can be devastating. Overdependence on one or two industries often leads to the underdevelopment of other crucial sectors such as education, healthcare, manufacturing, and agriculture (Barcelona Field Study Centre, 2024). Further, **economic dependence on tourism increases vulnerability** to economic downturns and risks, especially during extreme events and global shocks such as the COVID-19 pandemic.

In recent decades, significant attention has been given to the **concept of economic vulnerability** (Briguglio et al., 2009), as traditional economic cycles only address part of the picture regarding vulnerability and economic fluctuations (Noy & Yonson, 2018). The **Economic Vulnerability Index (EVI)**⁴ provides a holistic view of a country's vulnerability, encompassing economic, social, and environmental factors and therewith presents a valuable opportunity for further empirical research into the determinants of economic vulnerability (Nguyen Phuc, 2020).

Recently, the **Tourism Economic Dependence Index** was also developed. The index is designed to quantify countries' reliance on tourism, adjusting for variations in economic development levels among them. (Ortega, Ribeiro, 2024)

The COVID-19 pandemic has starkly illustrated that countries heavily reliant on tourism revenues are more vulnerable to external shocks that directly impact tourist demand. Milesi-Ferretti (2021) demonstrated that

⁴ a **comprehensive measure that accounts for instabilities** in trade, agricultural production, natural disasters, environmental factors, economic structures, population dynamics, and regional remoteness,

countries with higher tourism dependence experienced more severe economic downturns compared to pre-crisis growth forecasts than less-dependent countries. Therefore, in the face of external shocks, a decline in tourism demand in these countries cannot be replaced in the short term and economic losses cannot be avoided (Ortega & Snajuan, 2022). According to the World Bank (2020), the broader economic impacts of a collapse in tourism demand vary based on the following factors: (1) the country's specific economic dependence on tourism activities; (2) the resilience of its main tourism destinations; and (3) the demand dynamics in its main source markets. (Ortega & Sanjuan, 2022)

Therefore, relying exclusively on tourism investments is not enough to achieve sustainable economic growth; instead, tourism should be **integrated into a broader destination development strategy** focused on fundamental income determinants. To reduce dependence on tourism, it is crucial to **diversify the economy** and **strengthen economic cross-sectoral linkages between sectors**, e.g. agriculture, handicraft and transportation (see 3.1.1). This holistic perspective ensures that tourism development aligns with other economic activities, leading to more comprehensive and diverse economic benefits.

To address the **risks of a local economy becoming overly dependent on tourism**, a **holistic destination development strategy** is essential. This approach considers tourism in relation to other economic sectors, creating diverse income opportunities and reducing the vulnerability of the local economy to tourism fluctuations. Such a holistic concept can only be developed and implemented by involving all stakeholder groups of the destination and should be supported by a comprehensive monitoring framework that enables evidence-based decisions.

Regarding **the solutions analysed** in the best practices to address the economic risks of a strong dependence on tourism, destinations like Borkum have developed holistic strategies that integrate sustainable development across all sectors of the local economy. The island's "Living space Borkum 2030+" strategy, created with a wide stakeholder involvement, aims to enhance climate neutrality and qualitative tourism while considering the needs of residents and natural resources. The strategy employs a cyclical process of planning, implementing, and reviewing, with adaptations every three to five years, supported by KPI-based management. Similarly, destinations such as Juist, Malta, and Thako have implemented sustainable strategies to mitigate their dependence on tourism. Juist has engaged both tourists and local stakeholders in its development planning, highlighting tourism's critical role while ensuring balanced growth. Malta and Thako have adopted monitoring frameworks, with Thako using a certification system to track sustainable progress. These frameworks help make evidence-based decisions, with the aim to promote economic growth without compromising social and environmental well-being. Overall, a comprehensive development strategy that integrates tourism with other economic sectors and is guided by continuous monitoring can effectively reduce the risks associated with tourism dependency and support a balanced and sustainable growth.

3.1.4 Seasonality of tourism

Typically, **seasonality in tourism** is characterised by a temporal imbalance of tourist arrivals in destinations, which are concentrated in relatively short periods, rather than being distributed uniformly across the year (Allcock, 1994). Seasonality tends to occur at the same time and for nearly the same duration each year and is caused and **influenced by endogenous and exogenous factors** that vary from destination to destination (Butler, 2014). Manning and Powers (1984) consider seasonality to be **one of the major problems faced by tourist destinations**: *"Uneven distribution of use over time (peaking) is one of the most pervasive problems with outdoor recreation and tourism, causing inefficient resource use, loss of profit potential, strain on social and ecological carrying capacities, and administrative scheduling difficulties"* (p.25).

Most tourist destinations around the globe are affected by seasonality while few have consistent tourism flows throughout the year. However, the extent of seasonality can differ a lot, from extreme to little fluctuations of demand across the year. Urban destinations are generally less affected, as many of the activities on offer can be undertaken at any time of the year. In contrast to urban areas, **European coastal and rural areas are more often confronted with seasonality**. This can be particularly problematic in small destinations where temporally concentrated high visitor numbers may create feelings of disturbance or even threat (Butler, 2019). The **highest seasonality is concentrated in the Mediterranean countries** (Duro & Turrión-Prats, 2019). In European countries and their destinations, the peak season generally takes place in the summer months between June and August,

when the weather is favourable for tourists while the off-season is between November and February with a comparatively low demand except the time around Christmas and New Years Eve.

According to Butler and Mao (1997), the **fluctuations of demand** are mainly **caused by two factors**, natural (physical) and institutional (social and cultural), involving both the source markets and the destination. **Natural factors** relate to variations in climate and weather patterns (for example sunlight, temperature, snowfall) which have an impact on certain forms of tourism demand (for example, water sports require warm temperatures). **Institutional seasonality** is more complex and results from public, religious or school holidays and the availability of leisure time, travel habits and motivations, and the hosting and timing of events (Lee et al, 2008).

The **impacts** and challenges **can be explored from the demand-side** (tourists) **and supply side** (businesses, employees, residents) **of tourism**. In high season, tourists face **high prices, crowding, and pressures on the transport system and infrastructure**, with a resulting reduced quality and satisfaction of the experience. For the supply-side, seasonality may lead to higher risks for businesses due to the **instability in income and return on investment**, an **under- or over-utilisation of resources**, and **shortages of seasonal workers** (Lee et al., 2008). Destinations may also experience increased use and **impairment of natural resources**, such as a high consumption of water and energy, which may lead to peaks and bottlenecks. This aspect is a major challenge in insular destinations with limited resources (Coccosis et al., 2002). Increased resource use may lead to **local depletion and imports of natural resources** as well as rising maintenance costs for local infrastructure, thus overlapping with physical infrastructural impacts (Strasdas et al., 2020).

Whilst many destinations develop **strategies to combat seasonality**, there is also evidence of benefits. In fact, low seasons provide an opportunity for the social and ecological environment to recover from pressures (for example post-season recovery of the seasonal workers or the environment) (Witt & Moutinho, 1995).

Therefore, **distinct strategies and activities are needed by destinations** to combat seasonality and therewith tap the potential that each tourist season brings (peak-season, shoulder or off-season) **aiming to spread the tourist inflows over more months**, which is better in terms of economic outcomes. However, addressing seasonality's possible solution strategies and measures cannot be applied universally to all destinations and contexts. Destinations are mostly of unique character and require **localised responses**, especially **in terms of product development and marketing**. At the same time, "there are generalised lessons that can be learnt and transferred across destinations, whether cities, peripheral northern locations, cultural locations or sun, sea and sand resorts". **Climate change-related impacts** might open an opportunity for some destinations, e.g. those located further north, for example by prolonged seasons due to warmer weather conditions in the shoulder season. But it can also cause additional problems in the peak season if destinations are heavily affected by an increase in heat days and heat stress or the increased occurrence of extreme weather events.

Common strategies for addressing seasonality can be grouped in **differential pricing** (for ex. seasonal pricing), **diversified tourism products** (for ex, introduction of festivals and events), **diversifying the market** (for ex. marketing campaigns to attract different markets in different seasons (a multi-segment approach)), and **state-initiated measures** (for ex. staggering of holidays over a longer period) (Lee et al., 2008).

In the best practices analysed, solutions to combat seasonality focus on diversifying the tourism offer, improving product quality and availability, differentiated pricing, improving accessibility in the off-season, and targeting specific markets for year-round tourism. Sustainability and continuous monitoring are key in all destinations.

3.1.5 Changing consumer preferences to more sustainability

"Changing consumer preferences to more sustainability" addresses two aspects. On the one hand, it considers the **increasing demand for sustainable tourism offers**; on the other hand, it takes up the destinations approach to **raise awareness for sustainable tourism among tourists** and **influence their sustainability behaviour** and respectively their choices.

Globally, as travellers become more aware of the environmental, social, and cultural implications of their journeys, there is an **increasing desire for** and a **market-driven shift towards sustainable tourism**. Travelers are increasingly seeking ways to have **more meaningful and conscientious travel experiences**, from searching for

and booking more sustainable options to identifying opportunities **to improve their impact on the destinations** and communities they visit (Expedia Group, 2023; ADB, 2023; de Jong, 2023). Accordingly, recent studies and survey results indicate an **opportunity and even a need for sustainable travel products**. A survey by Booking.com found that four out of five global travellers agreed that sustainable travel is a priority for them, with 71% intending to travel more sustainably and 78% aiming to stay at a sustainable property at least once a year (WEF, 2022). Adding to this, they increasingly seek destinations and activities that promote environmental preservation, reduce carbon emissions, and protect natural resources (Allied Market Research, 2023). Yet, making mindful travel choices goes beyond eco-tourism as well, with nearly three in four consumers stating they would choose a destination, lodging, or transportation option that is committed to supporting the local community and culture, even if it was more expensive (ADB, 2023).

However, while travellers seem to indicate an **increased demand for environmentally friendly and sustainable products**, the uptake of sustainable travel products does not show the same accelerated trend yet. Thus, there are still significant **gaps between consumers' intentions and behaviour** (WEF, 2022). As research shows, "nine in 10 consumers said they look for sustainable options when traveling, while 70% reported feeling overwhelmed by starting the process of being a more sustainable traveller". Many are turning to trusted travel resources and providers for inspiration and guidance to inform their decisions, including destinations, lodging providers, transportation providers, travel agencies, and booking sites. According to the ETC Long-Haul Travel Barometer, which also looks at attitudes toward responsible choices, 64% of the respondents (potential long-haul travellers to Europe) said that they prioritise comfort and speed of travel over environmental impact (ETC, 2024). However, sustainable offer is still under development. For instance, there is **limited research on actual purchasing behaviour** (Expedia Group, 2023) and little is understood about personal communication channels and message factors that lead to positive consumer reactions (Tölkes, 2018).

Against this background, **changing consumer preferences is a key challenge** in the development of sustainable tourism destinations. It requires to both respond to increasing demand for sustainable offers and create awareness for sustainable tourism and behaviours.

At the end of the day, it appears to be **essential for sustainable tourism destinations** and their businesses, to **promote and communicate sustainability effectively**. Concrete measures might range from the development of sustainable tourism products, over an implementation of sustainability standards in the destination to communication and nudging activities.

Sustainability communication is usually **part of a wider sustainability marketing strategy** aimed to make consumers aware of the availability of sustainable products, stimulate pro-sustainable choices and increase transparency about organisations' sustainability engagement (Tölkes, 2018).

Adding to that, **tourism organisations' websites** represent the most researched channel of sustainability communication (Tölkes, 2018) and therefore play a key role for online sustainability communication. However, the websites potential is not being fully utilised to create awareness of sustainability issues and sustainability messages have only limited persuasiveness (Marchi et al., 2023; Font et al, 2017).

Furthermore, the **promotion of sustainable behaviour** among tourists involves strategies and practices aimed at encouraging travellers to engage in environmentally friendly and culturally sensitive travel patterns. Key aspects embrace:

- **Educational Campaigns:** Informing tourists about the importance of sustainable tourism, its benefits for local communities and ecosystems, and ways they can contribute. This can be done through brochures, websites, social media, and on-site information.
- **Incentives and Certifications:** Promoting destinations, accommodations, and tour operators that have eco-friendly practices and certifications. This can include eco-labels (e.g. the EU Ecolabel for tourist accommodations) and rewards for choosing sustainable options.
- **Providing engaging Content:** Creating engaging and inspiring content that highlights sustainable travel experiences. This can include videos, blogs, and social media posts highlighting eco-friendly activities, cultural heritage, and conservation efforts.
- **Partnerships with Influencers:** Collaborating with travel influencers and bloggers who advocate for sustainable tourism to reach a broader audience and add credibility to the message.
- **Interactive Tools:** Providing tools such as carbon footprint calculators, sustainable travel guides, and apps that help tourists plan their trips in a more environmentally responsible manner.

- **Positive Reinforcement:** Sharing success stories and positive impacts of sustainable tourism, such as community development, wildlife conservation, and preservation of cultural sites, to motivate tourists to make responsible choices.

Besides, destinations are asked to **actively develop and offer sustainable tourist products** to implement them in the tourism market to the respective demand. However, the development of sustainable products in the destination is complex as they require, among others, high coordination and cooperation effort, time for the development and implementation, as well as systematic processes to enable an organised and standardised approach that can ensure quality assurance. In addition, the inclusion and motivation of the service providers is crucial, since they are needed for the development of new attractive tourism products (Weber & Taufer, 2017). In this context, DMOs play an important role since they have the strategic responsibility to coordinate the overall supply of tourism products and marketing activities (ibid.).

In the framework of the 50 best practices identified, common solutions to address changing consumer preferences towards more responsible and sustainable tourism include **awareness-raising and education campaigns**, e.g. with online communication and sustainability guides, **digital tools** such as apps, calculators and online platforms that help visitors and stakeholders track their environmental impact, sustainability **certifications** to promote environmentally friendly practices and signal commitment to responsible tourism, active **participation of visitors in conservation**, and social projects to promote responsible tourism, and **incentives for sustainable behaviour** (e.g. discounts, gifts) to encourage tourists to make responsible choices.

3.1.6 Insufficient use of new and advanced technologies in tourism

Tourism was among the first sectors to digitise business processes globally, by bringing flight and hotel bookings online and establishing itself as a digital pioneer (Bekele 2024).

Digital transformation in tourism refers to the **integration of digital technologies** into all aspects of the tourism industry, fundamentally changing how businesses and destinations operate and deliver value to customers. This transformation affects everything from **customer experiences** to **operational efficiency**, to **business models**.

Key elements include (ibid.):

- **Online Booking Systems:** Moving from traditional travel agencies to online travel agencies (OTA) where customers can book flights, accommodations, and activities directly.
- **Mobile Technology:** Utilising mobile apps for bookings, travel information, maps, and virtual tour guides, enhancing convenience and accessibility for travellers, managing visitor flows.
- **Social media marketing:** Leveraging social media platforms for marketing, customer engagement, and real-time feedback, enabling businesses to reach wider audiences and build stronger relationships with customers.
- **Data Analytics:** Using big data and analytics to understand customer preferences, improve services, and tailor marketing strategies. This helps in predicting trends, personalising travel experiences, and develop new services and products.
- **Artificial Intelligence (AI) and Chatbots:** Implementing AI for personalised recommendations, customer service, and virtual assistants that can handle inquiries and bookings, providing 24/7 support.
- **Virtual and Augmented Reality (VR/AR):** Offering virtual tours and augmented reality experiences that allow customers to explore destinations and accommodations before booking and during their stay (e.g. virtual reconstruction of archaeological sites).
- **Internet of Things (IoT):** Enhancing smart tourism with IoT devices that improve operational efficiency and create seamless, connected travel experiences (e.g. smart hotel rooms, automated check-ins).
- **Blockchain:** Utilising blockchain technology for secure and transparent transactions, especially in booking and payment processes, ensuring trust and reducing fraud.

The adoption of technology for tourism destination is both a challenge and an opportunity.

On one side, it is an opportunity because digital transformation in tourism aims to **create more efficient, personalised, and enjoyable, lasting travel experiences**. Indeed, technology and data analytics provide new business opportunities (e.g. innovative business models and ecosystems) and improve destination management in terms of increased efficiency and management capacity flows (Erhart & Bosio, 2022). Additionally, it improves

visitor experiences through the provision of customised visitor experiences, the development of new tourism products and services, also based on visitors' feedback contributing to a better understanding of the visitors' needs (European Commission, 2022).

On the other end, leveraging on tourism data remains a significant challenge for many. The processes of collecting, analysing, understanding, and converting it into actionable insights for successful strategies requires state-of-the-art tools, advanced technology, extensive expertise, and, most importantly, the right mind-set (datapeal.io n.D).

Another important topic regarding the digitisation in tourism concerns the **new skills requirements**. Thus, **job creation** in the tourism sector is undergoing a transformation in light of the industry's technological evolution. Future tourism roles will **demand a blend of technical expertise and advanced soft skills** necessary for effectively implementing and managing smart initiatives.

As these advantages cannot be denied and as this development is probably unavoidable with a view to the future, it is important for destinations to set the course in the coming years to deal with this subject and its challenges and **create a digital infrastructure** that enables solid data management to adapt to these new requirements and demands.

To achieve this successively, the OECD (2021) provides various recommendations regarding the implementation. Firstly, this includes **creating a (legal) framework** that promotes innovation and supports SMEs in their development. In addition, tourism companies should be encouraged to **invest in new technologies** and **create jobs that specialise in smart initiatives**. Finally, **digital business models** and ecosystems, an access to **digital infrastructure and knowledge-sharing platforms should be promoted** in general. The UNWTO (n.D.) suggests that the tourism sector should prioritise bolstering start-ups and micro, small and medium enterprises (MSMEs), integrating them into the tourism value chain, and fostering technology- and skills-focused education, training, and policies to spur innovation and foster decent employment opportunities. Furthermore, the "Transition Pathway for Tourism" and the "European Agenda for Tourism 2030 consider digitisation as a main pillar for the transition to a resilient tourism ecosystem. In particular, digitisation of tourism services, such as data sharing between the public and private sector, real-time data-driven management of tourism flows and the use of data and statistics for informed policy and decision-making processes, are key factors for increased competitiveness and innovation in the sector. Besides, **funding is essential** to generate **human and financial resources**. **Capacity building** is necessary to be able to deal with all these requirements and demands related to digital technologies and their implementation. Building a skilled team capable of translating data into actionable insights is important. Continuous learning and adaptation are essential as the digital landscape and tourist expectations evolve (Lalli 2024, European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs et al. 2022).

In the framework of the 50 best practices identified, the **main digital tools and technologies** to support the sustainable and digital transformation of tourism include **digital passes and mobility cards** providing access to attractions and public transport, real-time information on visitor flows and trip planning, **visitor flow management tools** such as early warning systems, cameras and mobile sensors providing real-time information, and the **sustainability awareness raising tools**, such as the Climate Smart Vacation Calculator which is used in Gothenburg that helps travellers assess and reduce their environmental impact or QR codes that provide information on environmental practices. Other examples include **technologies to improve visitor experience of cultural heritage** with AI, VR and AR technologies, **measurement and monitoring systems** using satellite data, AI and big data, **digital tools for carbon footprint management** using for example blockchain technology to track and manage tourism-related CO2 emissions, and **tools for employee recruitment and retention**, such as digital employee cards and digitised training programs to improve working conditions and attract skilled workers.

3.1.7 Spatial and temporal concentration of visitors

In recent years, many European tourist destinations have felt excessive pressure from tourists at least temporarily, when there has been a **spatial and temporal concentration of visitors** in certain areas of the destination because the number or density of tourists has exceeded the carrying capacities of these places. This

phenomenon is (often) referred to as “overtourism”⁵. Thus, overtourism is closely linked to the concentration of visitors in space and time, which is as well referred to as overcrowding.

Overcrowding usually occurs just in certain locations, neighbourhoods, historic town centres, coastal strips or at specific attractions, which are characterised by a high level of tourism attractiveness. The causes behind the occurrence of **overcrowding** are multifaceted including general and tourism-specific developments as well as new (market) trends. International tourism growth, especially from emerging economies, seems to be a key driver of unbalanced tourism development at most destinations, which is underpinned by the generally existing “growth focused mind-set” of the tourism sector. The expansion of cruise tourism has exacerbated the growing effects especially in some urban destinations, such as in Barcelona or Venice (Peters et al. 2018). Furthermore, the volume growth is closely linked to increased transport connectivity and to the falling of travel-costs, such as in regard to low-cost airlines (Goodwin 2017; Dodds & Butler 2019). **Technological advances** combined with **wider access to media and information** and the **evolution of social media use** are further drivers of such developments. By sharing their photographs on social media platforms such as Instagram, tourists themselves also actively promote the establishment of “must-see” destinations and thus influence the image of a particular destination (Gretzel, 2019). In addition, the rapid development of ICTs has led to the rise of the “sharing” economy, in particular peer-to-peer accommodation are to be mentioned as factors leading to an increase in tourism in certain destinations (Nilsson, 2020). In many destinations, overcrowding is basically a seasonal problem.

Overcrowding is resulting in high pressure to the tourism destinations ecosystem implying a variety of **negative impacts**, equally stressing the local people and the environment (European Commission: European Innovation Council and SMEs Executive Agency, 2022). These potential negative impacts of overcrowding are manifold and can be of physical, environmental, economic or socio-cultural nature, dependent on the specific combination of driving forces, pressures and destination characteristics. They can be clustered in five main categories:

- Degradation of local infrastructure
- Degradation of the environment
- Imbalances in the local economy
- Disturbance of the societal environment
- Decreased quality of the visitor experience (European Commission: European Innovation Council and SMEs Executive Agency, 2022).

With regard to the various drivers and impacts, some common solution approaches have been identified to address overcrowding at destinations and its negative impacts. They can be clustered in different categories:

- **Policies:** Specific tourism policies are implemented at destinations to address unbalanced developments, such as the increase of prices for tourism attractions in the peak season, capacity regulating policies (e.g. limits to the number of visitor arrivals and/or transportation facilities), or the extension of visitor hours of tourism attractions (European Commission: European Innovation Council and SMEs Executive Agency, 2022). Moreover, **strategic planning and marketing strategies** are important for building resilient structures able to manage high levels of tourism flows. One approach coping with overtourism is “**place demarketing**”, which refers to an aspect of marketing that deals with discouraging customers to visit a certain location and involves activities that are aimed at deflecting interest, visitors and/or investments in certain places (Eliasson & Velasco, 2018; Peters et al., 2017; European Commission: European Innovation Council and SMEs Executive Agency, 2022). Another marketing approach implies focusing on sustainable tourism, thus **targeting at sustainable tourism segments** (Weber et al. 2017; Eliasson & Velasco, 2018). **No marketing** could also be a solution, thus, not promoting the destination in the first place.
- **Continuous monitoring:** To understand and manage impacts caused by overtourism (overcrowding), it is emphasised to undertake continuous **monitoring** of the unbalanced tourism development, so that evidence-based decisions on changes and improvements can be taken timely (Eliasson & Velasco, 2018; Peeters et al., 2018; European Commission: European Innovation Council and SMEs Executive Agency, 2022).
- **Dispersion of visitor flows:** Distributing tourists to other places that are away from key attractions to disperse crowds is a common measure at many destinations. This can happen via various measures, such as

⁵ “Overtourism describes the situation in which the impact of tourism, at certain times and in certain locations, exceeds physical, ecological, social, economic, psychological, and/or political capacity thresholds” (Peeters et al., 2018).

promotion, new attractions, better transportation options and guided tours. Economic incentives, e.g. by increasing prices (at specific times, places or for specific groups) or via taxation, are also used. Besides, providing (real-time) information for tourists on, for example, crowdedness, transport options, and alternative visiting times proved to be helpful to manage high visitor volumes (European Commission: European Innovation Council and SMEs Executive Agency, 2022; Peeters et al., 2018; Eliasson & Valseco, 2018).

- **Laws and regulation:** The implementation of legally binding **rules and regulations** to address unbalanced tourism developments directed at tourists has been undertaken to be able to better control and/or to stop overtourism developments. These measures include for example forbidding access to certain locations at certain times, zoning systems, regulations referring to alcohol and drug consumption, as well as the extension of sharing platform activities, e.g. AirBnB (European Commission: European Innovation Council and SMEs Executive Agency, 2022; Peeters et al., 2018; Eliasson & Valesco, 2018).
- **Building capacities:** Increasing and improving capacities of the destination to deal with higher numbers of people.
- **Digital solutions:** especially the use of mobile phone applications is a common solution to manage visitor flows and movements and assist in data gathering for crowd management, e.g. by informing visitors about areas which are already at capacity. They as well might provide helpful information of where to go alternatively (European Commission: European Innovation Council and SMEs Executive Agency, 2022; Peeters et al., 2018).

In the framework of the 50 best practices identified, the solutions implemented to manage the spatial and temporal concentration of visitors include **visitor redistribution** to reduce pressure on heavily visited areas. Examples include the promotion of lesser-known attractions, **capacity management** through the introduction of online bookings, pre-booking systems and capacity caps, **extended opening hours** to spread visits more evenly throughout the day and week, and **traffic and transport solutions** to reduce traffic and direct tourists along optimal routes. These measures are supported by the **involvement of local communities and businesses** in the planning and implementation, ensuring that solutions are well supported and effective, and by comprehensive **measurement and monitoring systems** to assess impacts on tourism and adapt strategies.

3.1.8 Increase in the cost of living due to tourism

Negative socio-economic impacts of tourism are mainly associated with **imbalances in the local economy**. A major impact in this regard is the **inflation of prices** in local areas, driven by the increased demand of tourists coupled with an overall growth-focused mind-set (UNWTO, 2018). Inflation is especially affecting urban tourism destinations and their stakeholders, but also rural and coastal destinations.

Destinations experience **increased cost of housing**, especially due to the rise of new tourism platform services in the accommodation sector. Indeed, platforms proved to have an inflationary impact on (local) prices of residential real estate, home rentals, and house shortage (Mikulić et al., 2021), ultimately impacting on local residents' ability to purchase real estate. It is also argued that commercial tourist amenities (e.g. beaches, parks, golf courses, etc.) influence housing prices (ibid.). Furthermore, **tourism raises prices of goods and services**, partly due to the often higher purchasing power of foreign tourists. Research has found that supermarkets located in tourist areas charge higher prices than those in non-tourist areas, indicating that local populations do not always benefit from living in a tourist city. Therefore, it can be concluded that tourism often leads to an increase in prices in local areas, affecting both housing and retail markets (European Commission: European Innovation Council and SMEs Executive Agency, 2022). Besides, **prices for leisure facilities** might also be affected and increase respectively (UNWTO et al. 2018, p. 23).

Thus, **price inflation** contributes to an overall **increase in the cost of living** for the local population, while these developments are not necessarily accompanied with income growth. (Jordan et al., 2018; Postma et al., 2018). It might also result in a general “reduction of the availability of certain goods, services, and factors of production” aimed at inhabitants and for other sectors and functions (industry, agriculture, housing, etc.) due to an increasing tourism demand (Jordan et al., 2018; Postma et al., 2018; Peeters et al., 2018, p. 39).

Inflation and tourism gentrification – happening in different parts of Europe and affecting both urban and rural areas (Mikulić et al., 2021) – may result in **displacement of local residents** from tourism destinations and leading to an overall tourism-led decay of cities and municipalities. Another related process is the increasing privatisation of public spaces and community resources that limit access to formerly shared resources (Milano, 2017; Milano

& Cheer, 2019). In sum, these processes lead to an overall **decrease in the quality of life for the communities and local residents** in tourist destinations (Milano, 2017, p. 5, Peeters et al. 2018, p. 88, Mikulić et al., 2021).

The above concerns highlight the importance of careful **strategic (spatial) planning and clear tourism management system**, to respect the limits of capacity and to deal with these challenges in an inclusive, action-orientated and visionary manner. Evidence suggests that in the absence of strategic planning, these processes may conflict with existing social structures and locals' needs.

Studies indicate that most destinations have implemented **legally binding rules** and regulations to address unbalanced tourism developments and certain socio-economic developments, e.g. regulating the accommodation offers or monitoring short-term in private rental developments, for example via Airbnb to avoid touristification and to maintain a sound balance between resident and visitor numbers (European Commission: European Innovation Council and SMEs Executive Agency, 2022). Additionally, **specific tourism policies** are implemented at destinations to address unbalanced developments.

Stakeholder cooperation seems to be important to achieve positive and harmonious co-existence between residents and visitors, e.g. via diverse governance mechanisms and the halting of exponential *touristification* of the destination. DMOs are asked to reinvent their role and profile enabling for clearer alignment between municipal and tourism development goals (European Commission: European Innovation Council and SMEs Executive Agency, 2022). Communication with and **involving local stakeholders in a participatory way** is essential as they are particularly at risk. In this context, literature also supports that tourism management and development needs to be part of a wider destination agenda including other tourism-related sectors (UNWTO, 2018).

Although none of the **50 best practice cases analysed** focused explicitly on **rising living costs due to tourism**, this issue often stems from the increase in tourism demand, which leads to commercial gentrification and rising rental prices. To address this problem, cities like Barcelona and Bruges have implemented measures to regulate the real estate market and control tourism-related developments. Barcelona has introduced strict regulations on the construction and short-term rental of various tourist accommodations, including apartments, hostels, and hotels, with a plan to ban short-term apartment rentals to tourists by 2028. These actions aim to curb rising housing costs and make life more affordable for residents. Similarly, Bruges has banned the construction of new hotels and holiday homes in the city centre. Additionally, it passed a law allowing shared apartments like Airbnb only if the property is offered by residents who actually live there, preventing non-residents from buying properties for short-term rental. These strategies aim to control the property market and provide economic relief to local communities affected by rising costs due to tourism.

3.1.9 Deterioration and congestion of local infrastructure including commercial gentrification

The **deterioration and congestion of local infrastructure** and services (e.g. traffic, tourism attractions, public spaces etc.) is a main effect of overtourism that occurs if high numbers of tourist in a destination encounter limited local capacities (Peeters et al., 2018). It is particularly severe when the destination suffers from a lack of facilities to accommodate the demand of tourists. The spaces that become particularly crowded vary depending on the type of destination: in island and coastal destinations beaches suffer most from overcrowding, while in urban spaces historic city centres are often affected.

Congestion of local infrastructure seems to be especially relevant regarding traffic and transport, including issues such as high traffic volumes, overloaded roads and public transport systems, lack of parking spaces or blocked parking places for coaches as well as, for example, illegal parking in protected areas (McGinlay et. al 2020; Weber et al., 2018). These developments are leading on one side to a **reduced accessibility of this infrastructure** for both residents and visitors, inhibiting regular activities, such as reaching shops or working in their daily local travel". On the other side a high demand and use of utilities can lead to heavy wear and deterioration. In both cases, the **quality of these services** is diminished, while at the same time the maintenance cost for infrastructure, facilities and commercial activities, including waste treatment and disposal and sewage systems, are increasing (European Commission: European Innovation Council and SMEs Executive Agency, 2022; Peeters et al., 2018). Correspondently, investments in infrastructure needed by residents and the wider destination community are lost due to tourism-generated investments in tourism-specific infrastructure residents (Peeters et al., 2018). Thus, residents face a degradation or reduction of community-specific infrastructure or facilities and/or inflated costs in all types of services and products, which could eventually force them to leave a certain area.

In addition to a destination's general infrastructure, **overcrowding at attractions**, including natural, historical, and architectural sites can be considered as a relevant impact in the context of an overall "**damage of visitor sites and attraction**", which might also contribute to a **visual pollution** related to the aesthetics of the tourism infrastructure, facilities and activities" (Peeters et al., 2018). The damage of such sites is mainly caused by overuse and misuse by tourists and inappropriate tourism development" (Coccosis & Mexa, 2002, 18). Thus, damage can take the form of litter, vandalism, theft, degradation and erosion (Hugo, 2020).

Commercial gentrification is caused by the **degradation of commercial infrastructure and activities** directed at residents as a result of rising visitor numbers in a destination or at certain locations often combined with the increased dominance of large tourism businesses (Peeters et al., 2018). When tourism becomes predominant in certain areas, which refers to "**touristification**", there is (always) a risk that traditional stores or professions are pushed out as prices for real estate or everyday goods rise, while at the same time cheap souvenir shops take over and the deterioration of the cityscape by commercials increases.

The destinations resilience against the described impacts depends on the stage and development of the visitor influx, but also on **different characteristics** a tourism destination brings along in terms of geography, socio-political, and tourism history (European Commission: European Innovation Council and SMEs Executive Agency, 2022). They include, for example, aspects regarding the way **tourism management** is organised and structured and **how tourism is planned**. In addition, the cooperation with stakeholders at site involved in various roles and responsibilities is relevant, as it enables concrete management strategies to address unbalanced tourism at site (EISMA, 2022).

One of the main ways **to relieve local infrastructure** from congestion is to **disperse tourists** over the destination site balancing both the positive effects and limiting the negative externalities. Today, marketing strategies and "nudges" are being used to encourage visitors to think outside the box (Peeters et al., 2018). In this context, **digital technology** is widely employed to mitigate the impacts of overtourism as using location data can help in identifying the flow of tourists in real time and suggesting alternative routes, redirecting tourists to less-crowded attractions (Peeters et al., 2018; European Commission: European Innovation Council and SMEs Executive Agency, 2022).

Ultimately, the management of visitors' flow might also require implementing stricter **standards**, either by local governments through **legally binding regulations** or in form of **tourism-specific policies** that prioritise, for example, the needs of local residents over those of tourist. However, understanding the residents' attitude towards tourism and engaging local communities is central for an effective management ensuring sustainable tourism development (UNWTO, 2018).

In the framework of the 50 best practices identified, **solutions** include **tourism planning and governance strategies, discourse and collaboration with stakeholders**, especially those affected, and the temporal or spatial **distribution of tourists** to relieve local infrastructure from congestion, through for example **nudging techniques** or **digital tools**. **Stricter standards** and **legally binding regulations** are being implemented.

3.1.10 Deterioration of the destination image

Tourism can provide important economic support for urban and rural destinations and their SMEs through employment and foreign exchange, transport and communication connectivity. At the same time, it is important to ensure that tourism does not cause harm to the nature, local environment, social and cultural wellbeing of the local residents (European Commission, 2022). If tourists mainly perceive negative effects, they will not return to the destination (Jalilvand et al., 2012).

Thus, lowering the destinations environmental and cultural authenticity reduces **the attractiveness of the destination** over the long term. Accordingly, visitors may experience a lowered quality of their stay in the destination as well as a **deterioration of their experience**. This might translate into an **increase in negative reviews** and feedback on websites and social media platforms, and in extreme cases into the **deterioration of the destination image** (McKinsey & Company & World Travel & Tourism Council, 2017; Peeters et al., 2018; UNWTO et al., 2018). A tourist destination's image is one of the most important strategic tools for creating and sustaining tourist destinations and an important element in the process of tourist' destination choice (Font, 1997). The image of a destination suffers, if tourists perceive the destination as not attractive anymore.

Key factors that may have harmful effects on the social sustainability of local destinations are the perceived negative direct impacts of visitors (crowding, nuisance, increased waste, harm to nature or buildings) and indirect

impacts (higher prices for services, changed housing markets, gentrification and access to business premises in city centres) (European Commission, 2022). These factors and negative impacts are mainly centred around the **phenomenon of overtourism and overcrowding at attractions**, including natural, historical, and architectural sites contributing to a visual pollution of the tourism infrastructure, facilities and activities (Peeters et al., 2017) and impacting on the **visual appearance of the destination**.

Further negative impacts on the destination's image are **increased crime** (Frey 2021, p. 28; Weber et al. 2017, p. 193) and ultimately a **general deterioration in the perception of safety** among residents and visitors (Peeters et al., 2018, p. 40). Furthermore, an increase in gambling, alcohol consumption or drug use can reinforce **uncivilised behaviour among visitors** (Frey, 2021; Jordan et al., 2018, p. 5), which often implies noise impairments, e.g. in the case of party tourism. In turn, this intensifies the negative impacts and dissatisfaction of residents and tourists alike.

However, the **revisit intention of tourists** is an important guarantee for the sustainable and healthy development of tourism destinations; it indicates a **loyalty of tourists to the destination**, which commonly refers to the level of tourists' perceptions of a destination as a recommendable place (Tran, 2015). Therefore, the objective of each destination is to achieve a high "loyalty level" among their visitors. As the revisit intention of tourists is closely linked to the **image of a destination**, the destination's management must create an attractive portfolio of tourism products and services whilst also protecting its social and cultural environment.

Strategies minimise the negative impacts that influences the visitors' perception of the destination, thus the overall destination image include, among others, **policies and regulations, the enhancement of social capacities** (e.g. **community participation**, increasing awareness and education), **environmental measures, tourism management** (e.g. strategic planning, monitoring and evaluation, marketing and remarketing) and **visitor management** (e.g. visitor guidance, time distribution, spatial distribution, different target markets) and **repositioning the destination brand**. Besides, digital solutions, particularly the use of big data from mobile technologies and centralised tourism data observatories, seem to be key aspects of successful management of unbalanced tourism as they enable data-driven decision-making (European Commission: European Innovation Council and SMEs Executive Agency, 2022).

In the framework of the 50 best practices identified, **Rebranding efforts**, such as in Prague, show how destinations can successfully shift from low-value, mass tourism to higher-value, sustainable tourism. By redefining target markets, enhancing collaboration with local artists and businesses, and launching sustainability campaigns, cities can improve tourism's economic contribution while reducing pressure on local infrastructure. Measurement and monitoring systems ensure that quality standards are met, and that tourism remains sustainable in the long term. **Cooperation with tourism stakeholder groups** was essential for all measures.

3.2 Challenges related to the environmental dimension of tourism

3.2.1 Climate protection and climate change mitigation

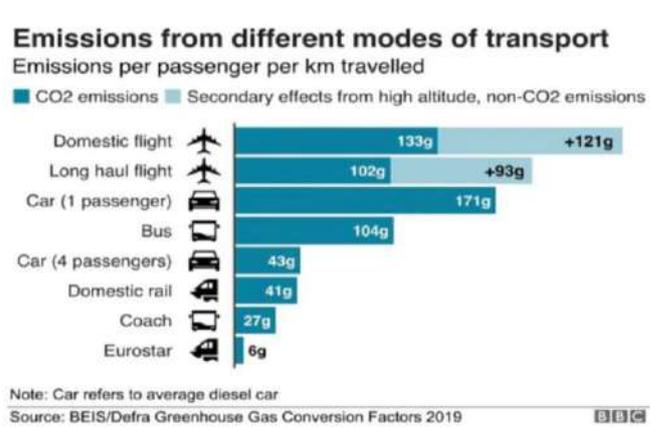
Climate change is one of the greatest global **challenges** of our time. According to its latest report from 2023, the Intergovernmental Panel on Climate Change (IPCC) pointed out that climate change is already **affecting every region of the world** and that its impacts are becoming increasingly noticeable (IPCC 2023). Immediate and drastic **reductions in greenhouse gas emissions are necessary** to align with the goal of limiting global warming to 1.5°C – 2°C (Paris Agreement) and to enable a future worth living for all people in this world. Thus, **global greenhouse gas emissions must be halved by 2030** compared to current levels and even completely reduced to **net zero by 2050** at the latest (net zero emissions) in order to avert a further increase in global warming (UBA, 2024; Balas et al., 2022, Gössling et al., 2023). In alignment to these objectives the **European Union** targets to **reduce net greenhouse gas emissions at least up to 55% by 2030** and making climate neutrality by 2050 legally binding (EU Monitor, 2023).

This gives rise to **two major challenges**: On the one hand, greenhouse gas emissions must be drastically reduced to achieve the goal of climate neutrality. On the other hand, **politics, business and society must adapt to the effects of global warming**, as the changes that have been set in motion are irreversible and their impacts can

only be limited. This also applies to **tourism**, which therefore needs to contribute to the reduction of climate emissions and to adapt to the projected changes (see 2.3.2) (EEA, 2024).

Tourism is both at risk from but also **a significant contributor of greenhouse gas emissions** (Lenzen et al., 2018; Peeters & Dubois, 2010; UNWTO & ITF, 2019). According to current scientific findings, tourism is accounting for approximately 8% of all global greenhouse gas emissions in 2013 (Lenzen et al., 2018). Projections indicate that tourism emissions could reach 6.5 billion metric tons by 2025, which represents a 44% increase from 2013, and is equivalent to about 13% of current global greenhouse gas emissions (Sustainable Travel International, 2024). Tourism-related transport is largely responsible for this contribution, accounting for around 75% of the entire tourism-related emissions (Simpson et al., 2008; Gössling et al., 2023). Aviation is the largest tourism subsector in terms of emissions, followed by car transport. Coach and rail transport are the most efficient (see **Error! Reference source not found.**). Nevertheless, according to Gössling (2011), cruise ships tend to be the most CO₂ emission intensive form of transportation.

Figure 2: Emission from different modes of transport (Sustainable Travel International, 2020)



Accommodations and activities at site (visits to museums, theme parks and events or shopping) are also contributing to the overall tourism emission pool, with 20% and 3.5% respectively (Simpson et al., 2008; Gössling et al., 2023). Besides, the **provision and maintenance of tourism infrastructure** consumes resources, which exacerbates climate change. In addition, if considering also aviation's additional non-CO₂ contribution to climate change at flight altitudes⁶, the effects would even bring tourism's contribution to global climate change to 10%⁷ (Gössling et al., 2023).

Despite global efforts to reduce greenhouse gas emissions in the tourism sector, it is expected that **emissions in tourism will increase significantly by 2035**, depleting 40% of the world's remaining carbon budget to 1.5 °C (Gössling et al., 2023). Thus, without **worldwide policy efforts at the national scale** to manage the sector's emissions, tourism could turn into one of the major drivers of climate change.

As stated above this **continuous prospected growth of the tourism sector** emphasises the **importance of consistent mitigation** and the **active reduction of greenhouse gas emissions** (Gössling & Peeters, 2015; ICAO, 2020; UNWTO, 2022). It furthermore supports the **implementation of strategies and measures** to avoid and significantly reduce greenhouse gas emissions (Gössling & Peeters, 2015; ICAO 2020; UNWTO 2022) attempting to counteract the future progression of climate change and its impacts by taking target-orientated action (Gössling et al., 2023; Climate Service Center, 2024). With regard to the tourism subsystems, the focus of mitigation primarily has to be put on transportation and on strategies that reduce the share of transport in the total energy consumption of tourism (Gössling, 2024; Strasdas, 2017). It is also and above all necessary to keep adaptation to a minimum (see 2.3.2), as reducing emissions must be the priority to achieve climate protection (UBA, 2024).

⁶ "The main climate change contributions from [non-CO₂ emissions of aviation](#) come from the formation of persistent contrails and particularly the resulting aviation-induced clouds, as well as from the chemical atmospheric reactions driven by NO_x emissions" (IATA).

⁷ reference year of 2013

To **manage the effects of tourism on climate change** destinations could develop a **carbon management**, that includes CO₂ as well as other greenhouse gases, which is considered a **key practice** to advance towards mitigation and actively reduce greenhouse gas emissions in a systematic way (Gössling, 2011). In this iterative process, destinations initially identify and measure the greenhouse gas emissions generated (**determination of the carbon footprint**), and subsequently develop and implement measures to avoid and/or reduce them, with the collaboration of stakeholders, who can identify areas that are inefficient and react accordingly.

In general, the following **mitigation strategies and measures** can be distinguished (Strasdas, 2017; Climate Service Center, 2024). They can vary a lot depending on the sector and the type of business and or destination (Simpson et al., 2008):

- Use new technologies
- Switch to renewable energy (wind, photovoltaics, hydropower, biomass, geothermal)
- Increase energy efficiency, e.g. by improving the thermal simulation of buildings
- Choice of climate-friendly transportation (> modal split)
- Changing and improvement of management practices
- Changing consumer behaviour (e.g., prolonging the duration of stay, focusing on local destinations, etc.)
- Compensation of greenhouse gas emissions
- Introduction of political instruments

Summing up, **carbon management can be considered an important approach to an overall sustainability management of destinations** and tourism businesses, as it focuses on alleviating one environmental threat in particular: the emission of anthropogenic greenhouse gasses (Gössling, 2011). It can be adapted by any destination and business, and, if effectively implemented, will lead to a reduction in carbon emissions (Gössling, 2011). However, destinations need to consider their governance structure and management approaches under the “new low-carbon imperative” (Gössling & Higham, 2020). According to these authors (ibid.) **climate leadership and action must come at destination level**, given the failure of global action on carbon mitigation in tourism.

Thus, **destinations consequently have a key role to play in reducing emissions**, as they comprise clusters of tourism stakeholders who can work toward decarbonisation while meeting the secondary goals of increasing profitability and resilience. New destination management models are required, with a **shift in destination management approaches from volume to value perspectives** (Gössling & Higham, 2020). To achieve this, **joint action is needed**, with tourism stakeholders, local authorities and the communities all supporting this process.

Aligned with these findings, the Best Practice cases highlight the importance of community and stakeholder involvement, smart technologies, and financial resources in their climate action efforts. Mitigation strategies include switching to renewable energy, increasing energy efficiency, using climate-friendly transport, changing consumer behaviour (e.g. increasing length of stay, preferring nearby destinations, etc.), offsetting greenhouse gas emissions and adopting policy instruments. DMOs play a key role in implementing mitigation strategies and measures as they comprise clusters of tourism actors that can work towards decarbonisation while achieving secondary objectives such as increasing profitability and resilience. New models of destination management are required, which requires a shift in destination management approaches from a volume to a value perspective. Carbon management, which includes carbon measurement as a central task, is the foundation of all successful mitigation measures.

3.2.2 Adaptation to climate change

Ambitious efforts to reduce greenhouse gas emissions are necessary, but **tourism is not only a contributor to climate change** (see **Error! Reference source not found.**), **but it is also at risk** as it is very much affected by its impacts. A major reason for this is the **high dependence of tourism on climatic factors** and weather patterns, more than almost any other sector of the economy (Simpson et al., 2008).

Many destinations around the world are **already facing the impacts of a changing climate**, that vary however in types and degrees. The focus is basically on the tourism offer as a changing climate also brings along a change of the features of a destination. The effects of climate change on tourism demand are generally seen as

consequence of the changes in the destination (Brasseur, 2024). Although tourism is not expected to decline overall in the medium turn, there are destinations likely to suffer demand losses, while other destinations, which are less affected could benefit from shifts in tourist flows (Matei, 2024; Brasseur, 2024; Strasdas, 2017).

The **impacts of climate change on tourism destinations** are manifold. Due to the large number of variables to be considered, it is not possible yet to make precise projections, but certain trends are becoming increasingly clear. The **direct and indirect impacts of climate change** may be grouped as follows (Strasdas, 2017; Simpson et al., 2008).

- **Direct climatic impacts**

Climate change can affect the tourism offer directly via the climate conditions and weather in a destination, especially the **temperature, precipitation patterns and days of sunshine** (Strasdas, 2017). They influence the suitability of locations for a wide range of tourist activities, they are a principal driver of global seasonality in tourism demand, and have an important influence on operating costs, such as heating-cooling, snowmaking, irrigation, food and water supply, and insurance cost (Simpson et al., 2008; Strasdas et al., 2018).

Rising temperatures, changes in precipitation patterns, extreme weather and climate-related hazards such as heat waves, floods and droughts will become more frequent and intense in many regions (EEA, 2024). Depending on the season and region, rising temperatures and global warming leads either to more frequent pleasant warmth or to unbearable heat, the latter especially in Southern European regions (Strasdas, 2017; Simpson et al., 2008; Climate Adapt, 2024).

- **Indirect physical impacts**

Indirect physical impacts of climate change involve impacts **on tourism-related resources** such as **water, landscape and biodiversity**; These changes will have profound effects on tourism at the local and regional destination level. They include: rising sea levels and flooding, warming and acidification of the oceans, droughts, beach erosion, damage to the landscape (e.g. due to forest fires), loss of biodiversity. Due to a high level of complexity involved, the extent of these effects is only known on a limited scale. However, it can be assumed that these indirect effects of climate-induced environmental change are likely to be largely negative (Simpson et al., 2008).

Water will tend to become either scarce (droughts) or too abundant (heavy rains, floodings, sea level rise). The **landscape and its scenery** could be affected through, for example, erosion or damages caused by forest fires, heavy rainfalls and/or storms, which might heavily affect the quality of the tourists' experience and their stay. With regard to **biodiversity**, a loss of ecosystems or shift in habitats is to be expected, which could lead to the disappearance of certain species (Simpson et al., 2008; Vohland, 2012). Furthermore, the spread of **(tropical) infectious diseases** or political unrest caused by drought and increasing scarcity of drinking water resources can also impact on tourism and will even exacerbate the negative effects.

- **Indirect societal change impacts/consequences**

There are also indirect societal impacts affecting tourism and its operations including **adaptations and mitigation measures of other sectors, national and international mitigation policies** and an **increasing climate awareness among the population** (Strasdas, 2017). Mitigation policies as well as an increase in fuel prices are expected to lead to rising transportation costs having an **impact on tourist flows**, which would particularly affect long-haul destinations. Besides, operating cost are likely to increase as well. They also may foster environmental attitudes and **increase acceptance of climate mitigation and adaptation** that lead tourists to change their travel patterns, e.g. shift transport mode or destination choices (Simpson et al., 2008; Strasdas, 2017; University of Cambridge, 2014).

The integrated effects of **climate change will have far-reaching consequences for tourism businesses and destinations**. Which tourist destinations will be particularly affected by global warming and to what extent depends substantially on their geographical location, the market segment, and the destinations vulnerability, thus its sensitivity and adaptive capacity (Matei et al., 2024; Simpson et al., 2008).

Regarding **Europe, tourism destinations in the Mediterranean region are considered mostly at-risk** (De la Vara et al., 2014; UNWTO, 2008). A recent study examining the potential impact of climate change on tourism demand in European regions points out that **coastal areas** are found to be the **most susceptible to climate conditions**. Southern coastal regions are projected to lose nearly 10% of summer tourists compared to the present, particularly in warmer climate scenarios (3°C and 4°C). In contrast, Northern European coastal regions are expected to see more than a 5% increase in demand during summer and early autumn months. Across the continent, tourist interest will fall in July and grow in April. With seasonal shift of demand across the continent,

tourism will still grow, according to the projections. Additionally, the largest losses – more than 5% – are projected across Cyprus, Greece, Spain, Italy, and Portugal regions, while the highest gains – above 5% – are distributed across Germany, Denmark, Finland, France, Ireland, the Netherlands, Sweden and the United Kingdom (Matei et al. 2023).

There is an inevitable need for destinations to adapt to unavoidable changes in climate to minimise associated risks and potential damages and capitalise upon new opportunities in an economically, socially and environmentally sustainable manner. While consistent climate protection is intended to mitigate the future progression of climate change, **adaptation strategies and measures** to climate change help **to cope with the consequences of climate change** that are already being felt and therefore must be tailored to the specific circumstances in different regions and cities of Europe. Tourism destinations and businesses have different **adaptation options** to climate change **on both the demand and the supply side** (UBA, 2024).

Adaptation options are strategies and measures that are available and appropriate for addressing climate change adaptation (IPCC, 2023). They are usually developed based on the identified needs stemming from **climate risks and vulnerabilities assessments**. Over the years, several **option categories** have been identified (IPCC, 2023, Climate Adapt ,2024, Leitner et al., 2021). The following categorisation of “**Key Type of Measures (KTMs)**” is referring to Leitner et al. (2021), which was developed to provide a standardised way of communicating various adaptation measures to better report on actions and measures for adaptation and to support adaptation policy process across the European Union. They include:

- Governance and institutional
- Economic and finance
- Physical and technological
- Nature based solutions and ecosystem-based approaches
- Knowledge and behavioural change

Concrete adaption measures for tourism destinations and business mostly include technical, policy, management and education actions (UNEP 2008, TPCC 2023; UBA, 2023), such as:

- Assessing or reporting climate change impacts and development of climate change adaptation plan
- Understanding current and future physical climate risks at the destination and property levels
- Risk and innovation management (e.g. development/dissemination of early warning systems as well as crisis management (evacuation, emergency shelters ...)
- Monitoring and reporting on climate adaptation progress
- State planning and legal policies (building regulations: Keeping danger zones clear, escape routes ...)
- Technical measures (e.g. architecture/building materials, snowmaking, air conditioning, avalanche protection), including infrastructural measures (coasts- and floodwater protection)
- Funding to support stakeholders in their adaption attempts (subsidies/tax relief, emergency loans, insurance coverages)
- Information and training
- Product and market diversification

The ability to adapt, that is to **adjust to potential damage**, to **take advantage of opportunities**, or to **respond to consequences**, known as **adaptive capacity**, depends on the **sensitivity and adaptation capacity** of a destination and its stakeholders. It is thought to vary substantially between destinations, sub-sectors, and individual businesses within the tourism industry. Whereas tourists have the greatest adaptive capacity (depending on three key resources: money, knowledge and time) with relative freedom to avoid destinations impacted by climate change or to shift the travel period to avoid unfavourable climate conditions, suppliers of tourism services and tourism operators at specific destinations have less adaptive capacity. Destination communities and tourism operators with large investment in immobile capital assets (e.g., hotel, resort complex, marina or casino) have the least adaptive capacity (UNWTO, 2008).

Adaptation strategies should not be implemented separately but should be integrated into the wider scope of destination management wherever possible, and also into the communication and marketing strategy. Furthermore, the adaption of a destination should also be closely linked to the decarbonisation strategy, thus the carbon management as strategies and measures are usually correlated and possibly intertwined. Two key

components of strategic adaptation to climate change are **appropriate risk management** and **crisis management**, particularly in the case of extreme weather events (Dickhut & Zeppenfeld, 2014). Immediate action is crucial, as the IPCC report clearly shows that some regions and sectors may reach the limits of adaptation for ecosystems and societies, especially when the change of climate is comparatively severe (IPCC, 2023; UBA, 2024).

In the framework of the 50 best practices identified, the DMO in **Lower Saxony**, developed a climate change adaptation strategy together with the government and the local DMOs and with technical support from research institutions in a one-and-a-half-year process. The process started with a **vulnerability and climate risk analysis** that made it clear where and for which travel regions relevant risks exist, but also where opportunities could arise. Based on this, suitable **fields of action and measures** to minimise risks and exploit opportunities were identified. In addition, the state of Lower Saxony has launched a funding program. The scientific foundation and the intensive communication, constant exchange and feedback with relevant stakeholders were essential for the successful implementation.

3.2.3 Water scarcity and pollution

Water, especially pure, unpolluted freshwater, is **one of the most important resources worldwide**. It is becoming **increasingly scarce**, especially in arid regions of the world, as available water resources are declining due to the depletion of non-renewable fossil water resources (groundwater, glacial ice). In fact, the increase in global water consumption, caused by population and economic growth, increasing urbanisation and rising living standards, technologies and international trade (Gössling et al., 2011) adds to the decrease in water supply due to the effects of climate change (unpredictable rainfall, decreasing precipitation levels and longer periods of drought and increased evaporation).

The provision of tourism services is heavily water dependent (UNEP, 2004), as it is used in kitchens, for laundry, cooling, watering of gardens and for swimming pools, but also for the operation of water-intensive golf courses, spas and the irrigation of green spaces, etc. Indirect water requirements include the production of food, building materials, fuels (energy), and is needed for tourism infrastructure development. Studies have shown that **consumption of water per capita by tourists** is typically **double to triple that of residents of destinations** (UNEP, 2004). Furthermore, **water is of high non-use value for many tourism segments and recreational activities**, like swimming, sailing, canoeing, diving or fishing, which strongly depend on the presences and availability of healthy water bodies (elements) as part of an overall intact landscape. However, besides the direct and indirect water consumption, water resources are under **increasing pressure from pollution**. Thus, water quality is negatively affected especially by nutrients and pesticides from **agricultural and indirectly released pollutants** by industry (EEA, 2023). Adding to that, tourist contributes to water pollution through the release of oils, fuel residues, and chemicals caused for example by water-based tourism activities, such as boating, snorkelling, and scuba diving. Furthermore, tourists also contribute to water pollution through the **improper disposal of solid waste**, including plastics, **packaging materials**, and **other non-biodegradable items** (Pásková et al., 2014).

Although tourism contributes to global water consumption, direct-tourism related water use is considerably less than 1% of the overall global consumption (UNWTO, 2023). The **problem of water shortage** is rather **noticeable at regional level** and most **often in arid destinations**, where water is short in supply and where the peak tourist season coincides with the dry season, for example in the Mediterranean region. Thus, **water can become a constraint** to development, a limit to tourist activities, and a contentious issue with local residents over allocation and pricing. New (additional) water supplies can be difficult to obtain and costly (e.g. import, or desalination) (UNWTO, 2004).

Thus, **water scarcity is a challenge** that predominately **accounts for the Southern European countries** and the **coastal destinations**. It has been recognised that in countries with high tourism intensity, the proportion of water used for tourism is between 5 and 10% of total consumption. However, it is increasing in small island and certain sub-regions, mostly along the coast (Gössling et al., 2011).

Understanding water-related risks in the destination might be a starting point for a destination strategy safeguarding water scarcity. For this, the Destination Water Risk Index (DWRI) might be used, which rates destinations around the world in terms of high to low risk. Originally developed for the hotel industry this might be as well used by destinations for their orientation regarding water scarcity risk (SHA, 2024).

Several indicators exist to measure water availability and conservation, ranging, inter alia, from water use per capita per tourist to water saving and recycled waste and grey water, as well as pricing. In addition to these

aspects, measuring the quality of drinking water and sea water are also aspects of interest for tourism and require relevant attention by destinations (UNWTO, 2004).

In the framework of the Best Practices cases analysis, Benidorm implemented an innovative **AI-powered water monitoring system** and **integrated water management** that aims at ensuring adequate water supply for the population and tourists. These measures are accompanied by **information campaigns** to raise awareness of responsible water use. High level of stakeholder engagement, with the private sector, the public sector and residents working together, contributed significantly to the success.

3.2.4 Waste production and pollution

Tourism activities generate waste, either **directly or indirectly**, with possible negative implication on people and the environment (ecological and health effects). The quantity and composition of tourism-related waste is determined by many factors, such as the number of guests, the spatial and temporal concentration of visitors, the number of overnight stays, the tourism offer and the disposal and recycling behaviour of tourism providers and tourists, including environmental awareness (Dickhut et al., 2023). Especially in countries and regions with a high tourism volume and without an adequate waste infrastructure, the aspect of waste disposal and the associated ecological pollution is extremely problematic.

UNEP has estimated that European tourists generate about 1 kg per person per day of solid wastes (when touring in Europe), while tourists from the USA generate up to 2 kg per person each day (when touring in the USA). Some scientific articles highlight that solid waste generation in touristic locations can vary significantly, ranging from 1 to 12 kg per guest each day (ISWA, 2015).

The **main sources of waste** in relation to tourism and leisure come from **accommodation and catering, major events, tour operators and airlines**. In addition, **waste is also generated by tourist leisure activities** such as hiking, biking and swimming, which is closely linked to "littering", i.e. throwing garbage around in parks and forests and on beaches and other places. It is especially problematic in touristic areas on the coast as it can be extremely damaging on the local landscape and the marine environment (Müller, 2007).

In tourism-intensive regions with a high degree of seasonality, **waste from overnight guests and day-trippers** makes a particularly large contribution to the total regional waste volume, which might lead to considerable **capacity problems in waste collection, separation and disposal** (Öko-Institut, 2001; Velis et al., 2014). This results not only in **environmental pollution and degradation of the destination** (e.g. surface and groundwater contamination, emissions of air pollutants or biodiversity loss), but also in possible negative consequences in economic and social terms, in that affected tourism **regions lose their attractiveness** as a result of feedback effects or the acceptance of tourism among the local population. In addition, strong tourism flows lead to directly higher costs for local authorities and municipalities for waste collection (Greco et al., 2018; Koliotasi et al., 2023; Velis et al., 2014). According to Koliotasi et al. (2023) the challenge of proper waste management becomes **crucial especially in touristically developed islands** since waste management systems must deliver efficient services in a short period due to the area limits set by the insular character.

Against this background, **solid waste management** is an important aspect in the sustainable, resilient and future-proof development of tourism. Therefore, **measuring waste production and managing its treatment** is crucial for destinations (UNWTO, n.D.; UNEP 2004). To **eliminate waste effectively and efficiently**, circularity represents a **new conceptual framework and an important strategic approach** for tourism, which is based on the idea that the **life cycle of products** is extended by **using all materials used in value creation** – from production to distribution to consumption (European Parliament, 2023). The circular economy can help the tourism industry move away from its typical linear "take-make-use-dispose" economic model and decouple economic growth from resource use (Centour, 2020; European Parliament, 2023).

Working to a more circular economy in tourism can be achieved by supporting the **integration of circularity elements** into their **services, products and business models**. The extensive and transversal value chain of tourism offers **numerous opportunities** to finding solutions on how to make longer, better, more circular use of the materials and products. At the same time, developing closed economic circles presents a major challenge, precisely because of the complex and often untransparent value chain in tourism (Einarson & Sorin, 2020; CenTour 2020). Hence, **active collaboration and co-creation of value** between **value chain actors** is seen as a key enabler of successfully transitioning to a more sustainable and resilient tourism model through the application of circular economy principles.

However, the best practices analysed show that reducing waste production and improving waste management in a destination cannot be solved by tourism actors themselves, as much depends on how waste management is organised by municipal waste management infrastructure and services. Therefore, **solutions for a proper waste management** must be **tackled in a collaborative effort** with the local governments of the municipalities and policy makers. Furthermore, awareness raising is important to give guidance to both tourists and tourism enterprises on how they can contribute to the reduction of waste. DMOs play a key role, especially in terms of raising awareness and informing local tourism stakeholders and tourists.

3.2.5 Degradation and loss of biodiversity

Biodiversity describes the **variety of life on Earth** and is one of the **most important natural resources** that provides humans and their development with a **wide range of vital products and services** (WWF, 2021). Despite its high economic and social benefits **biodiversity is highly endangered** and is continuously declining mainly due to the excessive use of natural resources by human activities. According to an UN report published in 2019, **biodiversity is declining faster than ever before in human history**. Thus, around one million of an estimated eight million animal and plant species worldwide are threatened with extinction (IPBES 2019, European Parliament 2021). Besides climate change, the worldwide extinction of species is one of the key global ecological challenges of our time and poses a massive threat to humanity and our planet. According to the World Economic Forum's Global Risks Report 2023, "biodiversity loss and ecosystem collapse" ranks as the **fourth biggest threat or risk of the next 10 years** (World Economic Forum, 2023).

Tourism and biodiversity are intrinsically linked due to a variety of interactions. Intact nature and attractive landscapes are among the most important components of tourism products and main characteristics of the perceived natural attractiveness of a tourist destination. They are the **core asset for the sector** and the prerequisite for its long-term economic success (Dickhut, 2017; Hall 2010; Christ, 2003). **Protected areas** are of particular importance for tourism, as they **represent important attractions and are preferred destinations for tourism**, especially for nature- and eco-tourism activities (Dickhut, 2017; Christ, 2003). Therewith, tourism is an economic sector particularly dependent on species-rich natural landscapes and therewith as well much affected and threatened by biodiversity risks contributing to reducing the quality of the stay for tourists.

However, **tourism itself considerably contributes negatively to the degradation of nature** and the loss of biodiversity in destinations in various ways (see Figure 3).

Figure 3: Tourism-related impacts on biodiversity.

Pressures caused by either tourism infrastructure or tourism activities	Impacts on biodiversity
Land consumption and soil sealing (building)	Degradation/Loss of ecosystems, cutting up ecosystems (e.g. through roads), decimation and loss of animal and plant species
Natural resource consumption	(Over-)consumption of water and energy, aridification (groundwater extraction), salination (coasts), fishing, building materials, etc.
Pollution (wastewater, oil, chemicals, waste, GHG-emissions, noise)	Pollution and eutrophication of ecosystems, Loss of species, Changes in species compositions, Threat of animals through, e.g. eating plastics
Physical presence of people	Disturbance of species through noise, odours or movements
Mechanical damage of nature	Damage of vegetation and animals, degradation of habitats, erosion
Invasive species	Disturbance of local ecosystems, threat of individual species through displacement

Source: Dickhut et al. (2023)

The most serious tourism-related impacts on species and ecosystems derive from its infrastructure as well as from the immediate leisure activities. This is especially true for the massively developed coastal tourism (BFN 1997). Furthermore, the **degradation of the natural environment** tends to be more prominent in rural areas where ecosystems are often fragile and even relatively low visitor numbers may have negative effects. Equally, tourism is also affected by the complex impacts of other economic sectors on biodiversity, e.g. forestry, agriculture and mining.

As a **profiteer of biodiversity and as a victim of its loss**, the tourism sector should have a major interest in **preserving nature and biodiversity**. Tourism should therefore always act as an **ally of nature conservation** and, in this role, **make an important contribution to the appreciation of nature and landscape** among guests and locals (Sorakunnas et al., 2024; Dickhut, 2017; Hall, 2010). Therefore, **close cooperation** is needed **between tourism managers and environmental and nature conservation stakeholders**. It is important to discuss the

positive and negative impacts of tourism activities on nature and the landscape and to jointly develop respective strategies and the necessary measures.

Accordingly, a focus should be put on fostering and facilitating the positive effects and opportunities that tourism can have on the **protection and conservation of nature and landscapes** through the promotion of the **concept of sustainable use**. However, the concept must be firmly embedded both in the population and among tourism stakeholders (Dickhut, 2017). At the same time ecological impacts can be controlled or reduced through intelligent tourism planning and, for example, a coordinated visitor management.

From an economic point of view, the sustainable use of nature, in particular of protected areas, offers great potential for tourism generated added value, thus contributing to a sustainable regional development, through the creation of income and job opportunities. For example, the estimated expenditure of visitors to Natura 2000 sites is about EUR 9–20 billion/year, generated by around 350 million visitor days, with the associated job creation estimated at 800,000 to 2 million FTE (Fulltime Employment) jobs (European Commission, 2013). In addition, tourism offers the possibility of direct financial support for nature conservation, especially in protected areas. Despite, tourism can help raise awareness of the value of nature among visitors through nature experiences, environmental education or nature interpretation (Dickhut, 2017).

In practice, the main challenge is to achieve a balanced **mix of protection and sustainable tourism use** adapted to local conditions. **Visitor management** is one important approach to enable a **co-existence of tourism activities and nature conservation** as it aims to minimise tourism-related damages of nature and landscape. This is done by developing **measures to influence the spatial and temporal or quantitative distribution of visitor activities**, e.g. directing visitor flows from sensitive to less sensitive habitats. Visitor management also includes the information of visitors, e.g. on the right behaviour, as well as raising awareness for conservation needs.

Furthermore, the tourism sector can be seen as a promising source of direct income for financing nature conservation activities due to its **own interest in preserving biodiversity**. This refers especially to the **financial support of protected areas**, which are often struggling to generate sufficient finance for its maintenance. The spectrum of opportunities to generate revenue from tourism ranges from voluntary grants and user fees over user agreements with tourism companies (e.g. licenses) to offering commercial activities in the parks as well as voluntary contributions by tourists or tourism businesses (Dickhut, 2008).

In the **best practices** that have been collected, several key solution patterns emerge when tackling biodiversity loss and promoting sustainable tourism:

- **Awareness and education:** This includes campaigns, workshops, festivals and information tools such as QR codes that highlight environmental problems and solutions.
- **Community participation and engagement:** Actively involving tourists and local communities in conservation activities such as clean-ups, wildlife monitoring and reforestation efforts. This promotes a sense of shared responsibility and direct commitment to sustainability efforts.
- **Using technology and sustainable infrastructure:** Integrating innovative technologies to support environmental monitoring and conservation, such as sensors to track water and air quality in real time, digital waste management systems and sustainable transportation options such as free buses and bike lanes.
- **Supporting sustainable business practices:** Many regions offer incentives or require tourism-related businesses to adopt sustainable practices, with financial support or grants often tied to environmental criteria to encourage environmentally friendly operations within the local economy.
- **Collaboration and networks:** Success often depends on close collaboration between different stakeholders, including local governments, businesses and communities. Early stakeholder engagement and building long-term partnerships contribute to the effective implementation of sustainability initiatives.

These patterns highlight that **successful biodiversity conservation in tourism relies on a combination of education, technology, collaboration and policy frameworks** that encourage sustainable practices.

3.2.6 Sustainable and smart mobility solutions

Mobility and accessibility are essential for societal participation, economic exchange, employment, and prosperity. However, the current **transportation system has a substantial environmental impact**, accounting for over a quarter of the EU's greenhouse gas emissions. This proportion is **increasing with rising demand** while other sectors decrease their emissions (European Environment Agency, 2024).

The relationship between transport and tourism is symbiotic and mutually dependent, with transportation advancements driving tourism growth.

Changes in work, shopping, and technology, such as automation, vehicle electrification, and the sharing economy, are **reshaping the transport system**. In tourism, evolving travel trends will significantly influence transport provision. While emissions standards and other factors may restrict long-haul travel, movement and mobility will persist beyond familiar areas. **Shared mobility options** like car- and bike-sharing will **impact travellers' mode choices in the future** as well as electric vehicles supporting the reduction of emission from fossil fuels. Furthermore, smart mobility solutions applying advanced and digital technologies to **improve transportation efficiency**, safety, and convenience are increasing. They include **connected vehicles**, which are using the Internet of Things (IoT) technology to connect vehicles with each other and with infrastructure, enabling real-time data exchange and improved traffic management. **Mobility as a service** represents a transition from private transport to service-based mobility solutions. **Intelligent transport systems**, spanning roads, waterways, and airspace, will be pivotal in streamlining mobility. Thus, "**sustainable and smart mobility solutions**" refer to transportation systems **designed to be environmentally friendly, efficient, and technologically advanced**. These solutions aim to reduce the environmental impact of transportation, enhance the quality of urban life, and improve the efficiency of moving people and goods (European Commission, n.D; European Commission, 2009; neste.com, n. D.).

Still, transportation and traffic cause a **variety of problems in tourist destinations**. With a focus on tourism, **transporting tourists to, from, and within destinations is the primary source of carbon dioxide emissions** in the tourism sector due to its heavy reliance on fossil fuels. This reliance is exacerbated by the **seasonality of tourism**, which increases demand for transport services during peak periods, particularly in specific tourist regions. Moreover, airports, roads, railroad tracks and parking lots destroy the habitats of plants, animals and people. Aircraft noise, traffic jams or abundance of parked cars in key tourist areas reduce the quality of the stay and thus the satisfaction of visitors. Traffic can also significantly reduce the quality of life of residents in a tourist region. Noise and exhaust gas pollution can lead to health problems.

To avoid and reduce the negative effects of tourist traffic, the Destination must consider how they can provide their guests with unrestricted mobility and at the same time keep the volume of traffic as low as possible. This requires **enhancing the effectiveness and efficiency of local transport systems**, which might also turn into a market opportunity, as consumers increasingly prioritise sustainability. Overall, a sustainable transport planning makes use of **various strategies**, which include traffic avoidance, modal shift strategies, restrictions for using harmful transport, incentives for the use of environmentally friendly modes, the improvement of intermodality and the attractiveness of sustainable transport options (Zeppenfeld, 2012).

More and more tourism destinations are already recognising the value of sustainable friendly mobility, which combines ecological effects with economic benefits. At the same time, more and more tourists are more climate-sensitive and want to travel sustainably. (DTV, 2016). However, the implementation of suitable approaches remains a challenge, as sustainable alternatives (train and public transport) could be perceived as too expensive, inflexible, unreliable and insufficiently connected.

A central aspect of successful transport measures in destinations is the availability of closed mobility chains, i.e. the interconnection between arrival and departure and mobility at site, which are increasingly relevant for the choice of means of transportation (Zeppenfeld, 2014; DTV, 2017). Seamless connections from door to door and to the mobility offers in the vacation region are indispensable prerequisites for enabling guests to travel without their own car. DMOs need to optimise the interfaces along the entire tourist mobility chain and secure the "first mile" (start of the vacation or tourist excursions) and the "last mile" (reaching the accommodation).

Furthermore, destinations could strive to **enhance their mobility offers**. Tourists arriving at destinations by train, bus or bicycle - i.e. without their own car - should be offered the use of convenient and environmentally friendly mobility services, through price advantages or a novelty or experience value. Alternative mobility options include, for example, vacation bus, car sharing, rental bike system, pick-up service from hosts, cooperation with minibus or taxi companies, electric cars, e-bikes or horse-drawn carriages. When considering the mobility options, it is also important to **keep the mobility needs of the local population** in mind.

According to Shokoohyar et al. (2022) prioritising users and offering them affordable, accessible, healthier, and cleaner alternatives is crucial for transitioning to more sustainable mobility (European Environment Agency, 2024). Further, sustainable transport requires a **comprehensive policy mix**, as single measures alone are insufficient (neste.com). However, sustainable mobility solutions for the leisure and tourism sector are only possible if the transport, tourism and environmental sectors work closely together at all levels. Individual

measures and approaches to action can only be achieved through an integrated approach. Tourism managers are asked to play an active role in the design and planning of mobility concepts (DTV, 2017).

In the framework of the 50 best practice cases, the solutions implemented in the destinations regarding sustainable and smart mobility underline the importance of limiting car use, improving public transport, using technologies and cross-sectoral cooperation to promote sustainable and smart mobility solutions. The solutions implemented can be characterised by:

- **Introducing traffic zones** with different restrictions to limit private car use in busy areas, such as in Bohinj, helps reduce congestion and improve air quality.
- **Expanding public transport**, including buses, trains and electric vehicles, is a key solution to promote sustainable mobility. Both Bohinj and Brussels place emphasis on developing local transport networks and integrating them into regional services.
- **Integrating mobility and tourism** and linking tourism offers with transport options, such as mobility cards that provide free access to public transport and parking, encourages visitors to use sustainable transport methods.
- **Active and shared mobility**: Promoting alternatives to driving, such as cycling, walking and shared mobility schemes such as bike and scooter sharing, helps reduce emissions and supports a more sustainable transport system.
- **Technology and digital tools**: Using mobile apps and data-driven monitoring systems to manage transport services and provide real-time information facilitates planning and more efficient use of public transport.
- **Cross-sectoral cooperation**: Close cooperation between local authorities, tourism organisations and different sectors is crucial for developing and implementing effective mobility strategies, leveraging collective expertise and ensuring coordinated decisions.

3.3 Challenges related to socio-cultural dimension of tourism

3.3.1 Lack of qualified and skilled workers

The tourism sector's challenge of attracting qualified and skilled workers has worsened significantly since the COVID-19 pandemic. The sharp decline in global travel led to widespread layoffs and furloughs, prompting many workers to leave the industry permanently. As the sector began to recover, a mismatch between the surging demand for services and the available workforce emerged, creating a significant labour shortage. Currently, this shortage is affecting the ability of some tourism businesses to operate at full capacity. The situation has been described by the UN World Tourism Organisation (UNWTO) as a "pandemic" of skilled labour shortages, affecting destinations (UNWTO, 2024). With regard to the European Union, the total number of travel and tourism jobs nearly recovered from the impact of the COVID-19 pandemic in 2023, being roughly five percent lower than in 2019 (Statista, 2024). However, since 2023 was a record year in the number of accommodation services provided, there is still a critical staff shortage. Regarding this hospitality sector the overall share of open vacancies in 2023 was 3.5% at EU-27 level, with very high shares of open jobs in Austria (7.9%), Czechia (7.8%) and Belgium (6.9%) (Eurostat, 2024).

According to the European Commission, a **striking 92% of small and medium-sized enterprises (SMEs) in tourism encounter challenges in hiring skilled staff**, predominantly due to a shortage of applicants. Despite this, only a quarter of these SMEs have explored hiring talent from other EU countries (European Commission, n.D.)

Those serious shortcomings have significant **financial implications** for affected businesses likely to cause considerable **economic damage** to the industry (Kirchhoff-Feil & Pinnow, 2020). Not only it is affecting businesses operations, but it is also impacting the overall **guest experience** through missing or poor services. Increased competition for workers has led to **rising labour costs**, as businesses are forced to offer higher wages and better benefits to attract and retain talent. Furthermore, there is a need to **invest in recruitment and training programs**, which also adds to operational expenses. Lost revenue opportunities can also be caused, if businesses are unable to fully capitalise on demand during peak periods due to staffing shortages.

The **driving factors** contributing to the labour shortage in the tourism industry are a combination of **demographic, economic and societal shifts or developments**. In addition to the demographic trend, unfavourable framework and **working conditions in tourism** are the main causes of the shortage of skilled workers. Irregular working hours due to seasonal work and shift working, overtime hours, below-average wages and low career and developmental opportunities all contribute to the **unfavourable image of the tourism labour**

market, and in particular of the hospitality industry (Kirchhoff-Feil & Pinnow, 2020). Besides, shifting working attitudes and preferences are reshaping the labour landscape. Younger workers (millennials and Gen Z) put more importance to work-life balance and therefore tend to prefer more flexible and physically less demanding employments. Furthermore, the **use of technologies** is increasing and therewith the request for certain skills, which might as well limit the potential pool of available workers (ibid.).

This makes it more important than ever to find ways to attract candidates and train them effectively to continue growing your business. Among others, some relevant measures that could help to overcome this lack of skilled workers and to keep the employees trained and satisfied include (Lund-Durlacher, 2020):

- **Offering part-time work and considering flexible working time models:** This applies in particular to women, who have limited time due to childcare. Flexible working time models are also particularly suitable for returning to work after a maternity leave. However, regulated working hours are seen as an important framework condition for women with children, as spontaneous work assignments that are not planned are hardly compatible with childcare.
- **Improvement of working conditions:** Regulation and stricter controls on compliance with the legal framework are considered urgently necessary to improve working conditions in the sector. Furthermore, the reduction of physical constraints, fair wages, and maintenance of a “healthy workload”, especially during high season, an employee-oriented corporate and management culture and the possibility of job rotation are as well contributing to an improved working environment (see 3.3.2).
- **Offering advanced training and career opportunities:** Mentoring or career coaching are good techniques to promote professional and personal development and careers. Mentoring could also help with motivation with further training opportunities and in psychologically stressful situations. It should however not be used as the sole instrument, as studies have shown that it has a low to medium measurable effect on career development.
- **Improvement of tourism businesses’ image:** A shift from serving towards hosting is needed to raise the image of the sector. Awareness campaigns about the importance of tourism for the destinations economy and employment could also bring an improvement.
- **Employment of elderly employees:** the employment of older employees is desirable and necessary from several points of view (socially, in terms of demographic change, etc.). Companies need to be creative to make working life easier for older employees (i.e. lowering physical constraints)

Although the tourism industry offers good **job opportunities for workers with little or no education**, there is criticism of the limited opportunities for further or advanced trainings available to employees. Formal training measures and advanced trainings are barely present in small companies (Lund-Durlacher et al., 2020).

The European Union supports tourism by **linking jobseekers with employers across Europe**, investing in reskilling and upskilling, notably through the Pact for Skills in Tourism, and supporting the sector’s shift towards jobs that require **green and digital skills** and other new competences. **Funding programmes** such as Erasmus+, Erasmus for Young Entrepreneurs or the Single Market Programme further support businesses, training providers and authorities, ensuring a resilient and competitive tourism workforce (European Commission, n.D.).

According to the Best Practices collected, the DMO in *Wilder Kaiser* is focusing on **creating an attractive working environment** with the primary goal of employee retention and **promoting young talent**. Increasing the attractiveness of the working environment includes **building a stable social network for employees, joint activities**, a **staff card** with discounts on leisure activities and transport, a **training and education program**, a **job platform** and **management workshops for employers and managers**. **Promoting young talent** includes school visits, round tables with teachers and a strong presence at career fairs and a tourism college. Innovative **onboarding and offboarding events for interns** who come to the region in the summer are intended to match the interns’ expectations with reality and offer the opportunity to make social contacts. The **success** of the measures depends on **good relations with stakeholders**, the **willingness of employers to participate** in projects of different kinds and the **political will**, which is crucial for financing.

3.3.2 Poor working conditions in the tourism industry

The **low quality of tourism employment** is mainly due to overall **poor working conditions** including low and unfair wages, irregular working hours as well as shift work, overtime hours, and a **missing work-life-balance**. Especially work in hotels and restaurants is characterised by large deviations from standard working times (Eurofund Europa, 2012). Furthermore, employment in tourism is subject to **strong seasonal fluctuations** in demand throughout the year possibly leading to unemployment during the low season (**seasonal employment**). Consequently, seasonal variations in demand for employees create a major structural problem in the lack of continuous employment in large parts of the sector (Eurofund Europa, 2012). **Time pressure and stress**, especially during peak times, are further issues to be considered in this context, as well as **physical strains** caused by some tasks and activities, e.g. standing times in the kitchen and service, carrying heavy utensils, room cleaning, etc. **Horizontal gender segregation** is another issue to be mentioned in this context.

Developing **attractive career paths** with **fair working conditions** for all employees in the tourism sector is essential for **promoting decent work** and sustainable development. Further possible approaches to **improve working conditions** for tourism employees include the following aspects (Lund-Durlacher, 2020):

- **Stricter controls on compliance with the legal framework**
- **Employee-oriented corporate and management culture:** Good leadership and employee orientation are further measures to improve the image of an entity.
- **Reduction of physical strain:** When it comes to reducing physical stress, creativity and responsibility are required from employers. Significant improvements and relief for employees could be achieved with simple measures, e.g. physical strain could be reduced by using various aids, tech or lighter objects.
- **Job rotation:** Rotating the job could lead to improvements in monotonous or one-sided physically demanding activities.
- **Relieving older employees:** Lowering physical stress at organisation level would be one possibility. Another suggestion is aimed at increasing the number of employees to reduce the physical strain per employee. The needs of older employees should also be considered with regard to working hours and/or partial retirement models.

The task of changing working conditions primarily affects companies, changing the corporate culture is certainly a medium to long-term process.

Although poor working conditions in the tourism industry were not a major theme in the 50 **best practice cases analysed**, they are identified as a key factor contributing to the shortage of skilled workers. Several destinations such as Wilder Kaiser, Nassfeld-Pressesee-Lesachtal-Weissensee and Wagrain-Kleinarl have implemented measures to improve the working environment for tourism employees to address this issue. These initiatives include the introduction of employee cards offering discounts on leisure activities and sustainable transport options to improve employee wellbeing and loyalty to the business or destination. The Wilder Kaiser destination, as described in the previous section, has focused on building a supportive social network, organising joint activities and providing training programmes to create a more attractive working environment. The success of all these initiatives depends on cooperation with stakeholders, employer involvement and political support for the necessary funds, which underlines the need for a holistic approach to improving working conditions in the tourism sector.

3.3.3 Insufficient and declining tourism acceptance

Tourism acceptance, defined as the attitude of local residents towards tourism, is playing an increasingly important role for the sustainable development of tourism destinations in Europe, especially in current discussions on so-called **overtourism** (Peeters et al., 2018). Only if the needs of the local population are considered and local people are satisfied with the tourism development in the destination, a high level of acceptance can be achieved, and sustainable tourism development will be possible.

As Gračan & Lučić (2022, p. 1) point out: “**A healthy symbiosis of local populations and tourists** is a prerequisite for the success of a tourist destination, but also for sustainable development of tourism”. This statement illustrates well that both interest groups, residents and tourist, are intrinsically linked to each other as they heavily interact and influence each other. Thus, the local population directly affects tourism in the destination, and vice versa, tourism is increasingly influencing the local population in sociological, cultural, and economic terms (ibid.).

However, the increasing number of visitors puts a lot of pressure on this relationship, negatively affecting the **quality of life of the residents**. Consequently, conflicts and dissatisfaction arise, with a **decline in the acceptance of tourism**.

The **reduced quality of life** is mainly due to factors such as **overcrowding, high prices, the increase of living costs** (e.g. housing, common goods) and the related displacement of residents, **low level of tourism awareness, noise pollution, negative impacts on the local environment, inappropriate visitor behaviour** (e.g. high alcohol consumption, noise, gambling and drug trafficking), **perceived degradation of safety**, and **increased crime** and violence (Weber et al. 2017, UNWTO et. al. 2018, Peeters et al. 2018). In addition, **insufficient involvement and participation** of the local population in the planning and decision-making process on the development of a tourist destination is seen as a reason for dissatisfaction (Weber et al. 2017).

Whether tourism activities in a destination are perceived and assessed as positive or negative depends on individual factors and external influences.

The **external influences** include factors such as the economic importance of tourism in the destination, including available jobs, income and employment status. Factors such as the intensity of tourism (number of tourists/inhabitants) and overtourism as well as the form of travel and behaviour of tourists at the destination determine the perception of tourism by the local population. The cost of living within the destination, the provision of infrastructure and cultural offerings as well as the impact of tourism on nature and the environment are other relevant factors that influence the evaluation of tourism. Another significant factor seems to be the pace of tourism development and the opportunity for residents to participate in tourism planning processes (Pens 2018, Eisenstein & Seeler 2022).

At the **individual level**, the degree of involvement of local people and each of them in local tourism activities, the frequency with which they are in contact with tourists, and the personal experiences they have with tourists may play a role. It can therefore be assumed that the acceptance of tourism by residents without a connection to tourism is lower than that of those who are employed in tourism and are therefore economically dependent on tourism or may benefit from it. Factors such as the existing tourism knowledge (i.e. knowledge about the importance of tourism in one's own place of residence), the duration of residence in the destination and personal travel experience can also determine the perception and evaluation of tourism. In addition, the extent to which residents are affected by the negative effects of tourism, e.g., overcrowding, noise pollution, price increases, etc., seems to be important (Pens 2018).

The **local population constitutes a central interest group in tourism destinations**, and the quality of the tourist product depends on their **satisfaction with the development of tourism at site**, and their participation in the competitiveness of the tourist destination (Gračan et al., 2022). According to a stakeholder consultation conducted in the scope of a European study, it was highlighted that “the well-being of residents is a key aspect to the long-term sustainability of tourism” (European Union 2024, p. 29). Therefore, **measures for creating a balance between the needs of the locals, tourists, and other participants** (stakeholders) in a tourist destination are essential for a sustainable and prospective tourism development of a destination (see **Error! Reference source not found.**).

To enhance tourism acceptance, the analysed best practices implemented various strategies. Wagrain-Kleinarl focused on local culture promotion, employee discounts for leisure, and addressed the tourists with responsible tourist behaviour tips and an AI concierge, alongside forming a sustainability advisory board and holding stakeholder meetings. Rotterdam established Living Labs involving residents and entrepreneurs to co-develop tourism initiatives in emerging neighbourhoods, supported by community events. They use monitoring tools and strategic planning to balance local needs with tourism demands, addressing problems such as overcrowding and environmental damage.

3.3.4 Displacement and marginalisation of the local population

The **increased growth of tourism** and **tourist numbers** exceeding the destinations carrying capacities are posing severe challenges to many European tourist destination, especially in urbanised areas and coastal regions. Examples are cities such as Amsterdam, Barcelona, Venice but as well rural areas at certain places in Mallorca or Gran Canaria (Spain) or at the island of Juist (Germany) (Peeters et al., 2018; UNWTO, 2018). This growth brings along negative impacts for the environment and the local population including **residential displacements** or **crowding-out of resident population** from their neighbourhoods, which may be temporal, for example during the summer month, or permanent (ibid., Koens et al. 2018; Mermet, 2024). Due to Peeters et al. (2018) marginalisation of the resident population occurs throughout all destination categories (44% of all cases) but is particularly present in coastal & islands destinations.

Such a **disturbance of the social environment** becomes a concern if tourist and residents are competing for the same space, amenities and service due to capacity limits of certain areas and locations (Dodds & Butler 2019, p. 13). Additionally, it is also influenced by the behaviour of tourists, (e.g., excessive noise or littering), which again might go along with a feeling of strangeness and insecurity among local people (Postma et al., 2018; UNWTO et al., 2018).]

Local population marginalisation and displacement is primarily driven by the phenomenon of **“touristification”** finally leading to the **“gentrification”** of residential districts. The process of touristification can be described as a transformation of the structure and character of traditional neighbourhoods through the influx and increased concentration of tourist and tourism-related businesses, such as for example segway and beer-bike tours, while traditional stores and services move out. Consequently, these areas and places are becoming less suitable and affordable for residents not least because of the associated increase in rental prices and the overall increased cost of living. These developments are mainly catered according to the demand visitors rather than towards the needs of the local population (Faye, 2014; Vaquero et al., 2024; Kato et. al. 2022; HOSTREC 2018; Milano, 2018).

The progress of **gentrification**, which can be described as the process by which middle-class people take up residence in a traditionally working-class area of a city, changing the character of the area (Collins English Dictionary, 2024), is especially caused by the development of the housing market and the growing presence of **vacation rentals** in residential districts. This again is caused by the increased conversion of rental housing into tourism accommodations that has taken property off the market for locals (Peeters et al., 2018). Furthermore, real-estate speculation is going along with changes in the use of real estate and/or the prospects perceived by owners of earning money. The increase of internet holiday bookings closely connected with the **rise of digital peer-to-peer accommodation platforms**, such as Airbnb and similar providers, are as well boosting and intensifying this transformation processes, displacing residents and generating emerging conflicts (Peeters et. al. 2018; Sequera et al., 2018). This is underpinned by Nilsson (2020, p. 6), who equally describes “the quantitative expansion of peer-to-peer accommodation with consequences for the housing market and the role of peer-to-peer accommodation in the tourist penetration of residential areas outside traditional tourist districts.”

Solutions to the marginalisation and displacement of local residents are likely to be centred on implementing **rules and regulations** or **policies** limiting the number of visitor arrivals, e.g. by determining capacity limits by a maximum touristic density. Furthermore, monitoring short-term private rental developments, e.g. via Airbnb, as well as the overall housing rental and real estate market by effective public housing and tourism policies are implemented strategies (European Commission: European Innovation Council and SMEs Executive Agency, 2022; Peeters et al., 2018). At some places, Airbnb rentals in private apartments are even prohibited or new hotel-buildings are limited. Thus, critical innovation in the design and implementation of local processes of urban and rural regeneration, as well as principles, policies and practices to prevent eviction and expulsions to ensure the “right to housing” instead of “tourism-led gentrification” are requested (Ibid.). Therewith, touristification is sought to be avoided and a sound balance between resident and visitor numbers to be maintained (ibid.).

Moreover, a **participatory tourism development** would help to proactively **involve local communities** into decision-making and consider them as not only a backdrop for tourism activities but also their interest. Besides, tourism investors should support initiatives that **elevate local priorities and needs** (WTC, 2024).

Raising awareness is another approach to sensitise the stakeholders of the tourism ecosystem and related sectors towards a sustainable and resilient tourism management and development. In this context, it should be achieved that tourist themselves take responsibility for their behaviour and their decisions while travelling as this can make a big difference to the impact on local residents (WEF, 2023).

In the framework of the 50 best practices analysed, destinations have adopted comprehensive strategies to address the challenges of displacement and marginalisation caused by tourism. They focus on implementing regulations and restrictions to control the impact of tourism, such as limiting construction and short-term rentals. The two best practice cases that were analysed in particular with regard to displacement and marginalisation of the local population, the cities of Barcelona and Brugges also prioritise monitoring and data collection to track tourism effects, using tools like surveys and big data to inform their strategies. Community engagement is a key factor in both cities' approaches, with active involvement from residents, local authorities, and stakeholders in decision-making processes. Strategic planning plays a significant role, with both cities using it to manage tourism distribution and target specific segments of tourists. Awareness raising targeted at the local community and tourists is used to sensitise all stakeholders in the tourism ecosystem towards sustainable and resilient tourism management and development. Additionally, increased tourist taxes and enhanced public services are used to support local infrastructure and mitigate the impact of tourism. These patterns highlight a balanced approach to leveraging tourism benefits while addressing its potential negative social impacts.

3.3.5 Accessibility and inclusivity of services and facilities

Accessible tourism (Tourism for all) aims to enable broader groups of people to fully participate in and enjoy visits to different areas and tourism experiences all year around. The development of an integrative and inclusive (barrier-free) tourism in a destination, which is **accessible for all**, poses a great challenge for destinations and businesses as it encompasses very diverse groups of clients such as persons with disabilities or health impairments as well as people with different economic facilities and persons from different religions, cultures, colours, genders, age and sexual orientations reflecting the diversity in society (European Commission, 2022; UN, n.D., UNWTO, 2016).

Accessible services comprise **barrier-free** offers in all areas of tourism, **easily accessible and usable for all people** without assistance, e.g. by developing adapted tourism facilities. For example, visitors with walking difficulties, families with baby carriages and people in wheelchairs would need access without steps or thresholds, wider doorways, space to manoeuvre and spacious elevators. Visual and hearing impairments are also common among potential visitors (UNWTO, 2016a). Unfortunately, **persons with disabilities** are still struggling with **various challenges when planning and undertaking a vacation** such as inaccessible booking services and related websites, lack of accessible airports and transfer facilities and services, untrained professional staff capable of informing and advising about accessibility issues, unavailability of adapted and accessible hotel rooms, restaurants, shops, toilets and public places, inaccessible streets and transport services and unavailable information on accessible facilities, services, equipment rentals and tourist attractions. (ibid.; UN, o.D.)

Furthermore, accessibility also refers to price diversity, thus also providing a range of moderately priced tourism offers and opportunities for **people with low income**, who could otherwise hardly or not afford to go on vacation. According to the Eurobarometer in 2021, 52% of persons not doing overnight trips mention financial reasons (European Commission, 2022). Destinations are also asked to address the **diversity of people** and to appreciate and accommodate people or customer groups from diverse backgrounds around the world providing certain services and sufficient safety for their clients (ibid.).

The **development of a broad spectrum of activities and services** adapted to the needs of the aforementioned groups can contribute to the **competitiveness and resilience of the destination**. The **information** of these opportunities should be **clearly available** online for the customers to consider when planning and booking their services (European Commission, 2022). As studies have spotted, many potential guests don't go on holidays because they cannot find suitable offers, or they assume that there are no accessible offers at their desired destination (TMBW, 2021). Thus, the **potential of this growing market is yet not tapped** by the destinations. As the UNWTO (2023) states: *"However, accessibility is still not seen as a game changer by all destinations despite a market of 1.3 billion people with significant disability in 2023, and 1 in 6 persons expected to reach the age of 65 by 2050. In Europe alone, "baby boomers" already account for over one third of the EU population and 70% of the EU citizens with disability have financial means to travel"*. Thus, increasing **diversification of consumer needs** require **creative strategies**, using **universal design and product innovation**. Processes, products and services must be customised to meet these specific needs. UNWTO (n.D.) notes that **specific qualitative and quantitative data is needed** for decision-making on future development in the sphere of accessible tourism. These will not only help to better understand the actual needs and **behavioural patterns of the travellers with**

access requirements but will also make the business case of tourism for all more evident for the private sector and public investments (ibid.).

Regarding the analysed best practice destinations Liepaja, Katerini and Bordeaux, several common patterns across all three destinations emerge in their approaches to enhancing accessibility and inclusivity in tourism. Each city is dedicated to implementing universal design principles to make their tourism infrastructure accessible to people of all abilities. This involves incorporating features such as tactile paving, accessible beach facilities, and barrier-free infrastructure. They also leverage technology such as developing a digital metaverse, using solar-powered Seatrac for beach access, and employing multi-sensory tools and accessible public transport. Community involvement is crucial, with Liepaja enjoying strong public support, Katerini using a volunteer team, and Bordeaux relying on a participatory citizens' forum. Each city also focuses on comprehensive planning and communication, with detailed information and effective engagement strategies. Additionally, adherence to accessibility certifications and standards is evident. Overall, these similarities in the solutions demonstrate a concerted effort across cities to create inclusive environments through thoughtful design, innovative solutions, community engagement, and adherence to high standards.

3.3.6 Maintenance and conservation of cultural heritage sites

The **cultural tourism sector** represents a substantial portion of European tourism, making up nearly 40% of the market. Additionally, cultural tourists tend to spend 38% more per day and extend their stays by 22% compared to other tourists (Cordis EU 2024).

Cultural heritage encompasses any cultural expression transmitted from the past and inherited by present day society. It can take material forms, such as buildings and artefacts, or be intangible, including traditions, lifestyles and customs. It depicts present and future way of life as well as cultural values of a society and enhances solidarity and social integration of communities (Mekonnen et al., 2022).

The **maintenance and conservation of cultural heritage sites** involve the **protection, preservation, and management of sites** that hold **historical, cultural, architectural, or archaeological significance**. These practices ensure that such sites are kept in good condition, so they can be enjoyed by future generations while retaining their cultural and historical integrity (UNESCO, 2008). In detail, the maintenance of cultural heritage sites included regular inspections, cleaning, and minor repairs; preventive maintenance to prevent damage before it occurs, continuous monitoring of the site's condition, including environmental factors like humidity, temperature, and pollution levels, as well as documentation and record keeping of the site's condition. In addition, conservation of cultural heritage sites involves the preservation, restoration, reconstruction and adaptation as well as legal protection.

The **relationship between tourism and cultural heritage destinations** is **intricate and multifaceted**. Cultural heritage is frequently regarded as an asset **that attracts tourists**, and it has become a **major catalyst for tourism development** through the transformation of heritage resources into tourism products. Renowned World Heritage Sites, such as the Taj Mahal in India, Machu Picchu in Peru, the Trulli of Alberobello in Italy, and Angkor Wat in Cambodia, as well as historic cities like Amsterdam, Venice, and Dubrovnik, draw millions of visitors each year (Peeters et al., 2018).

Tourism and cultural heritage management (CHM) often have a **complex relationship**. Traditionally, CHM focuses on preserving cultural heritage, while tourism develops and promotes these assets. This has led to two main perspectives: some view tourism and CHM as fundamentally incompatible, arguing that commercial interests compromise cultural values (Urry, 1990), while others believe that any "tourismification" stifles its potential benefits (Hovinen, 1995). Conversely, **collaboration between the two sectors can be mutually beneficial**. Heritage tourism **can reconnect people with their cultural roots** and strengthen interest in history, while also **supporting the conservation of cultural, historical, and industrial heritage** (Donert & Light, 1996; Harrison, 1997). Thus, tourism might play a vital role in preserving heritage sites.

Despite the world's abundant cultural and historical heritage, its **sustainability is under threat**, and the contribution of heritage tourism to local communities remains minimal. Eken et al. (2019) note that **cultural heritage properties are vulnerable** to a **range of physical, chemical, natural, and human-induced factors** that undermine the sustainability of these heritage attractions. Tourism can also negatively affect heritage sites. As destinations grow in popularity, **uncontrolled mass tourism** can create significant challenges. **Overcrowding** can lead to physical damage and create safety risks for visitors. **Excessive noise and pollution** create damage to infrastructure, and disruption to local residents' daily lives can diminish a destination's value and authenticity.

Furthermore, commercialisation, such as an **influx of vendors or souvenir shops**, can detract from a site's cultural integrity and authenticity (Cordis EU, 2024).

Factors that furthermore impact heritage conservation include **inadequate management, insufficient monitoring and evaluation, a lack of funding and stakeholder involvement**. Additionally, poor government attention and professional commitment, negative attitudes toward cultural heritage, **illicit trafficking**, insufficient promotion of cultural heritage, and **natural disasters** such as invasive interventions and climate change (including humidity, frost, excessive rainfall, floods, and heat) are significant challenges (Mekonnen et al., 2022).

To ensure the survival of cultural heritage in a globalised world, efforts must be made to carefully manage respective cultural heritage sites. This is where destinations can support by establishing **effective partnerships** between governments, private tourism sectors, NGOs, and local communities, which **are essential** to succeed. Through mutual understanding and consultation with and **involvement of local communities, stakeholders** can collaboratively support and manage cultural assets (Xulu, 2007). **Community-based tourism projects** facilitate direct engagement between communities and heritage tourism, promoting sustainable development of cultural assets (Eleonora 2007).

Engaging local communities in tourism management ensures that the economic benefits of tourism are shared locally, contributing to the site's sustainable preservation. Other measures for sustainable heritage site management include **controlling visitor numbers and promoting responsible tourism practices**. For example, Peru's Machu Picchu has imposed **limits on daily visitors to control overcrowding** and protect the site. Historical sites also **educate tourists about sustainability** and **collaborate with operators** to foster eco-friendly tourism (FasterCapital, 2024).

Moreover, the sustainability of cultural heritage in any area is at risk unless **conservation efforts are bolstered by clear guidelines, heritage site management plans** and research. In addition to stakeholder participation and community involvement, **resource mobilisation**, ecotourism activities, and **corporate fundraising** mechanisms should be developed in the destination to support conservation programs. Contributions should be based on the **willingness and capabilities of the stakeholders** (Mekonnen et al., 2022). Above all, a **legal framework** is necessary to ensure the conservation and protection of heritage (Pacheco & Ervity, 2011).

As stated above, **tourism generates substantial revenue** providing **financial support for the preservation of the sites and its maintenance**, restoration, and educational programs, contributing to the **safeguard cultural treasures** to support, strengthen and **maintain cultural heritage**, particularly in Europe's rural and less-known destinations (Cordis EU, 2024). However, it is essential to **seek alternative funding** sources for heritage conservation. Government funding, private donations, and corporate sponsorships can supplement tourism income. For example, the restoration of Rome's Colosseum was partially financed by a corporate sponsorship from Tod's, an Italian luxury brand. However, it is crucial to ensure that external funding does not compromise the cultural value of the site or lead to excessive commercialisation (FasterCapital, 2024). Additionally, **tourism raises public awareness** of the importance of heritage sites, **encouraging broader support for their protection**. Thus, responsible tourism practices also contribute to the preservation of these sites. Both measures, funding and awareness raising can contribute a lot to the valorisation of cultural heritage sites.

When traditional conservation of heritage properties is not feasible due to limited funds or expertise, tourism destinations could support the **digital preservation offers an alternative method of safeguarding cultural heritage**. Heritage digitisation is understood as the **process of photographing or scanning materials and transferring them to a digital format**. Sharing digitally preserved heritage on websites, social media platforms, and through Google search optimisation can significantly expand access, reducing the need for individuals to physically visit libraries, archives, or museums. **Digital preservation** provides a **long-term solution** to threats such as decay, war, fire, and flooding, ensuring that valuable resources remain available for future generations (Mekonnen et al. 2022).

In the framework of the 50 best practices analysed, the destinations focus on preserving and enhancing their cultural heritage by **revitalising historical sites** and **integrating modern technologies**. They use **interactive tools** like VR and AR to enrich visitor experiences and improve engagement. Each city benefits from **strong strategic planning** and **political or institutional support**, with Carbonia leveraging long-term political stability and international networks, and Cork relying on national and local frameworks, community involvement, and external funding. Both cities also emphasise the importance of using technology and maintaining robust partnerships to support their heritage conservation efforts.

3.4 Challenges related to the governance dimension of tourism

Tourism has been described by several governments and academics as relating to fields such as economics, sociology, cultural anthropology and geography (Theobald, 2005). Chisova (2015) views tourism from a socio-economic perspective and describes it as a twentieth-century phenomenon involving not only the travelling individual but also a **process engaging many people** and **multidisciplinary activities**. Consequently, a comprehensive sustainable tourism planning and strategic management is crucial as part of an effective destination governance developing **local tourism strategies and policies** to accelerate the transition to sustainable tourism.

Whereas **destination governance** refers to the coordination, regulation, and management of activities, resources, and stakeholders involved in the sustainable development of a tourist destination, in contrast, **destination management** is “the coordinated management of all the elements that make up a tourism destination (attractions, amenities, access, marketing and pricing) (UNWTO 2019, 10; UNWTO 2007)”. Responsible and sustainable destination management should entail “a process that effectively and harmoniously addresses the interactions between the visitors, the industry that serves them, the community that hosts them and the environment in a broad sense (natural and cultural resources) (UNWTO 2019, 10)”.

In a nutshell, whereas destination governance refers to the frameworks, policies, and processes that guide how decisions are made and how power is distributed among different stakeholders, destination management focuses on the daily operations and implementation of strategies to ensure that the destination runs smoothly and meets the needs of visitors and stakeholders. Thus, this underpins the **importance of a well-structured and profound governance approach** with appropriate strategies and policies to foster a sustainable transformation.

3.4.1 Appropriate local tourism strategies and policies to accelerate the transition to sustainable tourism

Destination governance relates very much to “the **development and implementation of a cohesive tourism destination policy**, an appropriate **institutional framework** to ensure the effective implementation of this policy and a consistent operational system” (UNWTO, 2019, p. 20). Developing a sound framework including **local tourism strategies and policies as well as respective criteria and indicators** is essential to consistently guide the management of destinations, with the participation of and collaboration among various stakeholders including government agencies, local communities, businesses, and non-governmental organisations, in accordance with their responsibilities and the needs of the destination (López Olivares, 2016). Accordingly, it should provide tourism stakeholders with guidelines **defining the scope for action and areas of responsibility** and **sets the direction** in perspective. Setting the course is necessary to **ensure legitimacy both internally and externally**, but also to be able to **set priorities for coming years** in a way that the idea of sustainable tourism can be realised (DTV, 2017; Rein & Balas, 2017).

Thus, the establishment of a destination governance framework is especially **relevant for the implementation of sustainable tourism practices** that aim to address the economic, social, cultural, and environmental dimensions of tourism, e.g. conservation of natural resources or preservation of cultural heritage (Gössling et al., 2020; Hall & Lew, 2009). This implies the broad cooperation and coordination of all stakeholders.

However, a **comprehensive sustainability approach** in destinations as **faces a myriad of challenges** including the overall **complexity of the structures, requirements and responsibilities** at destination level. Interaction among stakeholders at various levels (vertical coordination), **conflicting interests** among them, **inadequate resources** and infrastructure, **regulatory complexities** and **the inadequate implementation of strategies** as well as **governance gaps** are further issues to be noted in this context. Moreover, the escalating pressures of overtourism, climate change, and socio-economic disparities pose obstacles to sustainable tourism development (Torres et al., 2023). However, amidst these challenges lie **significant opportunities for positive change and innovation** (Becken, 2013).

To ensure a **coordinated destination management** approach a **sustainable tourism strategy** could be elaborated as a helpful instrument that translates the overall strategy tourism alignment and policy into region- and activity-specific actions and measures and formulates the short, medium and long-term orientation of tourism in the destination. Based on a status quo analysis, such a strategy includes a vision with guiding principles and specific goals, a development or action program with measures and a dynamic management cycle for implementing the

strategy. The aim is to establish guidelines for the future-proof and sustainable development of the destination and to review these regularly using a monitoring concept (DTV, 2017; Balas & Rein, 2017).

Adding to that, a **strong strategic organisational structure** in form of a **destination management organisation** (DMO) is also an important prerequisite for the implementation of sustainable tourism policies (Rein & Balas, 2017). Thus, the DMO's role should be to lead and coordinate activities under a coherent strategy in pursuit of a common goal. It must ensure that the **tourism policy objectives of the destination** are met within the framework established by the governing body and that all **tourism stakeholders are involved**. DMO's are therefore key for a coordinated approach and for the realisation of the destination's sustainability process through management, communication, planning and exchange with the relevant stakeholders (DTV, 2017; UNWTO, 2019).

Initially focused on marketing (Destination Marketing Organisation), in recent years DMOs more and more change their roles from **destination management** to **destination stewardship**, involving a broader mandate, which includes strategic planning, balances and meets the needs of a destination and its communities, and operates with legitimacy and consent under a **participatory governance** model. It requires a clear mission, good knowledge, data, and the identification of mutual interests and priorities, particularly between the public and private sectors (WTTC, 2021).

The growing **need for**, and interest in, **greater stewardship** has been accelerated during the COVID crisis and driven by factors including the increase in sustainability awareness and requirements, smarter tourism development and management for both tourists and residents, a rising call for social inclusion, new enabling technologies, a growing need for resilience and increasing governmental interest in destination governance.

Within this context, tourism increasingly becomes a **shaper of the living space**. To that end, DMOs are, in addition to the management of tourism, confronted with the demand for an extension of tasks to the entire "habitat" (living space) in the destination. Consequently, tourism management becomes habitat management and the DMO becomes a "habitat manager". This is underpinned by the fact that everyone is a guest of the destination - from locals to day visitors to overnight guests (DWIF, 2023). Moreover, destinations face a growing competition for business and tourists, in some cases also residents. Due to the increasing competition between locations for location-independent resources, such as labour, knowledge and capital, **location management** is becoming increasingly necessary requiring the promotion of interrelationships through the targeted formation of networks and the creation of synergies between tourism, regional development, urban planning and economic development, at operational, strategic and organisational level. How such governance processes take place and play out and tourism development is locally manifested is much influenced by institutional policy frameworks and strategies established (Hartman, 2021).

Summing up, the **need for transformation** forces DMOs to take a **holistic approach** setting up a coherent integrated policy framework that facilitates a comprehensive (sustainable) tourism planning and development. Some approaches for developing a destinations policy framework are listed as follows:

- **Inclusive Stakeholder Engagement** including the establishment of multi-stakeholder councils or boards that include representatives from all key sectors, with regular public consultations and forums to gather input and feedback as well as a transparent communication to keep stakeholders informed and involved.
- **Capacity Building and Education**, e.g. training programs for local communities and tourism operators on sustainable tourism practices and workshops and seminars on governance and stakeholder engagement; facilitating knowledge exchange between established and emerging tourism destinations.
- **Adaptive Management and Flexibility** including the establishment of monitoring and evaluation systems to track tourism impacts and policy effectiveness and the promotion of a culture of continuous improvement and innovation in governance practices.
- **Digital Technologies and Smart Tourism** such as the implementation of digital platforms for stakeholder communication and collaboration, the use of data to inform decision-making and policy development and the development of smart tourism initiatives that enhance visitor experiences while supporting sustainable practices.
- **Holistic and Integrated Planning** including the integration of tourism planning with urban planning, transportation, and environmental conservation as well as the cross-sectoral collaboration to address complex challenges comprehensively.

By considering these approaches, destinations can create an effective governance framework and structures that promote sustainable tourism development, ensure stakeholder satisfaction, and enhance the overall visitor experience. However, it also requires a substantial number of resources, organisational capacity, extensive comprehensive and functioning organisation structures, institutional structure and thus an overall governance system.

In the framework of the Best Practices cases analysis, Tahko's engagement in the "Sustainable Travel Finland" program and Borkum's "Living Space Borkum 2030+" strategy illustrate the importance of **integrating local needs and future visions into tourism policies**. Tahko and Nassfeld-Preseggersee-Lesachtal-Weissensee's DMO engage in rigorous certification processes and strategic planning, involving local communities in developing and implementing sustainability initiatives. Additionally, **data-driven decision-making** is emphasised, as seen in Malta's Tourism Strategy, which **balances tourism growth with social and environmental well-being** through clear objectives and measurable targets. Overall, these patterns highlight a commitment to collaborative governance, community involvement, and evidence-based strategies to foster sustainable tourism development.

3.4.2 Lack of community participation in tourism activities

Tourism can provide important economic support for tourism destinations and their SMEs. At the same time, it is important to ensure that tourism activities don't cause harm to the nature, the local environment and the social and cultural **wellbeing of the local residents**, the latter often being ignored due to unsustainable tourism practices (European Commission, 2022; Djurkin & Soldić Frleta, 2021).

Local communities are perceived as important players and **key stakeholders** of tourist destinations as the well-being of residents is a **key aspect to the long-term sustainability of tourism**. In order to maintain the sustainability of long-term livelihood of the people, the community needs to participate in tourism development (Setiyorini, 2019). Furthermore, the local community is directly linked to the development of tourist attractions and will interact directly with tourists. Therefore, community participation is a key determinant in the success of developing these attractions (Anis et al., 2021). In addition, the participation of the local population in tourism development promotes the acceptance of tourism⁸.

Therefore, effective community participation in tourism activities involves **engaging local residents** in the **planning, development, and management of tourism**. This approach ensures that tourism benefits the community, preserves cultural heritage, and promotes sustainable development. Thus, it is a particularly important task for local tourism governances to develop **mechanisms for including residents in planning and decision-making** through concrete institutional arrangements as well as in the follow-up of tourism activities and impacts (Djurkin & Soldić Frleta, 2021; European Commission, 2022). Moreover, destination governance influences positive behavioural support on part of the local population towards destination branding when mediated by destination identification (Amani, 2023).

Community involvement and participation in tourism basically embraces two different aspects: On the one hand community participation can be witnessed **in tourism activities and services** (e.g. in terms of entrepreneurship, business ownership) and the sharing of tourism benefits. On the other hand, residents participate in the **decision-making process** in view of a **sustainable development of the destination** (Cazan, 2019; Anis et al. 2021). However, participation has different degrees of intensity, ranging from "being kept informed" to being an active participant in the tourism development (Cazan, 2019).

The active involvement of the community in tourism development is crucial, as it yields significant benefits. Firstly, it **enhances the internal planning and sustainable development** of the destination. Secondly, it positively **impacts the effectiveness of external marketing efforts**. For example, the interactions between tourists and the local community **shape the "moment of truth" and the overall experience** at the destination, with higher tourist satisfaction and increased likelihood of future visits (Setiyorini et al., 2019).

⁸ This has been shown by a study, which compared the attitudes of residents in a highly visited destination and a destination in the early stage of development. The obtained results indicate that residents with no connection to tourism are the most dissatisfied with the local tourism governance dimensions (Djurkin & Soldić Frleta, 2021).

In terms of holistic destination responsibility, **locals should be actively involved in tourism development** at an early stage. Hence the participation of citizens in the development of tourism and living spaces becomes ever more important **aiming at an understanding of their needs, requirements and pain points** in the destination. As good practice examples, the Berlin “Citizens' Advisory Council for Tourism” (Bürger:innenbeirat Tourismus Berlin) and the nationwide project in Mecklenburg-Vorpommern “Ideen.Machen.Tourismus. MitReden. MitGestalten” can be mentioned. Together with residents and tourism professionals, challenges in tourism were discussed in citizen dialogues and ideas workshops, and further worked on real solutions resulting in a mission statement and recommendations for action for resident-oriented tourism development (Rottig, 2024).

Thus, this evolution seeks to sustain tourism as an agent for socio-cultural and economic development. It is believed that participatory development approach facilitates the implementation of principles of sustainable tourism development by creating better opportunities for local people (Tosun, 2000). This also leads to more positive attitudes toward tourism development and the preservation of local resources, while expanding the community's tolerance toward tourism. These factors can help ensure both visitor satisfaction and continued benefits for the residents of destination areas (Tosun, 2006).

Hands-on elements of effective community participation in tourism include:

- **Inclusive Decision-Making:** Involving a broad spectrum of community members, including marginalised groups, in decision-making processes. This can be achieved through public meetings, workshops, and surveys.
- **Capacity Building:** Providing education and training to community members to enhance their skills and knowledge related to tourism, such as hospitality, tour guiding, and business management.
- **Ownership and Control:** Ensuring that the community has ownership and control over tourism resources and enterprises. This can be facilitated through community-based tourism initiatives where locals own and operate tourism businesses.
- **Benefit Sharing:** Implementing mechanisms to ensure that the economic benefits of tourism are distributed equitably among community members. This could include profit-sharing models, community funds, or employment opportunities for locals.
- **Cultural Preservation:** Promoting and preserving local culture, traditions, and heritage through tourism activities. This involves respecting and showcasing cultural practices and ensuring they are not exploited or commodified.
- **Environmental Stewardship:** Engaging the community in sustainable tourism practices that protect and preserve the natural environment. This includes initiatives such as eco-tourism, conservation projects, and responsible waste management.
- **Collaborative Partnerships:** Establishing partnerships between the community, government, NGOs, and private sector to support and enhance community tourism initiatives. Collaboration ensures resources, expertise, and support are available for sustainable tourism development.
- **Continuous Feedback and Adaptation:** Implementing a system for regular feedback from the community and tourists to adapt and improve tourism practices. This ensures that tourism activities remain relevant, beneficial, and sustainable.
- **Promotion and Marketing:** Involving the community in the promotion and marketing of their tourism offerings. This can include storytelling, local branding, and the use of social media to attract visitors.
- **Conflict Resolution Mechanisms:** Establishing mechanisms to address and resolve conflicts that may arise from tourism activities. This ensures a harmonious relationship between tourists and the local community.

Summing up, effective community participation in tourism helps to **create a more sustainable and inclusive tourism destinations**, where the benefits are maximised for the community and negative impacts are minimised. In the framework of the Best Practices cases analysis, common solutions across destinations for enhancing community participation in tourism include **involving locals in decision-making and project development**. Gothenburg and Lyon both engage residents directly in shaping tourism experiences and environmental initiatives. Programs like Lyon's Greeters and Aarhus's ReThinker **leverage local volunteers** to enhance visitor interactions and support cultural events. **Educational efforts**, such as Vestre Skole's community hub in Middelfart

and climate festivals, raise awareness and foster local involvement in environmental issues. These strategies collectively aim to **integrate local perspectives and contributions into tourism development**, promoting a more engaged and supportive community.

3.4.3 Lack of stakeholder management (multi-level, multi-sectoral)

Effective stakeholder management involves identifying, analysing, and engaging with individuals or groups who have an interest or stake in a project or organisation. Stakeholder management takes place at **multi-level and multi-sectoral levels** involving the **coordination and engagement of stakeholders** across **different hierarchical levels and sectors**. This approach is crucial in complex projects or in destinations that span various domains and require input from diverse groups.

Freeman (1984) argued that **stakeholders** are a **significant component of an organisation's environment**, and in fact, the support of all stakeholder groups is necessary for the continued survival of an organisation (Sheehan, Ritchie, & Hudson, 2007). Unlike traditional management, which primarily focuses on internal stakeholders, stakeholder management addresses the needs and interests of stakeholders who are internal, external, or interact with the organisation.

In tourism, literature identifies various **types of stakeholders**, often classifying them into **six main categories**: tourists, industry, local community, government, special interest groups, and educational institutions. These stakeholder groups play a **significant role in a destination's tourism development**, affecting areas such as tourism supply and demand, regulation, management of tourism impacts, human resources, and research. Furthermore, stakeholders, play a decisive role in sustainable destination development (Waligo et al., 2013).

The importance of engaging with stakeholders⁹ has been broadly recognised in tourism. Stakeholder collaboration is widely recognised as an effective strategy for the sustainable planning, management and development of tourism as they clearly influence tourism development initiatives.

The push for **increased stakeholder participation** represents a shift from shareholder-participation, away from traditional policies that lack informed and open public participation in decision-making, towards stakeholder-orientation for organising, managing, and governing destinations (Peeters et. Al., 2019, Baker, 2006; Nelson et al., 1993). Yet, previous research indicates that stakeholder engagement enhances the legitimacy of destination governance, ensures efficient destination management, and promotes equitable participation and benefit distribution. Local residents are particularly important stakeholders, as they possess extensive knowledge of local history and culture and are well-informed about local circumstances (see 2.5.2).

However, the **multiplicity and heterogeneity of tourism stakeholders** renders sustainable development of tourism complicated (Waligo et al., 2013).

Thus, **sustainable tourism** is significantly **hindered by a lack of cooperation and collaborative mechanisms** among various stakeholders and sectors preventing the establishment of essential connections. Due to **fragmented efforts** and **insufficient communication among tourism-related stakeholders**, **integrated destination management** aiming at a resilient sustainable tourism development remains an elusive goal. Often, **stakeholders operate independently**, facing challenges alone rather than uniting to overcome barriers and implement sustainable tourism initiatives effectively. Further challenges include **differences in priorities**, **organisational structure**, and **resource availability** (Waligo et al., 2013).

Consequently, implementing **sustainable tourism** with **multi-stakeholder processes** necessitates **effective leadership**, **incentive structures**, **priority setting**, **a long-term vision**, **resilience**, and **adequate financial resources** (Waligo et al., 2013). To progress successfully, it is imperative that all relevant **stakeholders also beyond the tourism system at local, regional, and national levels assume responsibility** and engage collaboratively. Besides, effective stakeholder management requires a **multi-level and multi-sectoral approach**, where diverse stakeholders from government, private sector, and community organisations coordinate their efforts. This **holistic, network-orientated destination strategy** ensures that **all voices are considered and integrated** into the planning, implementation and transformation processes. Within this context, the **DMO becomes a companion of transformation processes** and co-guardian of the common good in the destination.

⁹ Since Murphy's publication on the Community Approach (Murphy, 1985)

So far, stakeholder management processes have been crucial in achieving sustainability in tourism destinations and securing public support through collaborative practices (Peters et. al, 2019). To that end, effective collaboration not only fosters **strong networks** among stakeholders but also provides **access to essential resources needed** to meet their goals, both of which are vital for sustainable tourism development (Saito, 2017). Therefore, identifying and analysing stakeholders is crucial for establishing effective partnerships.

Additionally, **digital technologies** present **new opportunities to engage and interact with stakeholders** responsively.

Summing up, developing a successful tourism destination cannot be achieved by government alone or by a single dominant tourism organisation (Saito, 2017). **Stakeholders play a crucial role in achieving sustainability objectives**, making their perspectives essential for creating effective stakeholder involvement strategies. Key factors influencing stakeholder engagement in sustainable tourism include the **quality of leadership**, the **quality and accessibility of information**, **stakeholder attitudes**, their **capacity for involvement**, **relationships among stakeholders**, and **implementation priorities**. These are underpinned by the complexity of sustainable tourism, contextual circumstances and the diversity of stakeholders (Waligo et al., 2013).

In the framework of the Best Practices cases analysis, Azores and the Vaasa region prioritise **strong stakeholder management** to advance their sustainable tourism goals through collaboration and engagement. In both cases, a wide range of stakeholders, including local businesses, regional organisations, and sustainability teams, are involved in the development and implementation of sustainability strategies. The Azores **follow recognised sustainability frameworks** like EarthCheck and GSTC criteria, while Vaasa region promotes Finland's Sustainable Travel Finland (STF) program. Both destinations provide **training and resources** to help local tourism providers and SMEs adopt sustainable practices. Additionally, they **foster communication and collaboration** by engaging stakeholders through methods such as forums, workshops, newsletters, and internal training. Overall, the Azores and Vaasa region demonstrate a commitment to sustainable tourism by emphasising stakeholder collaboration, training, and adherence to established sustainability frameworks.

3.4.4 Lack of visitor participation in tourism destinations

Effective visitor **participation in tourism destinations** refers to the ways in which tourists actively engage with and contribute to a destination beyond just being passive observers. It involves various forms of interaction and involvement that can **enhance the overall experience for both visitors and the local community**. Key aspects of effective visitor participation are:

- **Engagement in local culture:** Tourists actively participating in cultural events, festivals, or local traditions which includes attending performances, taking part in traditional ceremonies, or engaging in local customs.
- **Community involvement:** Visitors contributing to community projects or initiatives, such as volunteering in conservation efforts, supporting local businesses, or participating in community-based tourism programs.
- **Interactive experiences:** Engaging in activities that allow tourists to interact with locals or the environment, e.g. guided tours, workshops, hands-on experiences that provide a deeper understanding of the destination.
- **Feedback and suggestions:** Providing feedback on their experiences which can help improve the services and offerings at the destination, e.g. surveys, focus groups, online reviews.
- **Sustainable practices:** Actively participating in sustainable tourism practices, e.g. minimising environmental impact, respecting local wildlife/habitats, adhering to guidelines that promote responsible tourism.
- **Cultural exchange:** Engaging in meaningful interactions with local residents that promote cultural exchange, such as learning about local traditions, sharing experiences, and fostering mutual respect.

Effective visitor participation can lead to a richer experience for tourists and contribute positively to the destination, creating a more vibrant, sustainable, and mutually beneficial relationship between visitors and the host community.

In tourism, an experience reflects customer involvement at various levels—emotional, physical, spiritual, and intellectual (Prebensen et al., 2013). Experiences, whether positive or negative, leave lasting impressions on consumers and impact businesses (Zatori et al., 2018).

Tourism experience is crucial as it encompasses the entire process of planning, engaging in, and reflecting on events. During their visit, tourists search for authenticity, uniqueness, entertainment and most significantly safety and security. A positive experience can enhance tourists' intentions to revisit, encourage positive word-of-mouth, and create lasting memories. Likewise, hosts benefit from improved perceptions of tourists, increased engagement, and strengthened relationships because of high-quality interactions (Choudhury and Dixit, 2020).

Recent trends in tourism research indicate that tourists are increasingly focused on the overall tourism experience, which is also becoming a key concern for service providers (Lee & Jan, 2018; Lu et al., 2015). This experience encompasses tourist engagement through both positive and negative interactions from the perspectives of tourists and tourism service providers. Prior studies on tourist engagement in nature-based ecotourism have explored various factors, including psychological engagement, brand loyalty, destination brand image, social media engagement, and their effects on satisfaction and loyalty (Cabiddu et al., 2014; Chen & Rahman, 2018; Mafi et al., 2020; Quoquab et al., 2020; Rasoolimanesh et al., 2019). However, there is a need for a deeper understanding of what motivates engagement from different perspectives, such as cultural, community, personal, and environmental values (Paul & Roy, 2023).

Moreover, with the participation of both the consumer and the producer, the value of the product or services is created or maintained – a process so called value co-creation. Value co-creation occurs when consumers actively participate in both the consumption and production of value, contributing to the design of their experience (Prebensen and Foss 2011). The 'first generation experience,' which emerged in the late 1990s, was primarily focused on entertainment and enjoyment. In contrast, the 'second generation experience' emphasises co-creation (Binkhorst 2005). Experience co-creation is highly personalised, varying from person to person based on factors such as services, destinations, and other tourism-related elements (Prahalad and Ramaswamy 2004). While products and services hold intrinsic value, it is the market that co-creates this value and shapes customer experiences. In tourism, the involvement of tourists, stakeholders, and destination settings plays a crucial role in co-creating experiences. Tourists seek interaction with producers or service providers to enhance their experience. According to Grönroos (2006), it is not only the tourists who engage in this process, but service providers also have a responsibility to facilitate opportunities for tourists to participate in value creation.

For the sustainable development of tourism, it is essential to connect various elements, with local communities (hosts) and tourists (guests) being central to this process (Zhang et al. 2006). Traditionally, hosts and guests have been positioned at opposite ends of the tourism transaction, with hosts focused on production or service provision and guests on consumption (Nash and Smith 1991). Research indicates that greater interaction of visitors with hosts enhances tourists' experiences, although this interaction may not always be entirely authentic (Dixit 2014; Cronauer 2012; Maccannell 1973; Zhang et al. 2006). This interaction is often brief, as tourists spend only a limited amount of time with the host community and experience a condensed version of their lifestyle, culture, and traditions (UNESCO 1976).

Consequently, it is crucial to improve the destinations quality and to identify the consumers' imagination and interest in the context of tourism by providing creative, innovative, and educational activities as well as providing experiences and memorabilia that prioritise the specific characteristics, and directly involves tourists in tourism services (Casaló et al., 2008). Most importantly, service providers must be able to design an experience-involvement-based activity that is more memorable to visitors (Widi Nugraha et al, 2021).

In the framework of the best practices cases analysis, Juist has developed several initiatives to **involve tourists in destination development** and to ensure both guest satisfaction and sustainable practices. Juist's Guest Parliament, for example, gave tourists the opportunity to advise the destination on sustainable practices. Although the Guest Parliament was abolished because the islanders felt patronised by the guests, it promoted the tourists' sense of responsibility and connection to the destination. The island continues to engage visitors through feedback mechanisms, sustainability events, and newsletters. In Middelfart, **visitors are invited to participate** in conservation activities, such as reporting sightings of harbour porpoises or collecting waste for discounts on water activities. These approaches foster active visitor engagement, promote responsible behaviour, and contribute to sustainable tourism development.

3.4.5 Resilience building and crisis management

Travel and tourism sector is highly exposed to various disaster risks and **resilience and crisis management are therefore particularly important**. As one of the sectors most affected by the Covid-19 pandemic, the tourism industry has faced great uncertainty but has also made ambitious efforts to recover from the crisis and to prevent similar scenarios in the future. However, consecutive global shocks have demonstrated the **importance of building systemic resilience** across the tourism ecosystem (OECD, 2022).

“**Resilience** refers to the capacity to absorb disturbance, recover from disruption and adapt to changing conditions while retaining essentially the same function as prior to the shock. It goes beyond risk management and concerns the performance of the economic system once a threat has materialised. It is characterised by the speed and strength of recovery, in particular through adaptation and transformation” (OECD, 2022).

Resilience actions in tourism are generally aligned with **crisis management and sustainability concepts**, and **measurement** that is focused on recovery. Individually, these components enable the sector to adapt and respond in the face of a crisis. In detail, agile, flexible and well-coordinated tourism policy approaches are a key part of responding and adapting to change and building a more resilient tourism system. However, due to its cross-cutting nature, tourism requires profound co-ordination across policy areas and levels of government to ensure that the sector **integrated into broader crisis response and risk management strategies** (OECD, 2022).

According to Coombs (2019) a **crisis is defined** as “an unpredictable event that threatens important expectancies of stakeholders related to health, safety, environmental, and economic issues, which can seriously impact an organisation’s performance and generate negative comments.” Concerning tourism, crises encompass any event, which has the potential to threaten the continued normal operations of businesses related to tourism and harming the general reputation of a tourist destination because of **the negative impact on the perception of its visitors** (Vargas-Sánchez, 2018). This leads to a reduction in the number of arrivals and tourist income, causing a **decline in local economy** (Sönmez et al., 1994).

Paraskevas and Altinay (2013) highlight that **due to its high interconnectivity** with all societal aspects (political, economic, social, technological and environmental) a tourist destination is more vulnerable to crisis as it is **affected** by all the possible disruptions to normality. According to Faulkner (2001), the root of a crisis may be seen as the incapability of organisations to face gradual or sudden changes. **Sudden unpredicted events** can include (besides others):

- **Climate change and natural disasters:** climate change can lead to more frequent and severe weather events such as hurricanes, floods, and droughts, affecting both infrastructure and natural attractions. Rising sea levels can threaten coastal areas, and changing weather patterns can alter the appeal of a destination
- **Security:** Changes in security conditions, such as political instability, war, terrorism, or crime rates, can deter tourists and impact the safety and reputation of a destination.
- **Financial crisis:** Price inflation can increase the cost of living and travel in a destination, making it less affordable for both tourists and residents. Higher prices for accommodation, food, and services can reduce a destination's competitiveness.
- **Health crises:** Responding to pandemics or health emergencies by implementing health protocols, vaccination campaigns, and travel advisories.
- **Technological changes:** Adapting to technological advancements by integrating digital solutions for booking, navigation, and customer service

Depending on the type of crisis and the extent to which it affects the destination, the impacts can be of a **material and immaterial nature**. Material impacts include for example cancellations and rebookings, decrease in new bookings, low occupancy rates (e.g. means of transportation, hotel) as well as declining turnover and loss of market share, compensation payments damages or impairment of the normal business operations and increased marketing expenditures. Immaterial impacts refer to loss of image, and of trust among customers, public, investors and employees, long-term customer migration, loss of motivation among employees, difficulties in finding qualified personnel or possible political requirements and restrictions imposed by legislation (Dreyer et al.; 2001; Gläßer, 2005).

In general, tourism has been proven vulnerable to **exogenous shocks**, but crises also highlighted underlying **endogenous weaknesses**. These include for example: Management errors, financial instability, shortcomings in human resources or in the organisational area (Dreyer et al., 2001). It is these endogenous weaknesses that policy makers and businesses must consider to proactively address, to build systemic resilience while creating opportunities for future growth (OECD, 2022). Overall, the **ability to respond to changes in destination conditions** is a **multifaceted effort** that requires **coordination among various stakeholders**, including government agencies, private stakeholders, and local communities.

Due to the frequency of crises in recent years and the severe consequences of the COVID-19 pandemic, scientific research has increasingly focussed on the topic of **crisis management**. Crisis management can be broken down into four steps (Wut et al.; 2021): **Crisis prevention, crisis preparedness, crisis response and crisis revision**.

Crandall et al. (2014) describe this in detail: one of the outstanding means of **crisis prevention** is to identify emerging problems in advance through certain warning signs. In **crisis preparedness**, management teams are formed to develop crisis plans and appoint people to act as mediators. This then becomes relevant in **crisis response**, i.e. in an acute emergency. The **ability to respond to changes** in a destination's conditions refers to the capacity of businesses, governments, and communities within a destination to adapt to and manage various external and internal factors that can impact tourism and overall living conditions. **Crisis revision** takes place after the crisis to evaluate its performance and draw lessons for the future.

Predicting crises in the medium term is almost impossible - but being prepared for them is not: “Robust **destination governance structures** enhance the resilience of tourist destinations to external shocks, such as natural disasters, economic downturns, or global health crises. By implementing **risk management strategies**, **diversifying tourism products**, and fostering **innovation**, destinations can mitigate the impacts of crises and expedite recovery processes” (Becken, 2013). In order to be better prepared for any potential disaster risks to the visitors and the industry and to be able to promptly respond to disaster events, tourism crisis management entails developing **measures, plans** and **manuals**. Deloitte (2024) determines the following needs for destinations for a better preparedness towards crises:

- **Robust coordination system:** for tourism to be resilient, it needs a robust system of coordination that encompasses horizontal, vertical, and sectoral policy coordination.
- **Risk assessment and crisis response mechanisms:** industry and policymakers are increasingly recognising the importance and need to develop crisis management plans and response strategies in the tourism sector.
- **Guidance and training:** the tourism ecosystem (specially SMEs), need guidance and training in the areas of risk and crisis management.
- **Promotional strategy:** tourism destinations, especially those at the local/regional levels need support to develop strong promotional strategies and measures to accelerate the recovery from crisis events.
- **Adequate resource allocation and funding** are critical needs for the tourism ecosystem to build resilience, develop preparedness for crisis events, and effectively manage and recover.
- **Clear communication channels** and access to accurate information are critical needs for the tourism ecosystem to effectively respond and recover from future crisis events.
- **Monitoring and evaluation** frameworks for data collection, analysis, and reporting are getting increasingly important.
- **Access to knowledge** (best practices, measures, policies, initiatives): knowledge sharing among different countries, different sectors, and public and private stakeholders at various levels is essential for the tourism ecosystem to enhance its preparedness and response to crisis events.

However, a **crisis requires urgent action** and an **adequate response** to cope with its negative impacts as well as to overcome the long-term effects. This should be supported by the cooperation of the main authorities and stakeholders in the sector and applying appropriate crisis management instruments (Martens et al., 2016). According to Durocher (1994) the involvement of the public and private sector and full cooperation is essential for a complete recovery.

In consequence, from a destinations point of view the objective would be to **develop a proactive model for the management of crises event at site** (Vargas-Sanchez, 2018). In order to strengthen the ability to respond as a crisis occurred, the following factors should be kept in mind as being critical regarding the response management: **People should be adequately trained** and should be familiar with all crisis or emergency protocols. For this purpose, the **support of federations and associations** is recommended, who are specifically aimed at taking control of managing the crisis (Martens et al., 2016). Furthermore, a **good working and coordinated team** should be put in place and is necessary in terms of **target-orientated decision-making** and to **avoid frictional losses** in a surrounding already characterised by pressure and emergencies. Furthermore, it is important to have **emergency communication systems in place**. It still seems to be a common occurrence that during a crisis, telephones, switchboards and mobile phone lines collapse (Vargas-Sanchez, 2018). Nevertheless, an accurate preparation is crucial for the success of any response strategy, which should include simulations that are not too easy. Furthermore, conclusions and learnings from previous events should be better considered to prepare for future occasions (Vargas-Sanchez, 2018; Martens et al., 2018).

Summing up, implementation and action are important to build on the platform of change and collaboration from the crisis, better manage tourism development and transition to a stronger, fairer and more sustainable tourism system (OECD, 2022). Generally, the key to success is creating a problem-solving action plan including prevention measures that combine all stakeholders' interests and activities.

In the framework of the Best Practices cases analysis, Helsinki and the Ahr Valley both implemented crisis management solutions tailored to their challenges. Helsinki emphasises **comprehensive safety planning** with real-time information systems, coordinated by a Safety and Preparedness Team, and fosters resilience through **collaborative networks** and the **DataLokki platform**. In contrast, the Ahr Valley's recovery from infrastructure damage is guided by the "Sustainable Tourism Concept Ahrtal 2025," focusing on local market engagement. Both destinations share common approaches, including crisis-specific safety plans, stakeholder collaboration, and a focus on sustainability to enhance resilience and support recovery.

3.4.6 Lack of awareness of sustainability and resilience among tourism stakeholders

Awareness raising **and information** towards tourism stakeholders aims to **ensure that all participants within the tourism industry and destinations** (destination managers, tour operators, hotel managers, travel agents, local government officials, and community members) **are well-informed about the current and future challenges and opportunities** related to sustainability, resilience and innovation, so they can **make informed decisions** and adopt best practices that contribute to a more sustainable and forward-thinking tourism ecosystem.

Key components to raise awareness regarding sustainability and resilience include:

- Identifying key challenges and topics, e.g. sustainability and innovation
- Disseminating information through educational programs, publications and reports and digital platforms
- Engaging stakeholders through consultation and collaboration, networking event and advisory services
- Raising Awareness through campaigns, case studies/success stories and media engagement.

Sustainability and innovation become even more important in tourism, as there is an **increasing demand for sustainable travel worldwide** (ibid.). According to the Booking.com's Sustainable Travel Report 2023 (booking.com, 2023) that contains insights gathered from more than 33,000 travellers across 35 countries and territories, **76% of global travellers saying that they want to travel more sustainably** over the coming 12 months. The recent climate change news continues to be a key influence driver for 53%, who say that this has encouraged them to be more sustainable.

Looking at the **source markets** and their **awareness towards sustainability**, a strong difference can be noticed between countries. 17 out of the top 20 leading countries in the Sustainable Travel Index 2023 are in Europe. Sweden was ranked first, followed by Finland and Austria, Estonia and Norway (Euromonitor International, 2024).

Figure 4: Top 10 Countries in the Sustainable Travel Index 2020

	Rank 2020	2015–2020	2019/2020
Sweden	1	♦	♦
Finland	2	▲	♦
Austria	3	♦	♦
Estonia	4	♦	▲
Norway	5	▲	▲
Slovakia	6	▼	▼
Iceland	7	▼	♦
Latvia	8	▲	♦
France	9	▲	▲
Slovenia	10	▼	▼

Source: Euromonitor International

Note: rank 1 = best performing; yellow diamond signifies no change, green arrow - positive movement and red arrow – negative movement in the ranking

Source: Euromonitor International (2021)

Despite these positive results, the **lack of awareness and education about sustainable tourism** still represents a key barrier to its implementation. By raising awareness about the benefits of sustainable tourism and the importance of responsible tourism practices, tourism destination managers can encourage tourists, businesses, and local communities to **adopt sustainable behaviours** (Nowack et al. (2011) and Tölkes (2020).

To that end, **awareness raising** can be undertaken in a manifold way. They can take the form of **public service campaigns, social media awareness drives, or educational workshops**. By clearly defining the objectives and scope of an awareness program, organisations can effectively engage their target audience and promote behavioural change (AIContentfy, 2023). Raising awareness about the advantages of green transition for tourism businesses can be undertaken through **the promotion of sustainable destinations and dissemination of best practices in greening tourism** (European Commission, o. D.). Overall, raising awareness among local communities about the benefits of green tourism is an important step in promoting sustainable tourism practices (Frey & George, 2010). This can be done through **education and outreach programs**, as well as through **involving local communities** in the development and implementation of sustainable tourism initiatives (Lordkipanidze et al., 2005).

Summing up, **community engagement programs, awareness campaigns, and educational initiatives** (Chan et al., 2021) can be effective means to educate about the **advantages of sustainable tourism practices** and involve stakeholders in the decision-making process. Furthermore, green tourism can support conservation efforts by raising awareness about the **importance of environmental conservation** and sustainability (Edgell Sr, 2019). By promoting responsible tourism practices and supporting conservation initiatives, green tourism can help protect natural resources and promote environmental sustainability (Neto, 2003). Thus, **environmental and socio-cultural benefits** play a **crucial role in shaping community awareness** and commitment to sustainable tourism (Nguyen, 2023).

In the framework of the Best Practices cases analysis, solutions addressing the lack of awareness of sustainability and resilience among tourism stakeholders include information and educational campaigns for both residents and tourists. Destinations also utilise certification processes to educate and drive continuous improvement in sustainability. Additionally, involving the local community in participatory environmental projects, such as in Taranto, fosters greater awareness and active contribution to sustainable practices.

3.4.7 Lack of knowledge and skills of tourism stakeholders regarding sustainability and resilience

The dynamics of tourism are complex, influenced by a wide range of factors spanning from economic, socio-cultural, technological, environmental, and political aspects making an enormous impact across all stakeholders within the travel sector. these **various factors** interact and shape both the demand and the offer side of tourism. Only if people are properly trained, problems occurring and affecting destinations (e.g. regarding economic, environmental or societal issues) can be tackled efficiently **enabling destinations to remain competitive aiming sustainability at long-term benefits** (European Parliament, 2017; European Commission, 2017; Training Aid, 2017).

The European Union (2022) underlines that tourism actors in particular need skills to understand elements concerning the environmental sustainability and emphasises that, within this context, **skills development is necessary, especially at local level**, for example, to implement energy and resource efficiency measures. These skills could help tourism actors to **meet new policy requirements** and **recognise how addressing sustainability challenges** could also provide **new business opportunities** with the **increasingly sustainability-conscious customers**. As studies show the demand for sustainable tourism is increasing, and therewith the need for capacity building to enhance the quality, competitiveness, social and environmental performance of the destination offering respective products and services (ibid.).

Capacity **building** is therefore essential to ensure the **success of economic transformation** especially for the vitality and sustainability of the tourism sector for inclusive growth and, eventually, poverty eradication (UNWTO n. D.). In addition, capacity building is used as **capital for the community** to part the productive economic development activities in the tourism sector and to survive the continuous changes of the environment (Endarto et al., 2020). Moreover, **up-skilling and re-skilling of personnel** working in the tourism ecosystem is a fundamental building block of a resilient tourism ecosystem that needs to be **prepared to meet the future job market** and at the same time, **face the challenge of staff shortages** (ibid.) (See Error! Reference source not

found.). Ultimately, strengthening the **target-orientated and high-quality of the tourism workforce** is also about better equipping destinations and communities with the knowledge and **skills necessary to face various risks and threats** posed by changes in socioeconomic, environmental and geopolitical conditions (Training Aid, 2017). Adding to that, it is necessary to respond to the emerging and persisting new trends in the sector, such as provision of services to targeted groups of visitors (for example, elderly or with disabilities; visitors seeking specific experiences such as sustainable/green tourism, cultural tourism, adventure tourism etc.) (European Commission, 2016).

Today, certain trends are already emerging that will have an impact on the profile of the skills that need to be developed. Yet, **transversal skills** play a significant role: **Skill gaps and shortages** reported by employers mostly regard language, interpersonal skills and ICT skills rather than job/tourism-specific skills (European Commission, 2016). According to a survey from Training Aid (2017) many tourism industry employers see **sustainability skills** as **among the most important professional competencies** both for staff and management positions, while on the other hand employees often either lack awareness or access to opportunities to build sustainability skills. Investing in training and capacity building in sustainability-related areas, therefore, is an important consideration for tourism organisations, not just to improve their sustainability practices, but also to stay competitive.

Finally, **capacity building is a critical part of ensuring a sustainable and resilient future** of tourism destinations. It is about **developing the potential and ability of stakeholders** to make and implement decisions that will lead to more sustainable tourism, by increasing their understanding, knowledge, confidence and skills (UNWTO, 2004). There are many advantages to using **capacity building as an instrument to strengthen the sustainability** of tourism (ibid.). Much depends on destination managers' and stakeholders' capabilities and skills, hence, DMOs must create a suitable environment that forms leadership and coordination as part of human capital development. Therefore, DMOs must ensure that competent people working in the sector promote positive image for the visitors and the host community (Flores & Costa 2024).

Digital technology advanced computing and data will strongly impact the sector, making digital literacy a basic skill. Using and strategically integrating digital tools in work processes can facilitate developing and **implementing more effective and better-quality services** to meet the changing demand and expectations of the customers. Tourism actors need both basic and advanced digital skills (European Union, 2022). Furthermore, the **exponential development of science** will require the ability to constantly acquire new knowledge and unlearn what becomes obsolete, dictating a critical sense, a spirit of curiosity and a willingness to learn throughout life. Besides, in a world of **disruptive innovation** where **organisational agility** will be the first line of competitive defence, the courage to make decisions and take risks as well as the generosity and emotional intelligence to work in teams and promote diversity will make the difference (Pais, 2021).

Furthermore, **community capacity building** is widely acknowledged as an **important tourism development strategy**. Therefore, tourism development and building the capacity for local communities need to progress hand in hand (Flores & Costa, 2024). Thus, one way to build capacity is through **partnerships**. Therefore, **collaboration initiatives** should be included in destination management plans or programmes such as in the areas of marketing, operations, planning and development. The participation and collaboration of various stakeholders has been proven as a success **factor to capacity development programmes** in tourism destinations, as it leads to better appreciation to achieve capacity development goals in tourism.

Offering targeted and **high-quality training opportunities** presents a promising way to **attract more and better-prepared workforce candidates**. In addition, re-skilling and up-skilling of existing employees is necessary to **respond to the emerging and persisting new trends in the sector**, such as provision of services to targeted groups of visitors (for example, elderly or with disabilities; visitors seeking specific experiences such as sustainable/green tourism, cultural tourism, adventure tourism etc.) (European Commission, 2016). As Flores & Costa (2024) spotted, there could be no long-term benefits if local people working in this sector are improperly trained or lack the necessary skills. Thus, it is suggested that **capacity development is an essential element of a successful destination**. **Respective programmes** are key to effective implementation of managing destination resources (ibid.).

The many changes and challenges of the sector and the new business models that are being developed require a significant change in the education and training systems, to prepare the future tourism workforce (Pais, 2021).

However, finding and validating **new ways of developing** and **certifying new competences** is a challenge for the tourism sector, and for all the education and training institutions.

In the framework of the Best Practices analysis, Montafon, Vejle, and Värmland have adopted similar approaches to address the lack of knowledge and skills among tourism stakeholders, focusing on education, collaboration,

and practical tools for sustainable tourism development. All three destinations provide workshops and training sessions to build stakeholders' capacity, offering expert-led guidance on sustainability practices. Personalised consulting services are also common, helping businesses assess their current practices and develop tailored improvement plans. Each destination fosters knowledge exchange through networks, such as Montafon's innovation hub, Vejle's stakeholder network, and Värmland's coaching programs. Additionally, they encourage eco-certification by providing resources and incentives, promoting sustainability as a core aspect of tourism development.

3.4.8 Limited financial resources to support sustainability activities in tourism

Implementing **sustainable tourism** usually **requires additional financial, human, and technical resources** (Getz & Petersen, 2005), which may not be available or accessible for some tourism actors, especially small and medium enterprises and local communities (Dias et al., 2024). Besides, the COVID-19 shock surely has had a serious effect on the liquidity of tourism companies, due to lockdowns, services closures and fewer customers. This **lack of liquidity** and **accumulated debt** may be as well **barriers to private investment** in the measures needed for a green transition, especially by smaller companies. Various regulatory and market uncertainties are also affecting the investment climate.

Torres-Delgado and López Palomeque (2012) point out that there is often a gap between the **intentions of sustainable tourism policies** and the **financial resources needed** to implement them. Yet, the lack of financial investment can hinder environmental improvements, the adoption of sustainable technologies and the formation of responsible management practices. In addition, the lack of financial incentives and support for investment in sustainable practices can discourage tourism businesses from investing in sustainable tourism, which again might **hamper an overall sustainable development of destinations** (Dias et al. 2024).

It is widely acknowledged that appropriate policy and its implementation are needed to make tourism more sustainable (Asher, 1984, Edgell, 1999). Limited finances for supporting sustainable development derive from the lack of long-term vision, the lack of clear definitions, the lack of integration into government policy, the excessive bureaucracy and the economic priority versus environmental priority (Dias et al., 2024). Further, the lack of strategic planning as pointed out by OECD (2020), as this is often listed as one of the main causes of barriers to the implementation of sustainable tourism (Dodds & Butler, 2009; Raad, 2019).

In addition, **sustainable tourism policies are often misunderstood or ignored by the main actors** involved in tourism development, such as governments, businesses and local communities (Budeanu et al. 2016; Neshat et al. 2021). Moreover, the **lack of clarity and delay in bureaucratic procedures can discourage** tourism stakeholders from adopting sustainable measures. As such, as pointed out by Dredge & Jenkins (2007), implementing sustainable tourism may depend on the **existence and enforcement of appropriate policies and regulations**, which may provide guidance, incentives, or sanctions for tourism actors. However, some **destinations may lack such policies and regulations** or may face difficulties in applying them due to political, institutional, or legal constraints (Dias et al. 2024).

There is no doubt about the need for financial support to implement sustainable tourism initiatives. This aligns with the work of Torres-Delgado and López Palomeque (2012), who advocate for government funding to support sustainable tourism development. Financial support generally can be used to **fund research and development, training programs, infrastructure development, and marketing campaigns**. As identified by Maxim (2015), by providing financial resources, **tourism destination managers can create a more conducive environment** for sustainable tourism practices to flourish.

The **development of funding opportunities** for sustainability improvements in the tourism sector is crucial. In principle, funding opportunities are available at all administrative levels (e.g. European Union, federal government, state, local authorities).

Summing up, Diaz & Kien (2019) outline **seven possible sources of financing** for Travel and Tourism initiatives, which are:

- a **government's proposed budget allocation** for tourism
- **non-repayable funds** (or even products) gifted or disbursed by grant makers, which are often an intergovernmental organisation (e.g. UNESCO), partner government, corporation and foundation

- **loans provided by development banks** (e.g., Asian Development Banks) at very low interest rates
- grants or **loans provided by state-owned enterprises**
- **capital from local private individual** or company investors
- **investments** from international venture capitalists

According to the European Commission (2022), both **public and private-sector funding play a key role in the tourism ecosystem**, and **public-private partnerships** are important drivers of the green and digital transition. They play an important role in **enabling and supporting greener practices, facilitating data sharing and digital innovation, and supporting R&I and skills development** in all sectors and for all involved actors in the tourism ecosystem.

In the framework of the Best Practices cases analysis Aarhus and Jurmala address limited financial resources for sustainable tourism through community engagement and financial support. Aarhus utilises the ReThinker volunteer program, which involves over 2,000 volunteers to support tourism and cultural sectors with minimal financial input. In Jurmala, the "Inspiration" grant program and municipal co-funding assist small businesses and sustainable projects, covering up to 50% of costs. Investments in infrastructure are supported by the European Investment Advisory Hub, and initiatives like free public transport and co-financing youth employment further bolster sustainability. Both destinations effectively combine community involvement and financial mechanisms to support sustainable tourism development.

The analysis of all 50 best practice cases has shown, that sustainable and resilient tourism projects often rely on a mix of external and internal funding sources. Larger projects typically secure co-financing from EU funds such as the ERDF, INTERREG, and LEADER, while smaller, daily operational measures are funded from the DMO's budget. National and regional funds also support innovation and climate initiatives. Municipalities are crucial for infrastructure investments, with private companies, tourism stakeholders, and volunteer groups providing additional financial support. This diverse funding landscape enables effective implementation of sustainability and resilience measures in tourism.

3.4.9 Measurement and monitoring of sustainable tourism

Sustainability in tourism is a topic of global relevance, finding multiple mentions in the United Nations Sustainable Development Goals (SDGs). The complex task of balancing tourism's economic, environmental, and social effects **requires detailed and up-to-date (spatial-temporal) data**, which is critical for governments and stakeholders to design, implement and **monitor effective sustainable tourism policies** overall allowing for the better management of the industry and destinations.

Indeed, evidence-based decision-making requires the development of a rigorous, **statistical approach to the measurement of sustainable tourism**. Current **data collection and management methods**, however, are often costly and yield piecemeal results. Yet, measurement and monitoring of sustainable tourism is overall still insufficiently implemented in European tourism destinations (Hoffmann et al., 2022).

However, the **development and credible implementation of sustainable tourism** is only possible if there are **suitable criteria** that can be used to check whether the various dimensions of sustainability are being fulfilled and in which direction they are developing. Appropriate standards can help to develop a **common understanding of sustainability in tourism** and to evaluate and **compare the sustainability performance of a destination**. Accordingly, to assessing sustainability and reviewing it on a regularly base requires **adequate measuring instruments and suitable monitoring systems**.

Various **standards, criteria and indicator systems** as well as **certification schemes** are used to define, measure and monitor sustainability in tourism. Furthermore, key figures in relation to capacity limits (e.g. in regard to "overtourism") are also playing an increasingly important role, for example the **concept of "carrying capacity"** or "**Limits of Acceptable Change**" (Balas & Strasdas, 2019).

Indicators are especially attractive as they promise a valuable approach to managing a complex problem. Moreover, **sustainable tourism indicators** simplify, clarify and aggregate information for policymakers, which enable evidence-informed decisions and more effective actions. Furthermore, it is argued that **indicators help to make the vague concept of sustainable tourism tangible** through identifying key factors of change, their evolution, and potential threats (Miller & Torres-Delegado, 2023; (Tanguay et al., 2013). Accordingly, they have become widely accepted as a **key tool to guide sustainable development** in tourism (ibid.).

Important achievements have been made in **tourism measurement** over the past decades. There is a growing number of frameworks for the tourism sector that aim to **measure and monitor sustainability** by the means of indicators aiming to help integrating and organising data for the purposes of deriving indicators (such as tourism GDP). In order to support measurement initiatives worldwide and building on this past work, the World Tourism Organisation (UNWTO), with the support of the United Nations Statistics Division (UNSD), launched the **Measuring Sustainable Tourism (MST)** project to develop an international statistical framework for measuring tourism's role in sustainable development. The resulting **Statistical Framework for Measuring Sustainable Tourism (MST Framework)** aims to extend the current statistical frameworks beyond their economic focus, to incorporate environmental and social dimensions and at relevant spatial levels: global, national and sub-national (UNWTO, n.D.).

International institutions and associations such as the Global Sustainable Tourism Council (GSTC), the UNWTO and the European Commission have become increasingly active in recent years by providing recommendations on measurement and monitoring systems, particularly at destination level. For example, the World Tourism Organisation has been supporting regions since 2009 to set themselves up as "**Tourism Observatories**" and establish a destination management system based on key performance indicators. The **European Tourism Indicator System ETIS** offers a framework set of indicators that can be used at destination level in order to measure and evaluate the impact of tourism. The **GSTC criteria** are regarded as international minimum requirements for sustainable tourism and are sector-specific with many measurable indicators. Most recently, the European Commission launched the **EU Tourism Dashboard**, an online knowledge tool aimed at promoting and monitoring the (1) green and digital transitions and (2) socio-economic resilience factors of the European tourism ecosystem (EU Tourism Dashboard, 2024).

While the aforementioned indicators are mostly geared towards policymaking, **sustainability tourism certification** systems also serve as a source of information for consumers. They are voluntary instruments, suitable to facilitate the implementation of sustainability issues in, for example, tourism destinations. Therewith they set **standards for assessing the sustainability of tourism services** and thus serve as proof of the sustainability commitment of tourism stakeholders (Balas & Strasdas, 2019; Lund-Durlacher et al., 2015). Currently, there is a **wide variety of certification systems for sustainable tourism**, which create a certain degree of confusion among consumers ("label jungle") (ibid.).

However, destinations can refer and make use of these various approaches and instruments in order to improving their **measurement and monitoring** of sustainable tourism to be able to better manage its impacts. The **introduction of certification** schemes on business and/or destination level can be seen as a fruitful possibility to advance a destinations sustainability performance in a systematic and standardised way. They are also seen as a marketing tool offering consumers the opportunity to clearly identify sustainable products (Lund-Durlacher, 2015; Dragomir, 2018; Strasdas et al., 2016). To support consumers and help them face the green transition with better protection against unfair practices and better information, the European Union has passed the so-called "Empowering Consumers Directive". Furthermore, the upcoming Green Claim Directive aims to set clear and uniform standards for the use of environmental claims for products and services and to prevent greenwashing. Both the EU Ecolabel and the EMAS (Eco-Management and Audit Scheme) are European certifications, which comply with the EU legislation. Whereas EMAS is an environmental management system that supports companies and organisations in the implementation of sustainability and climate goals, the EU Ecolabel is awarded to products and services that have a lower environmental impact than similar products, to help consumers identify more environmentally friendly and healthier products and services (EMAS, 2024; EU Ecolabel, 2024).

In addition to certification systems, **(Big) Data** might be used by destination management to **determine potential negative impacts of tourism** as they help to optimise resource allocation, including energy use, waste management, etc. Furthermore, (tourist) data give information about the movement of the people visiting and support crowd control by managing visitor movements more effectively. In this context, it is also important to understand how the data are generated. A distinction is made between user-generated content (UGC), data generated through transactions and data from devices and sensors. While in the case of the first source the data is created by the tourists themselves (e.g. via photos and texts) and ultimately processed by the website's algorithms, the second type involves processing data from booking platforms or guest cards, among others (European Union, 2022). Monitoring real-time data enables destinations to swiftly respond to safety concerns, ranging from natural disasters to overcrowding, ensuring the security of both tourists and residents (Lalli 2024).

After all, a huge amount of data is **produced and collected throughout the entire tourism value chain**; thus, going along with the increasing request for a results-producing data management. This primarily technical

challenge refers to the **field of smart tourism** (see **Error! Reference source not found.**), which is understood as tourism supported by integrated efforts at a destination to collect and harness data derived from physical infrastructure, social connections, government and organisational sources and human bodies. In combination with the use of advanced technologies that data can be transformed into on-site experiences and business value-propositions with a clear focus on efficiency, sustainability and experience enrichment” (Erriechiello & Micera, 2021). Moreover, **establishing public-private partnerships could facilitate new data-sharing agreements** and the creation of new platforms. Improved data sharing between private entities and public authorities can support better decision-making and significantly boost the competitiveness and resilience of destinations and their tourism stakeholder. (European Commission, 2022).

Despite its benefits, leveraging data presents challenges. There are still many hurdles to a clean and efficient data management process. These challenges include the data itself, which is characterised in the literature with 4 V's:

- Valuable (need for a large number of data to be valuable),
- Velocity (the data has to be quickly generated and processed),
- Variety (normally data comes from different sources which must be standardised),
- Veracity (the data must be accurate).

Another challenge is that smaller destinations, or those with fewer financial resources, do not have the necessary infrastructure neither the resources. Finally, **privacy and data security are critical concerns** related to specific areas of tension when generating tourism-related data, as the experience should be as personalised as possible. They are requiring managers to navigate complex regulations and ethical issues (Lalli, 2024).

Additionally, the sheer volume and variety of data can be daunting. To effectively harness data, destinations must therefore invest in robust data management systems and analytical tools. **Building a skilled team** capable of **translating data into actionable insights** is equally important. **Continuous learning and adaptation are essential** as the digital landscape and tourist expectations evolve (ibid.).

The best practice case analysis shows that effective measurement and monitoring of sustainable tourism requires the integration of digital technologies and collaborative frameworks. Malta's approach includes a comprehensive monitoring system and one of the UNWTO's tourism observatories, supported by data-driven strategies, stakeholder collaboration and periodic reviews. This system balances economic, social, and environmental goals, using KPIs for continuous improvement. Similarly, Andalusia employs the Tourism Sustainability Indicator (TSI) Pilot project to standardise sustainability metrics, combines diverse data sources, and utilises platforms like "Smart Data" for insights. Both destinations leverage innovative technologies and collaborative efforts to measure and enhance sustainable tourism practices effectively.

4 Analysis of the challenges and best practices

4.1 Overview of the challenges

Of the 31 **challenges** for tourism destinations presented in Chapter 3, 10 relate to the economic dimension, 6 each to the social and environmental dimension and 9 to the governance dimension. One of the selection criteria for the best practice cases was to cover all identified challenges as evenly as possible. To this end, each case was assigned one main challenge, which was examined and analysed in more detail. Most of the 31 challenges were addressed as a main challenge by 1 or 2 best practice destinations, apart from “changing consumer preferences towards more sustainability”, “accessibility and inclusivity of services and facilities”, “degradation and loss of biodiversity” and “lack of knowledge and skills of tourism stakeholders” (each three). These are very comprehensive challenges that are of great importance for tourism and are therefore often discussed in the literature. They also show many different solutions, which are represented in the factsheets.

In addition to the key challenge, the identified solutions also addressed other challenges, which are indicated in the factsheet. The following figures show the counts for these **additional challenges covered**.

The most frequently mentioned solutions also addressed the **economic challenges** “Changing consumer preferences towards more sustainability” (11), “Creating local added value through tourism” (9), “Deterioration and congestion of infrastructure including commercial gentrification”, “Spatial and temporal concentration of visitors” and “Insufficient use of new and advanced technologies in tourism” (each 7 mentions), followed by “Growth-oriented mindset of destination stakeholders” (6). All other economic challenges were addressed a maximum of 3 times.

Figure 5: Additional Economic Challenges

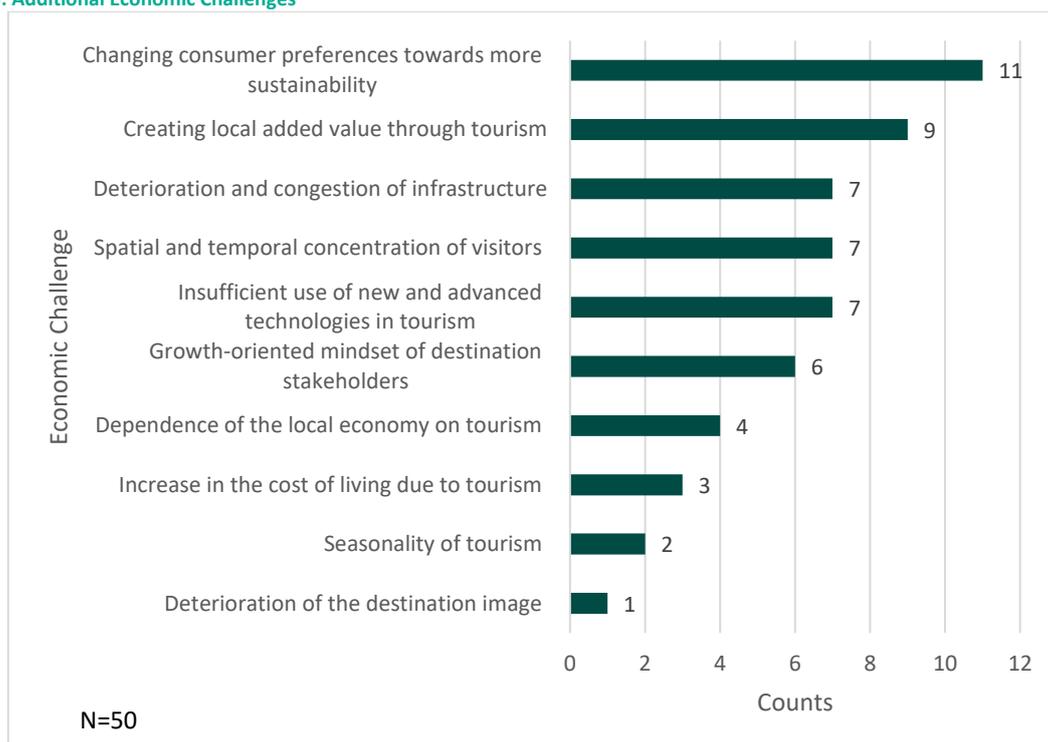


Figure 6: Additional Environmental Challenges

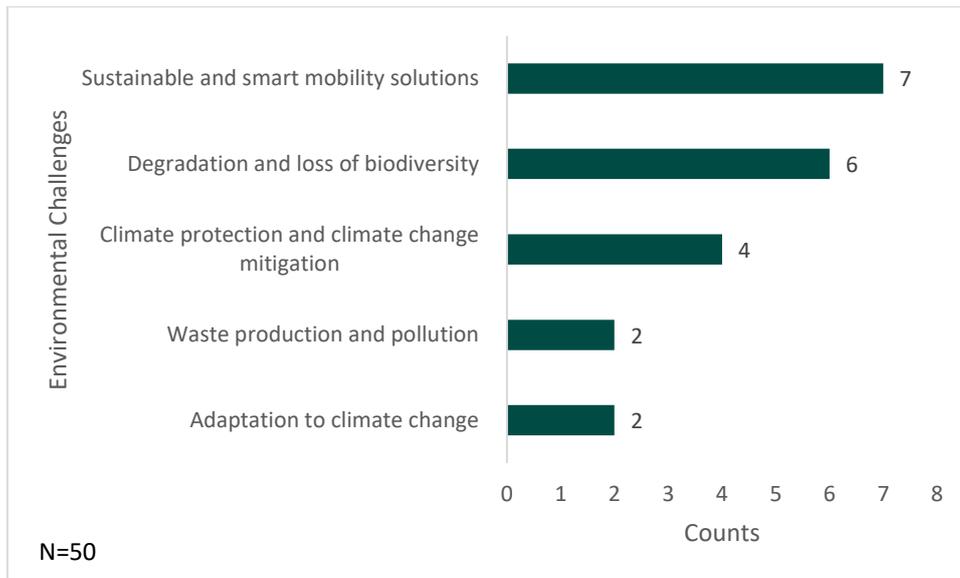
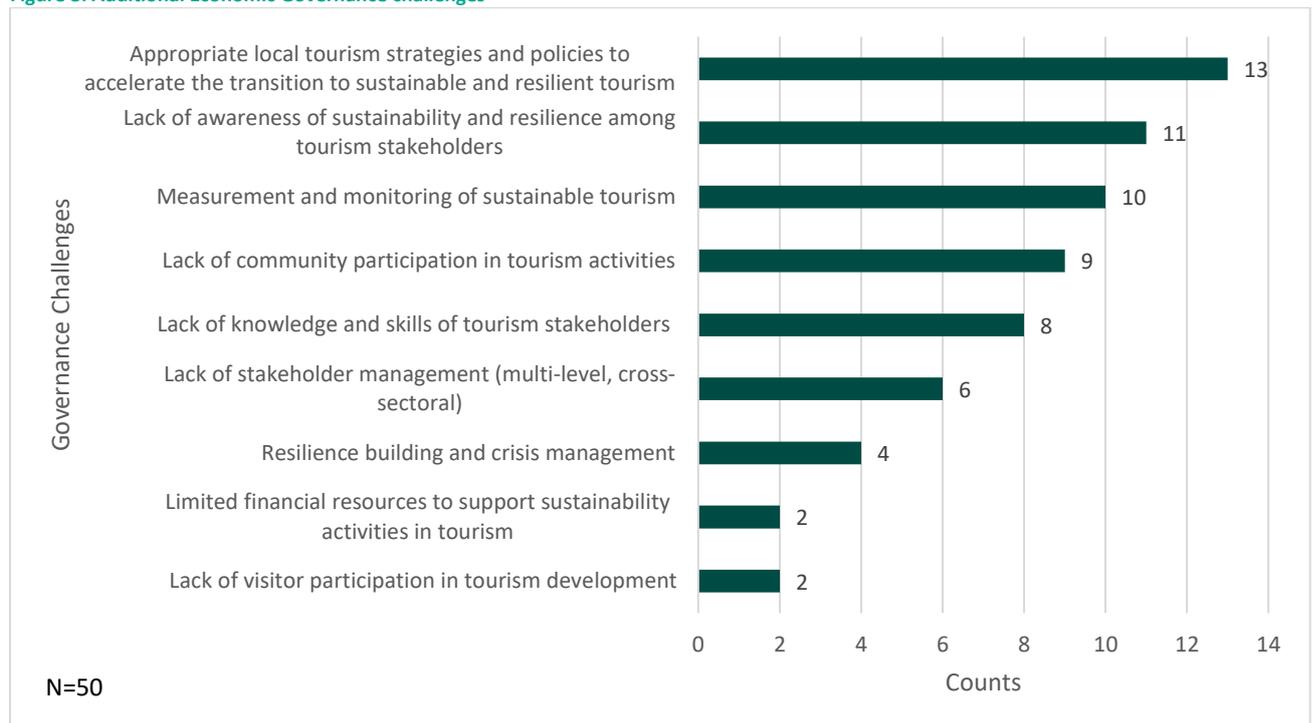


Figure 7: Additional Social Challenges



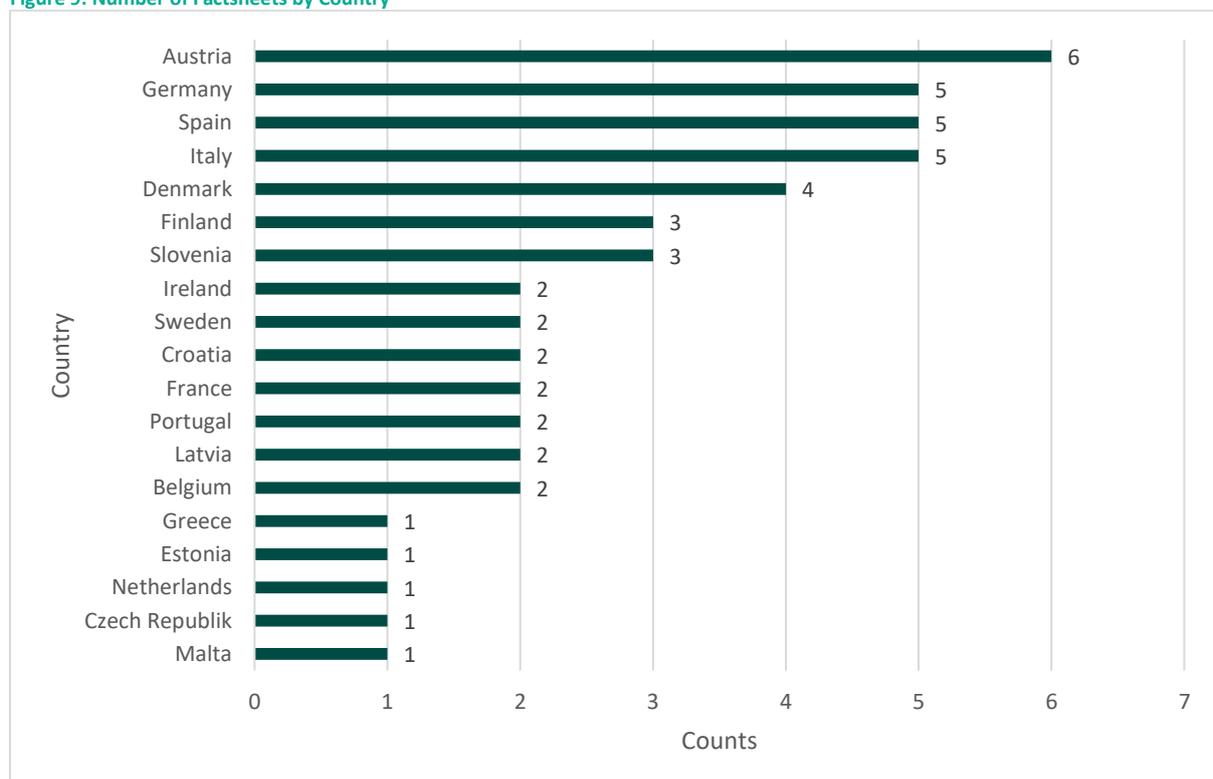
Figure 8: Additional Economic Governance challenges



4.2 Observed characteristics of the selected best practices

Each selected best practice case study is an example of successfully implemented solutions that provide insights into how different challenges or opportunities were overcome for the development of tourism.

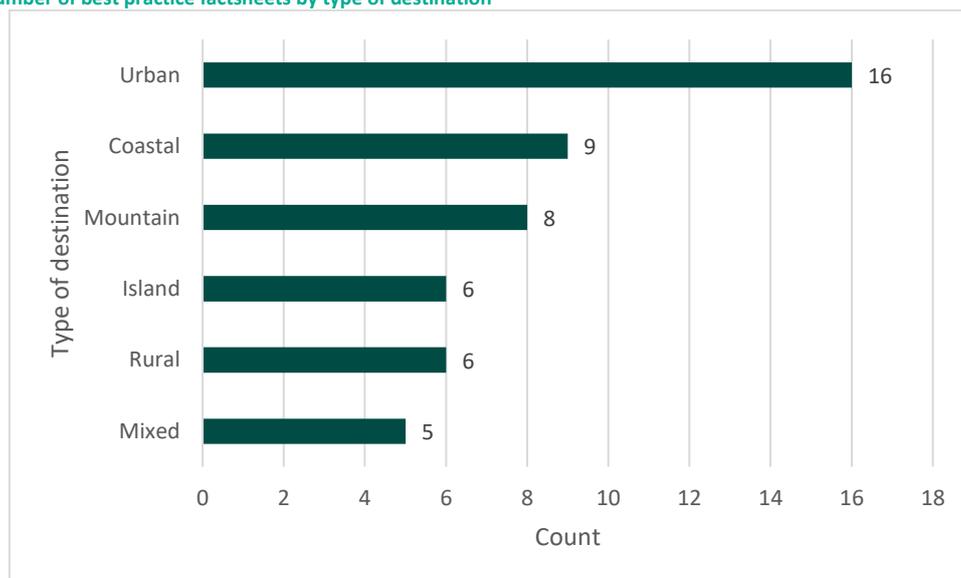
Figure 9: Number of Factsheets by Country



The selected **destinations are located in 19 EU countries**, with a slight predominance of destinations from Austria, Germany, Spain and Italy (see Figure 9). No best practices that meet the selection requirements could be identified in Bulgaria, Hungary, Lithuania, Luxembourg, Poland, Romania, and destination representatives of Larnaca (Republic of Cyprus) have not responded to the invitation to participate in the project.

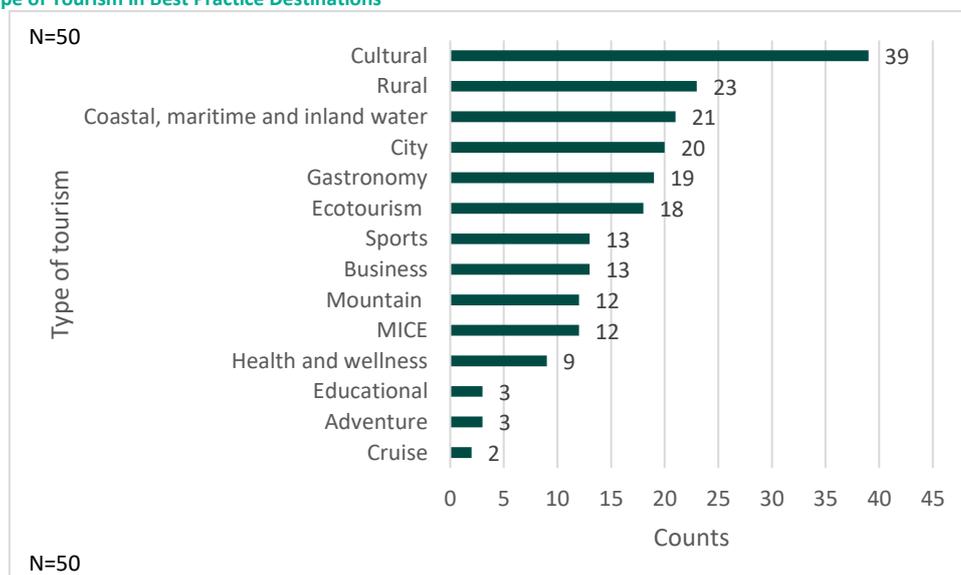
The representation of the **destination types** is relatively evenly distributed, with urban destinations dominating (see Figure 10). However, if you look at urban destinations with the combined groups of "mountain and rural destinations" and "coastal and island destinations", the dominance of urban destinations is put into perspective. Mixed destinations are larger regions, usually provinces or federal states, that contain different types of destinations.

Figure 10: Number of best practice factsheets by type of destination



Furthermore, the destinations were classified according to types of tourism. This resulted in multiple classifications, i.e. several types of tourism were assigned to one destination. Regarding the representation of **types of tourism**, cultural tourism is found in most of the selected destinations (78%), followed by rural tourism (46%), coastal tourism, maritime and inland water tourism (42%), urban tourism (40%), gastronomy tourism (38%) and ecotourism (36%). These results are strongly correlated with the type of destination. However, cultural tourism is well represented in all destination types (Figure 11).

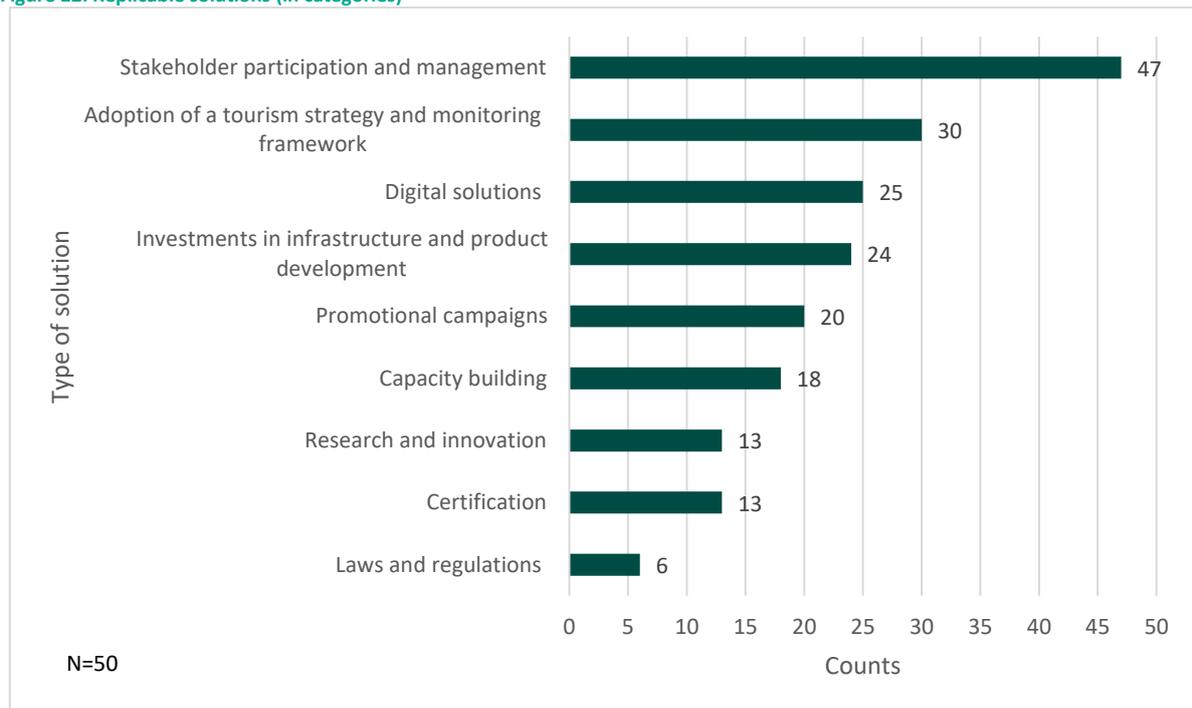
Figure 11: Type of Tourism in Best Practice Destinations



4.3 Overview of solution approaches

The solutions that destinations successfully use to address the different challenges studied were grouped into 9 categories and are presented in Figure 12. To overcome the challenges, all destinations have implemented a set of solutions and not a single solution. It is shown that stakeholder engagement is very important for addressing the challenges in destinations (mentioned in 90% of the best practices). Also important for addressing the challenges in the destinations studied was the introduction of a tourism strategy and monitoring framework (60%). This was followed by digital solutions (50%), investments in infrastructure and product development (48%), promotional campaigns (40%) and capacity building (36%).

Figure 12: Replicable solutions (in categories)



The nine solutions are described below in more detail, along with the measures and mechanisms used by each destination to implement them.

4.3.1 Replicable solutions

4.3.1.1 Adoption of a tourism strategy and monitoring framework

60%¹⁰ of the 50 best practice destinations analysed adopted a sustainable tourism strategy or monitoring framework to ensure sustainable and resilient tourism development, with clear objectives to address the impacts and opportunities of tourism.

Comprehensive sustainable tourism planning and strategic management is crucial to give clear direction and orientation to the transformation process, in which many multi-level and cross-sector stakeholders are involved. More and more destinations are adopting a **holistic and integrated planning approach**. This means that they integrate tourism planning, urban planning, transport and environmental protection and promote cross-sectoral cooperation to comprehensively address these complex challenges. This results in **integrated strategies and policy frameworks** that promote sustainable tourism practices and ensure that tourism strategies and policies

¹⁰ Ahrtal, Andalusia, Azores, Barcelona, Benidorm, Bled, Bohinj, Bordeaux, Borkum, Bruges, Brussels, Burren and Cliffs of Moher, Cork, Dubrovnik, Florence, Helsinki, Katerini, Liepaja, Lower Saxony, Mallorca, Malta, Prague, Saalfelden-Leogang, Saarland, Turin, Vaasa Region, Valencia, Valongo, Vejle, Wagrain-Kleinarl, and Zell am See Kaprun.

are integrated into other regional development plans and implement regulatory frameworks that protect natural and cultural resources.

To **monitor the impacts of tourism** and the effectiveness of policies, and foster a culture of continuous improvement and innovation, monitoring and evaluation systems need to be put in place. Digital technologies and smart tourism support data collection, management and analysis.

Here are just a few notable solutions from some destinations. **Borkum**, an Island with a high tourism dependence, adopted a holistic sustainable development strategy, the "Living Space Borkum 2030+" concept. This strategy, developed with broad stakeholder participation, promotes climate neutrality and high-quality tourism while considering all aspects of life on the island. The cyclical strategy process involves continuous development, implementation, review, and adaptation every 3-5 years, using KPI-based management. This approach has garnered strong acceptance from the population and stakeholders.

Malta, shifting from a growth-focused tourism model to one that prioritises sustainable development, developed a new strategy that balances economic growth with social and environmental well-being through data-driven decision-making and scientific research. A comprehensive measurement and monitoring system tracks progress, and Malta hosts one of the UNWTO's tourism observatories. It is also involved in innovative research projects to tackle future tourism challenges. This transformation is supported by strong stakeholder collaboration, a clear sustainability vision, political commitment, and a digitalised system for monitoring sustainability.

In **Lower Saxony**, a climate change adaptation strategy was developed through collaboration between the DMO, government, local DMOs, and research institutions over a one-and-a-half-year process. It began with a vulnerability and climate risk analysis, identifying region-specific risks and opportunities from climate change. Stakeholders participated in identifying action areas and measures through events, meetings, and surveys. Region-specific tools and documents, including guidelines and funding "Navigation Aids," were created to help regions adapt to climate impacts. Climate workshops and network events provide guidance for implementing strategies, supported by a state funding program. Scientific foundations and stakeholder communication were key to the strategy's success.

4.3.1.2 Stakeholder participation and management

Almost all destinations have implemented some form of stakeholder engagement or stakeholder management. The analysis of the different forms of stakeholder management and stakeholder engagement in the destinations reveals several interesting patterns. **Public-private partnerships** are often used to promote cooperation between local authorities, businesses and tourism service providers, thus promoting sustainable practices and balanced growth tourism (8 mentions). In particular, cooperation between DMOs and authorities is essential for the development of sustainable tourism, especially in the introduction of laws and regulations and in infrastructure development measures. Another fairly common approach is the **involvement of the community and residents** in tourism through volunteer programs, forums and community projects, thus creating a sense of ownership and improving community interaction with tourists (10 mentions). **Digital solutions and platforms** are used to improve communication with stakeholders, thus increasing engagement and operational efficiency (4 mentions). Multi-level **collaborative governance models** are introduced to ensure inclusive decision-making involving different stakeholders at different regional levels and in different sectors such as residents, businesses and NGOs (5 mentions). Regular stakeholder involvement through **workshops, consultations and forums** (7 destinations) is common and ensures diverse stakeholder input in the design of sustainable tourism strategies. **Thematic priorities** mentioned were "**Sustainable tourism and environmental protection**" (7 mentions), "**Crisis management and resilience**" (3 mentions) and "**Inclusive tourism and accessibility**" (3 mentions).

Only a few innovative examples are provided here. The Government of the **Azores** has implemented a collaborative governance model to promote sustainable tourism development. This model involves three key working groups: (1) a regional community group comprising tourism associations, fisheries, security representatives, and others; (2) sustainability teams from the island governments, known as the "green teams"; and (3) local businesses. Public, private, and NGO initiatives focus on raising awareness about shifting tourism demands and the opportunities presented by the twin transition (sustainability and digitalisation). These efforts align with Earth Check and Global Sustainable Tourism Council (GSTC) criteria. To maintain momentum, the Azores host two annual Sustainability Forums to encourage networking and share best practices.

To manage tourism more efficiently, a multi-level territorial and cross-sectoral tourism management system has been set up in **Florence**, coordinated by a Steering Committee. This Steering Committee is composed of the

DMO, the Chamber of Commerce, the university, the municipalities, tourism companies and other commercial partners and meets monthly to develop common strategies, regulations and tools for tourism management (homepages, applications, data analysis).

For example, **Aarhus** developed the "ReThinker" volunteer program, which integrates over 2,000 volunteers into cultural, sporting, and tourism events. This program supports not only tourism but also strengthens community involvement and interaction with visitors, thereby enhancing the local tourism experience. Volunteers are managed through digital tools and monthly meetings to maintain engagement.

Overall, the focus of stakeholder participation is on collaborative management, sustainability and inclusivity, with many destinations using innovative digital tools and governance models to involve a wide range of stakeholders in tourism development.

4.3.1.3 Laws and regulations

Destinations that have implemented laws and regulations include Barcelona, Bohinj, Bruges, Dubrovnik, Florence, and Mallorca.

Due to negative impacts of a concentration and high visitor numbers, Barcelona, Dubrovnik, Bruges, and Florence have implemented **laws and regulations to control the tourism situation**.

In order to counteract **commercial gentrification (Barcelona, Dubrovnik and Florence)**, restrictions on souvenir shops, bars, and take-away shops have been introduced, such as reducing the number of licenses for souvenir stands (**Dubrovnik**) or regulating the opening of new food and beverage stores (**Florence**). Also plans and regulations for governing short-term rentals and tourist accommodations to prevent further increases in housing prices were introduced. **Bruges** has controlled tourism by regulating accommodation types, banning new holiday home construction, and placing restrictions on shared accommodations (e.g., Airbnb), which can only be offered by residents.

In addition, regulations were introduced to limit the number of cruise ship visitors, for example by limiting berthing and the number of cruise terminals, as well as introducing a cap on the arrival of cruise ships or cruise tourists (**Barcelona, Dubrovnik, Bruges**).

Many of the laws and regulations concern the control of the traffic system. **Bohinj** and **Dubrovnik** introduced traffic zones with various **restrictions to better control vehicle access**. These regulations primarily aimed at reducing traffic in sensitive cultural and natural areas. **Bruges** also **limited tourist licenses** for transport options such as boats, horse-drawn carriages and sightseeing buses.

As part of the implementation of the Circular Economy strategy, Mallorca introduced **regulations to reduce plastic waste** and promote environmental sustainability.

Regulations mainly affect local authorities/ government, local residents and tourists, but also local businesses and transport companies are also more affected by laws and regulations than on average.

4.3.1.4 Certification

13 **destinations** have introduced certification to promote sustainable and resilient tourism including the Azores, Bordeaux, Gothenburg, Lika, Lyon, Montafon, Nassfeld-Presssegger See, Saalfelden-Leogang, Saarland, Tahko, Vaasa Region, Värmland, and Wagrain-Kleinarl.

Sustainability certifications are designed to ensure that destinations adopt environmentally and socially responsible practices. The destinations analysed have adopted both internationally recognised certifications and destination-specific national or local certifications (see Table 4). **Internationally recognised labels** meet international benchmarks for environmental sustainability, safety, accessibility and more, and cover multiple dimensions of sustainability, including environmental, social and economic factors (e.g. EarthCheck in Azores). They therefore have international weight, strengthen a destination's reputation in global markets and increase customer trust.

Some destinations have developed their own **national or local certification programs** tailored to their particular needs, environment and cultural values. For example, the Lika Quality Label promotes local food and products in the **Lika** region and **Lyon** promotes several certification labels such as the "Ville Equitable et Durable" label for businesses committed to sustainable practices and the "Bouchons Lyonnais" label for restaurants serving traditional Lyon cuisine. Additionally, the "Accueil vélo" label ensures quality services for cyclists. These

certifications are often designed to address a destination's specific challenges and opportunities (e.g. local environment, culture or heritage). They focus on promoting regional traditions, products and responsible practices and ensure that the destination's distinct cultural identity is maintained. As they are locally developed, they typically require a high level of collaboration between local stakeholders, ensuring widespread acceptance and long-term sustainability. They also often include extensive capacity building activities for the local community. Certifications also enable monitoring and continuous improvement as they require regular audits and updates and encourage destinations to continuously improve their environmental, social and economic impacts. They help destinations keep pace with evolving global tourism trends such as climate change adaptation, responsible tourism and digital transformation.

Sustainability certification always means a lot of effort and requires financial and human resources. To address this problem, especially for SMEs, **Montafon** has developed an interesting solution. In regular workshops, simple sustainability self-checks are carried out with the accommodation providers, which are initially intended to sensitise the companies to sustainable development and show possible solutions for improvement in their own businesses. The companies are then guided together with external consultants through the "Host Role Model" program, an educational program with group workshops and individual consultation hours, which are intended to help them achieve the Austrian Ecolabel as easily as possible.

In summary, sustainability certifications, whether global or destination-specific, play a critical role in promoting responsible tourism in destinations. They provide credibility, ensure sustainability and support the local economy, with each certification offering different levels of recognition and adaptation.

Table 4: Summary of certification's key differences

Type	Focus	Key Advantage
Sustainability Certifications	Environmental and social sustainability	Long-term environmental stewardship
Internationally Recognised Certifications	Global standards and third-party audits	Trust, credibility, and global market appeal
Destination-Specific Certifications	Local challenges and opportunities	Tailored solutions, local identity, and stakeholder engagement

4.3.1.5 Promotional campaigns

Destinations that have launched promotional campaigns to support their sustainability strategies and efforts include Ahrtal, Benidorm, Bled, Bohinj, Bordeaux, Bruges, Copenhagen, Lika, Ljubljana, Lyon, Madonna di Campiglio, Mallorca, Middelfart, Prague, Saalfelden-Leogang, Tallinn, Taranto, Valongo, Wagrain-Kleinarl, and Wilder Kaiser.

Here are the **common themes** of the listed campaigns along with their frequency of mentions. These campaigns mainly focus on sustainability, local engagement, environmental protection and responsible tourism. Campaigns focused on creating **sustainability and environmental awareness** were mentioned most often (14 mentions), followed by promoting **local culture and products** (7 mentions).

Copenhagen launched the "Sustainable Choice CPH" project to motivate visitors to make sustainable choices during their stay. The city also developed the "Planet Copenhagen Manifesto" to highlight its environmental ambitions. Visitors are encouraged to engage in sustainable activities such as cycling and eco-friendly consumption through digital communication campaigns.

The **Lika** Destination Cluster promotes Lika's natural and gastronomic offerings through campaigns highlighting the region's sustainability and promoting local culture and products. Local producers are supported with promotional materials and the Lika Quality Label is promoted through regional and national initiatives, positioning Lika as an authentic gastronomic destination.

Prague's "Enjoy and respect" campaign is a good example of "responsible tourism" campaigns (6 mentions). This initiative encourages visitors to adopt sustainable travel habits and respect local culture. Prague also runs rebranding campaigns to attract high-quality tourism segments through its focus on sustainability in the MICE sector.

Bohinj is an example of a "sustainable mobility and transport" campaign (3 mentions) and has implemented promotional campaigns alongside its sustainable mobility and tourism strategies, including initiatives to educate tourists on the proper use of transport services and environmental protection through various media.

Campaigns to “promote off-season tourism” (3 mentions) and “water protection” (2 mentions) complement the focus topics.

4.3.1.6 Digital solutions

Half of the destinations have implemented notable **innovative digital solutions** to support the transition to sustainable and resilient tourism including Andalusia Barcelona, Benidorm, Bohinj, Bordeaux, Borkum, Bruges, Brussels, Burren, Carbonia, Copenhagen, Cork, Dubrovnik, Florence, Gothenburg, Ljubljana, Mallorca, Malta, Prague, Taranto, Torino, Valencia, Valongo, Värmland, and Zell am See Kaprun.

The **most common digital solutions** in the destinations are mobile apps for tourism services (15 mentions) and real-time data and monitoring systems (13 mentions). Several destinations such as Barcelona, Bohinj, Brussels, Florence and Ljubljana have developed **mobile apps** to provide real-time information on transport, attractions and eco-friendly options. These apps improve visitor navigation, promote sustainable mobility and reduce congestion. **Florence**, for example, has developed the mobile app "FeelFlorence", which uses real-time data to monitor tourist flows and provide personalised recommendations for alternative attractions. The app is part of the city's strategy to distribute visitor numbers to less crowded areas and improve the visitor experience. Florence has also integrated the Smart City Control Room, which aggregates data from multiple sources to optimise tourism management and city services. Another example is **Brussels**, where the app Floya was launched, which integrates different modes of transport (public transport, taxis, bike sharing) to provide tourists with a seamless travel experience.

Data monitoring and management systems, some with **real-time data**, are used to optimise tourism flows, manage resources and improve decision-making (in Andalusia, Barcelona, Bruges, Copenhagen, Florence, Mallorca and Malta). **Andalusia**, for example, has the “Smart Data” platform, which pools data on sustainable tourism from various sources and makes it available to anyone interested in decision-making. The Tourism Observatory in **Barcelona** provides insights from real-time monitoring of tourism. The observatory integrates data on visitor flows and public opinion to support sustainable tourism planning. In addition, **digital sustainability and environmental monitoring tools** (10 mentions) are implemented to monitor environmental impacts, including carbon footprint, waste management and water consumption (examples are Benidorm, Gothenburg, Malta, Mallorca and Valencia). The Tourism Observatory in **Malta** uses satellite data and artificial intelligence to monitor environmental factors such as land use and tree cover to assess the resilience of tourism areas. The observatory also tracks energy and waste data to promote sustainable tourism. All these tools help to ensure the sustainability of tourism and improve the visitor experience.

Digital mobility and transport solutions (8 mentions) offer apps with integrated transport services and real-time information to promote public transport, reduce car use and create sustainable travel options. **Brussels** and **Bohinj**, for example, offer apps that integrate public transport, bike sharing and taxis, thus promoting the use of sustainable transport, which reduces traffic and promotes green tourism. Mobility apps with real-time transport updates also help tourists to optimise their travel routes and use public transport.

Interactive and augmented reality tools (5 examples) make tourism more immersive, accessible and informative. They allow visitors to explore places in a completely new way, blending digital elements with the real world to enrich the travel experience (e.g. Bordeaux, Carbonia, Cork, Taranto, Valongo). To enhance cultural and historical experiences, AR apps allow tourists to visualise historical events or ancient architecture in real time. For example, when visiting historical landmarks or archaeological sites, visitors can use their smartphones to view reconstructions of how these sites used to look. This is used in cities like **Carbonia**, where AR improves understanding of the city's industrial heritage. Museums also use AR to make exhibitions more engaging. Visitors can point their devices at artifacts to view additional information, videos or 3D models that explain their historical significance or show how they were used. This allows for a deeper engagement with the exhibitions and a richer learning experience. Also, AR apps provide interactive city tours by overlaying information on streets, buildings or landmarks of a city as tourists walk through a destination. For example, by pointing the camera at a famous building, one can learn about its history, facts about its architecture or famous events that took place there. This makes self-guided tours more informative and engaging, turning the whole city into a living museum (e.g. **Turin**).

Artificial intelligence for accessible tourism can provide additional information to visitors with disabilities. For example, AR tools can translate signs into different languages or provide spoken descriptions of visual content for the visually impaired (**Bordeaux**).

In summary, digital innovations in tourism help destinations balance economic growth with sustainability, improve tourist experiences, and streamline operations through advanced technology and data-driven insights.

4.3.1.7 Capacity building

18 destinations have implemented capacity building measures for their tourism stakeholders, including Andalusia, the Azores, Burren and Cliffs of Moher, Gothenburg, Katerini, Liepaja, Lika, Lower Saxony, Middelfart, Montafon, Saarland, Tahko, Taranto, Vaasa Region, Valongo, Värmland, Vejle, and Wilder Kaiser.

All destinations offer **training programmes** and **workshops** on sustainability in general or on topics closely related to the challenges they face, such as sustainability standards in certifications, resource and conservation management, adapting tourism to climate change, creating resilient tourism offers, integrating local products into the value chain, business principles and marketing, digitalisation and new technologies and many more. These trainings and workshops are often coupled with other capacity building activities, such as **individual consultations** and **coaching by experts**, **awareness raising campaigns** and **peer learning activities**. These capacity building activities are often complemented by the **issuance of guidelines, manuals and tools** to help companies implement sustainable practices or go through the certification process. Many of the training activities are linked to certification processes.

Slightly different and therefore worth mentioning, Middelfart's capacity building activities **involve tourists in conservation activities** such as whale watching and waste picking, which strengthens biodiversity conservation capacity and raises awareness. Educational initiatives also target local businesses and encourage active stakeholder participation **in field trips** on sustainability efforts.

4.3.1.8 Investments in infrastructure and product development

Almost half of the destinations have invested in infrastructure or product development to address various challenges, including Ahrtal, Benidorm, Bled, Bohinj, Bordeaux, Brussels, Carbonia, Cork, Jurmala, Katerini, Liepaja, Lika, Ljubljana, Lyon, Madonna di Campiglio, Mallorca, Rotterdam, Saalfelden-Leogang, Tallinn, Taranto, Torino, Valencia, Valongo, and Zell am See Kaprun.

Investments in sustainable infrastructure and product development have been used as a solution to a number of different challenges, with significant efforts being made to reduce the environmental impact of tourism and make destinations more inclusive and resilient. **The focus areas for tourism investments and product development** in the 24 destinations are sustainable transport and mobility (13), waste reduction and environmental sustainability (7), accessibility for people with disabilities (4), cultural preservation and heritage management (5), tourism seasonality and year-round offers (3), water and environmental management (3), energy efficiency and renewable energy (3), digital innovation in tourism (3) and post-disaster reconstruction (1).

4.3.1.9 Research and innovation

Research and Innovation projects and organisations support 13 destinations in their transformation towards sustainable and resilient tourism, including Benidorm, Bohinj, Brussels, Carbonia, Cork, Ljubljana, Lower Saxony, Malta, Middelfart, Rotterdam, Taranto, Valencia, and Valongo.

The research and innovation projects focus on sustainability, smart technologies and social engagement. Five areas were identified in the destinations where research and innovation play an important role.

Destinations like Brussels, and Ljubljana have implemented **Smart mobility solutions**, including AI-powered systems for traffic management, electric vehicle infrastructure, and digital tools for public transportation. For example, **Brussels** promotes research and innovation through its "Good Move" mobility plan. This strategy encourages sustainable transport solutions and includes the development of smart mobility apps, charging infrastructure for electric vehicles, and data-driven mobility observatories.

Research and innovation also play a key role in **Data-driven decision making**. Places like Malta, Cork, Valencia and Benidorm are using AI, satellite data and sensors to monitor environmental factors, tourist flows and emissions and integrate data into decision-making processes to improve sustainability. For example, the Malta Tourism Observatory plays a key role in implementing the tourism strategy by utilising satellite data and AI to monitor environmental factors. Malta is also developing a Tourism Satellite Account (TSA) with OECD to include tourism sustainability indicators.

Research and innovation driven **Environmental Monitoring and Conservation Projects** in Lower Saxony, Malta, Taranto, Valongo, and Valencia involve real-time environmental monitoring, climate change adaptation, and biodiversity conservation.

For **cultural and cultural innovation**, VR/AR technologies and digital tools are used to improve cultural tourism and heritage conservation. For example, **Carbonia** uses interactive technologies like virtual reality (VR) and augmented reality (AR) in its museums to enhance the visitor experience and promote cultural heritage. The city is also involved in cultural research networks such as the European Route of Industrial Heritage. **Cork** participated in the "Big and Open Data for Atlantic Heritage (BODAH)" project, which developed an early warning model using on-site sensors and local data to estimate tourist flow and improve visitor management at cultural heritage sites.

In Middelfart, Taranto and Valongo, **tourists participate in research**. In these destinations, tourists are involved in conservation efforts and data collection for research on biodiversity and environmental health. **Middelfart** engages tourists in biodiversity conservation through innovative experiences, such as encouraging whale sightings to fund protection efforts. Visitors also participate in waste collection activities, which contribute to environmental projects. The city has set up a Climate Lab to explore sustainable solutions.

4.3.2 Solutions by destination type

Looking at the solutions used in the different **destination types**, some differences can also be seen. Table 5 provides an overview of the recurrence of specific types of solution by type of destination. For instance, in **mountain** destinations (8), the most common solutions pertain the adoption of a tourism strategy and monitoring framework, capacity building, and/or investments in infrastructure and product development (63%, 5 each). In **island** destinations, in all cases (6), the measures adopted include stakeholder participation and management – as well as in coastal destinations (9) – and in two thirds (4) also involve digital solutions and/or the adoption of a tourism strategy and monitoring framework. In **coastal** destinations, in many cases, also remedies concerning the adoption of a tourism strategy and monitoring framework, capacity building, or investments in infrastructure and product development (56%, 5) were adopted. In **rural** destinations, the most common approaches are about promotional campaigns (83%, 5) and stakeholder participation and management (67%, 4). In **urban** destinations, the most used approach pertains stakeholders' engagement (100%, 16), followed by the adoption of digital solutions (75%, 12). Again, in **mixed** destinations, all cases (5) entail at least a measure about stakeholder participation and management, whereas in four out of five cases a tourism strategy and monitoring framework and/or a capacity building solutions was adopted. In conclusion, the most common solutions adopted across all six types of destinations entail **stakeholders' engagement** and the **adoption of a tourism strategy and monitoring framework**.

Table 5: Solutions by destination type

Solutions	Mountain	Island	Mixed	Rural	Coastal	Urban
Adoption of a tourism strategy and monitoring framework	63%	67%	80%	50%	56%	63%
Stakeholder participation and management	88%	100%	100%	67%	100%	100%
Laws and regulations	13%	17%	0%	17%	0%	19%
Certification	0%	17%	40%	50%	44%	19%
Promotional campaigns	38%	17%	0%	83%	44%	44%
Digital solutions	38%	67%	20%	17%	44%	75%
Capacity building	63%	17%	80%	33%	56%	6%
Investments in infrastructure and product development	63%	33%	0%	50%	56%	56%
Research and innovation	38%	33%	20%	17%	11%	31%

4.3.3 Stakeholders affected by solutions

The implemented solutions always have an impact on several stakeholder groups, which are, however, affected by the solutions to varying degrees. Table 6 provides the rate of how many times a category of stakeholders is affected among the best practices adopting a specific type of solution. **Tourism service providers**

(accommodations, restaurants and bars, and other service providers) and **local residents** were in general the most affected categories.

When looking at the solutions **adopting a tourism strategy and monitoring framework**, local authorities/government (74%) and tourists (68%) were the most affected, together with the aforementioned groups of stakeholders. Again, **stakeholder participation and management** solutions mainly involved authorities/government (60%), as well as of course local residents and providers. **Laws and regulations** affected local residents in all cases, and local authorities/ governments and accommodation providers in 83% of the cases, but also tourists, other tourist providers and local businesses (67%) to a lesser extent. The stakeholders affected by solutions entailing **Certifications** include Accommodations in all cases, Restaurants and bars (92%), Other tourism service providers (85%) and event organiser to a less extent (62%). **Promotional campaigns** were predominantly aimed at Local residents, Tourists (85% each) and accommodations (80%). When implementing **Digital solutions**, Local residents (76%), accommodations and other tourism providers (72%) are the most affected. Accommodations, Restaurants and Bars and other tourism provider are the most affected by **Capacity building** solutions, while **Investments in infrastructure and product development** affect mostly local residents and tourists (75%) and Local authorities/ governments (67%). **Research and innovation** affected Local authorities (92%), other tourism providers and of course technology providers and R&D organisations (69%).

Table 6: Affected stakeholders by solutions

Stakeholders affected by solutions	Adoption of a tourism strategy and monitoring framework	Stakeholder participation and management	Laws and regulations	Certification	Promotional campaigns	Digital solutions	Capacity building	Investments in infrastructure and product	Research and innovation
Local authorities/ government	74%	60%	83%	31%	40%	68%	50%	67%	92%
Local residents	77%	72%	100%	62%	85%	76%	56%	75%	69%
Tourists	68%	57%	67%	46%	85%	56%	50%	75%	54%
Accommodations	77%	79%	83%	100%	80%	72%	83%	63%	54%
Restaurants and Bars	71%	72%	50%	92%	65%	60%	78%	63%	54%
Event organisers	52%	45%	33%	62%	40%	44%	39%	38%	46%
Other Tourism providers	77%	74%	67%	85%	65%	72%	72%	63%	69%
Local farmers and producers	19%	17%	17%	38%	40%	12%	6%	25%	8%
Local businesses	42%	34%	67%	23%	40%	32%	22%	25%	15%
Technology providers	19%	17%	17%	0%	10%	28%	17%	25%	23%
R&D organisations	29%	30%	17%	15%	15%	44%	33%	33%	69%
Transport companies	23%	17%	33%	15%	20%	20%	0%	29%	15%

4.3.4 Solutions by key challenge dimension

In this section, the implemented solutions of the 50 identified best practices are analysed according to the dimension of the key challenges they address. The table below provides an overview of the different solutions adopted for each destination, grouped by the four challenge dimensions of the key challenge addressed.

In almost all cases, destinations adopted solutions related to **stakeholders' engagement and strategy and monitoring**. Among the destinations primarily addressing **economic challenges**, the solutions involve stakeholder participation and management (in all cases), the adoption of digital solutions (71%), tourism strategy and monitoring frameworks (57%), and promotional campaigns (50%).

Environmental challenges were mainly addressed through the adoption of a tourism strategy and monitoring framework (83%), stakeholder participation and management (83%), investments in infrastructure and product development (75%), research and innovation, digital solutions and promotional campaigns (58% each).

For **social challenges**, the predominant solution approaches are stakeholder participation and management (in all cases), adoption of a tourism strategy and monitoring framework (70%), investments in infrastructure and product development (60%), and digital solutions (50%).

Finally addressing **governance challenges** largely involved stakeholder participation and management (93%), capacity building (57%), certification processes, and adoption of a tourism strategy and monitoring framework (43% each).

Table 7: Overview of key challenges and implemented solutions

Destination	Key Challenge	Solutions								
		Strategy and monitoring	Stakeholder Participation	Laws and regulations	Certification	Promotion	Digital Solutions	Capacity building	Infrastructure & product development	Research & innovation
ECONOMIC DIMENSION										
Turin	Creating local added value through tourism	x	x				x		x	
Lika	Creating local added value through tourism		x		x	x		x	x	
Malta	Growth-oriented mindset of destination stakeholders	x	x				x			x
Borkum	Dependence of the local economy on tourism	x	x				x			
Saalfelden-Leogang	Seasonality of tourism	x	x		x	x			x	
Tallinn	Seasonality of tourism		x			x			x	
Gothenburg	Changing consumer preferences towards more sustainability		x		x		x	x		
Copenhagen	Changing consumer preferences towards more sustainability		x			x	x			
Lyon	Changing consumer preferences towards more sustainability		x		x	x			x	
Ljubljana	Insufficient use of new and advanced technologies in tourism		x			x	x		x	x
Florence	Spatial and temporal concentration of visitors	x	x	x			x			
Burren and Cliffs of Moher	Spatial and temporal concentration of visitors	x	x				x	x		
Dubrovnik	Deterioration and congestion of infrastructure including commercial gentrification	x	x	x			x			

Destination	Key Challenge	Solutions								
		Strategy and monitoring	Stakeholder Participation	Laws and regulations	Certification	Promotion	Digital Solutions	Capacity building	Infrastructure & product development	Research & innovation
Prague	Deterioration of the destination image	x	x			x	x			
ENVIRONMENTAL DIMENSION										
Valencia	Climate protection and climate change mitigation	x	x				x		x	x
Zell am See-Kaprun	Climate protection and climate change mitigation	x	x				x		x	
Lower Saxony	Adaption to climate change mitigation	x	x					x		x
Benidorm	Water Scarcity and pollution	x				x	x		x	x
Mallorca	Waste production and pollution	x	x	x		x	x		x	
Madonna di Campiglio	Waste production and pollution		x			x			x	
Valongo	Degradation and loss of biodiversity	x	x			x	x	x	x	x
Middelfart	Degradation and loss of biodiversity		x			x	x			x
Bled	Degradation and loss of biodiversity	x	x			x			x	
Saarland	Degradation and loss of biodiversity	x	x		x			x		
Bohinj	Sustainable and smart mobility	x		x		x	x		x	x
Brussels	Sustainable and smart mobility	x	x				x		x	x
SOCIAL DIMENSION										
Wilder Kaiser	Lack of qualified and skilled workers		x			x		x		

Destination	Key Challenge	Solutions								
		Strategy and monitoring	Stakeholder Participation	Laws and regulations	Certification	Promotion	Digital Solutions	Capacity building	Infrastructure & product development	Research & innovation
Wagrain-Kleinarl	Insufficient or declining tourism acceptance	x	x		x	x				
Rotterdam	Insufficient or declining tourism acceptance		x			x			x	
Barcelona	Displacement and marginalisation of the local population	x	x	x			x			
Bruges	Displacement and marginalisation of the local population	x	x	x		x	x			
Liepaja	Accessibility and inclusivity of services and facilities	x	x					x	x	
Katerini	Accessibility and inclusivity of services and facilities	x	x					x	x	
Bordeaux	Accessibility and inclusivity of services and facilities	x	x		x	x	x		x	
Carbonia	Maintenance and conservation of cultural heritage		x				x		x	x
Cork	Maintenance and conservation of cultural heritage	x	x				x		x	x
GOVERNANCE DIMENSION										
Nassfeld-Pressegger See	Appropriate local tourism strategies and policies to accelerate the transition to sustainable and resilient tourism		x		x					
Tahko	Appropriate local tourism strategies and policies to accelerate the transition to sustainable and resilient tourism		x		x			x		
Azores	Lack of stakeholder management (multi-level, cross-sectoral)	x	x		x			x		
Vaasa Region	Lack of stakeholder management (multi-level, cross-sectoral)	x	x		x			x		

Destination	Key Challenge	Solutions								
		Strategy and monitoring	Stakeholder Participation	Laws and regulations	Certification	Promotion	Digital Solutions	Capacity building	Infrastructure & product development	Research & innovation
Juist	Lack of visitor participation in tourism development		x							
Helsinki	Resilience building and crisis management	x	x							
Ahrtal	Resilience building and crisis management	x	x			x			x	
Taranto	Lack of awareness of sustainability and resilience among tourism stakeholders		x			x	x	x	x	x
Montafon	Lack of knowledge and skills of tourism stakeholders				x			x		
Vejle	Lack of knowledge and skills of tourism stakeholders	x	x					x		
Värmland	Lack of knowledge and skills of tourism stakeholders		x		x		x	x		
Aarhus	Limited financial resources to support sustainability activities in tourism		x							
Jurmala	Limited financial resources to support sustainability activities in tourism		x						x	
Andalusia	Measurement and monitoring of sustainable tourism	x	x				x	x		

4.4 Funding sources and costs

The development of strategies and the implementation of measures and projects for the sustainable and resilient transformation of tourism in destinations is often made possible by initial funding or co-financing from external sources. The financing of these projects varies greatly and depends on the size and focus of the projects. Projects with a higher cost volume are often co-financed from EU and national funding pots, while projects with a smaller budget or measures that are closely related to the daily work of the DMO, such as awareness-raising measures, stakeholder management or training, are often financed from the DMO's budget.

22 destinations used **EU funding programs** to co-finance their projects and measures. EU funding has significantly supported projects across Europe aimed at enhancing sustainability, conservation, and digital innovation. Key programs like the **European Regional Development Fund (ERDF)**, **INTERREG**, and **LIFE**, have been crucial in co-financing diverse initiatives, including strategic urban planning, environmental conservation, and the digitisation of cultural heritage. These projects often involve a mix of EU funds and contributions from national or local governments, focusing on sustainable tourism, climate strategies, and cross-border regional cooperation. Additional EU programs such as **LEADER**, **Recovery and Resilience Facility (RRF)**, **Cohesion Fund (CF)**, **European Social Fund (ESF)**, **React-EU**, **Next Generation EU**, **COSME**, **EU Operational Programmes**, and **TSI – DG Reform** have provided targeted support for local development, economic recovery, and structural reforms. These contributions have been instrumental in addressing local challenges, promoting sustainable practices, and fostering long-term economic growth, benefiting regions throughout Europe.

National and regional funding programmes were used by 18 destinations to co-finance the development and implementation of their sustainable projects and measures. The use of funding lines was frequently mentioned in connection with innovation and climate protection, mitigation, and climate change adaptation.

In addition to the regular **budget of the DMO**, from which many additional projects for the sustainable and resilient transformation are financed, the most important financier, especially when it comes to investments in infrastructure, is the **municipality**. In almost all destinations, they were named as an important source of funding. In addition, funds also come from **private companies** and **tourism stakeholders** (e.g. nature parks) as well as **sponsors**. **Volunteer groups** can also be mentioned as indirect sources of funding.

4.5 Success factors and barriers in the implementation of solutions

4.5.1 Success factors

The investigation and analysis of the case studies also identified the **factors** that, from the destinations' perspective, significantly **supported the successful implementation** of the strategies and measures. Among best practice destinations, the most frequently cited factors were:

- **Stakeholder engagement** (48%, 24) - Involving stakeholders early in the process fosters collaboration and reduces resistance to new initiatives.
- **Funding opportunities and financial support** (36%, 18) - Diverse funding sources are crucial for implementing sustainable tourism projects beyond daily operations.

Other key success factors were:

- **Support from stakeholders and staff** (26%, 13) - Strong backing from stakeholders and skilled staff enables effective implementation of transformative projects.
- **Clear vision and strategy** (24%, 12) - A clear, shared vision provides direction for sustainable tourism development and adapts over time.
- **Knowledge, open mindset and engagement of tourism ecosystem stakeholders** (24%, 12) - An informed, progressive mindset among stakeholders supports innovation and problem-solving.
- **Stakeholder communication** (24%, 12) - Ongoing, transparent communication builds trust and facilitates acceptance of new policies.

Other mentioned success factors include the following:

- **Persistence and continuity** (11 mentions) - Long-term commitment is essential to sustain progress despite challenges and changing priorities.

- **Political will and public commitment (9 mentions)** - Strong political will to strategically transform the destination in a sustainable way is seen as the foundation and backing to drive the transition to sustainable and resilient tourism, especially for necessary but unpopular measures. Political support is also crucial for funding plans and projects (9 mentions).

4.5.2 Barriers

As for the success factors, destinations named obstacles in the process of implementing solutions. Not surprisingly, many of these correspond to the success factors. Among the 50 best practice destinations, the most frequently cited barriers were:

- **Scepticism and resistance (24%, 12)** - Strong resistance from local stakeholders often stems from misunderstanding the economic benefits of sustainable development.
- **Lack of resources (30%, 15)** - Insufficient financial, human, and technological resources hinder the ability to implement sustainable tourism projects effectively.
- **Lack of support (12%, 12)** - The lack of support partly relates to the public sector, such as a lack of project support from the public administration or a lack of understanding of tourism dynamics within the local government. It also relates to the private sector, such as a lack of interest from or cooperation with private stakeholders.
- **Insufficient or lacking stakeholder cooperation (10%, 5 mentions)** - Poor coordination between stakeholders, especially across multiple administrative levels, creates inefficiencies.
- **Difficult and lengthy change in the mindset of stakeholders (8%, 4 mentions)** - Shifting long-held mindsets of locals and stakeholders toward sustainability is a slow and challenging process.
- **Conflicts of goals and interests (6%, 3 mentions)** - Diverging priorities between economic interests and long-term sustainability objectives frequently cause conflicts.
- **Existing laws and regulations (4%, 2 mentions)** - Legal and regulatory barriers, both local and national, often prevent or slow down the execution of innovative projects.

Other interesting obstacles mentioned by some destinations include:

- The lack of understanding within the city administration of how the tourism sector works.
- The competitive mentality of the tourism industry, which makes collaboration in developing innovations difficult.
- Innovations and quick decisions are often not expected in classically conservative tourism and initially lead to cautious behaviour.
- The short funding time frame (e.g. 3 years) for implementing projects and measures in cooperation with politicians, DMO and tourism businesses.
- The complexity of the data (lack of harmonised methodologies and data gaps on social and environmental impacts of tourism; difficulties in making these easily understandable for users).
- The lack of communication with stakeholders about the positive results of some initiatives.
- Decreasing interest and engagement of stakeholders over time.

4.6 Takeaways from the destinations' perspective

Destinations were also asked to share lessons and recommendations with destinations facing similar challenges. The key lessons can be summarised as follows:

Adoption of a strategic concept: A clear and well-defined strategy is vital for the sustainable and resilient development of destinations. This involves understanding the current situation of the destination, engaging local stakeholders, and ensuring long-term vision alignment. Adopting strategic approaches can prevent overtourism and promote alternative forms of travel. It is essential to include local residents and address social sustainability alongside environmental matters.

The need for comprehensive planning: Long-term and holistic planning is crucial in particular for new infrastructure developments. The success of tourism projects requires adaptation to global tourism trends and the collaboration of tourism organisations at regional and national levels. Pre-established networks and partnerships can significantly improve planning outcomes.

Successful transformation processes: Transformation towards sustainable tourism takes time, patience, and stakeholder coordination. Replicable solutions can be achieved through collaboration and innovation, although the unique conditions specific to the destination must be considered. Communicating the benefits of sustainability to the local population is also key.

Role of DMOs: Destination Management Organisations (DMOs) need to go beyond traditional marketing roles and focus on innovation, sustainability, and long-term strategic planning. This might involve setting up independent organisations such as innovation labs that are free from day-to-day operations.

Involve SMEs: Involving small and medium-sized enterprises (SMEs) in sustainability initiatives is often challenging due to bureaucratic hurdles and paperwork. Practical, supportive steps such as creating communication channels and simplifying certification processes can help integrate SMEs.

Successful project implementation: Effective project implementation requires clear communication, the involvement of all stakeholders, including local residents, and collaborative mechanisms. Top-down and bottom-up approaches can coexist to ensure the success of sustainability projects. Independent project teams and long-term commitment are critical for keeping projects on track.

Stakeholder engagement and collaboration: The creation of networks and regular communication with stakeholders ensures more efficient collaboration. Stakeholder engagement is often a prerequisite for the successful implementation of projects related to infrastructure, environmental preservation and climate change. Regular meetings and direct communication channels among stakeholders help with coordination. Building close contact with different stakeholder types is also important for the success of large projects.

Stakeholder motivation: To motivate stakeholders, it's important to clearly communicate the benefits of sustainability efforts. Establishing a long-term vision, sharing examples of best practices, and committing to certifications can inspire stakeholders to get involved. Demonstrating economic benefits can also serve as motivation.

Communication towards stakeholders: Effective communication is crucial for engaging stakeholders and ensuring the success of sustainability measures. Storytelling and sharing best practices help build credibility and support for tourism initiatives.

Increasing tourism acceptance: Tourism acceptance hinges on transparent communication, responsible tourism promotion, and engagement with both local communities and tourists. Proactive communication of tourism tax investments and sustainability initiatives can help improve the local population's perception of tourism.

Measurement and monitoring: Comprehensive monitoring and data management are key to managing tourism flows and ensuring sustainable practices. Data helps set expectations and guide decision-making, but it is important to communicate monitoring results clearly to all stakeholders.

Digitalisation and new technologies: Destinations should embrace digital transformation, such as pre-booking systems, immersive technologies (like VR and AR), and e-commerce platforms. Digitalisation enhances both the tourism experience and operational efficiency while making destinations more accessible and sustainable.

Peer learning: Mutual learning between destinations and international tourism organisations has been a significant factor in successful projects. Peer learning allows destinations to adopt best practices from other regions and share their experiences for collective benefit.

Product and infrastructure development: Tourism products and infrastructure must cater to the specific needs of different market segments. Destinations should also focus on accessibility and inclusivity to increase competitiveness. Long-term investment in infrastructure is necessary to ensure sustainable tourism growth.

Funding: Securing funding is essential for the successful implementation of tourism projects. Persistence is key in securing national, European, or international funding. External funding is particularly vital for smaller destinations to boost tourism initiatives.

Other recommendations include understanding the importance of protecting culture and heritage, the value of the safety in crisis situations and establishing accessibility for all as common practice in municipalities and tourism destinations.

5. Summary and conclusions

The report provides an analysis of case studies showing successful tourism development strategies in **50 best practice destinations in 19 EU countries**, categorised into urban, rural, coastal and mixed types, with cultural tourism being the most common type of tourism (78%), followed by rural and coastal tourism.

Tourism challenges were categorised into **economic, social, environmental and governance dimension**. Solutions were grouped into nine categories, with stakeholder engagement (90%) representing the most adopted, followed by the adoption of tourism strategies and monitoring frameworks, digital tools and infrastructure investments. These strategies varied in importance depending on the type of challenge, but consistently relied on collaboration and strategic frameworks. In principle, **all best practice cases have a high replicability potential and a high degree of innovation**, as these served as selection criteria for the cases. But each destination presents a unique approach that not only addresses its key challenges, but also provides replicable models for other destinations with similar problems.

Detailed results on the key solutions are:

- Adoption of a tourism strategy and monitoring framework:** Around 60% of the analysed destinations have adopted a sustainable tourism strategy or monitoring framework, integrating tourism with urban planning, transport, and environmental protection. Notable examples include **Borkum**, which developed the "Living Space Borkum 2030+" strategy with stakeholder participation, emphasising climate neutrality and high-quality tourism. This cyclical strategy process involves ongoing review and adaptation every few years, driven by KPI-based management, earning broad support from locals and stakeholders. **Malta**, moving away from a growth-focused model, developed a strategy prioritising sustainable development, using data-driven decision-making and research to balance economic, social, and environmental objectives. A comprehensive monitoring system tracks progress, and Malta is involved in innovative research to tackle future tourism challenges, supported by strong collaboration among stakeholders and political commitment. In **Lower Saxony**, a climate change adaptation strategy was created through a collaborative process involving various stakeholders. It began with a climate risk analysis and the development of region-specific tools and guidelines to help adapt to climate impacts. Workshops and networking events offer ongoing support, backed by a state funding program. This strategy's success is attributed to its scientific basis and strong stakeholder communication.
- Stakeholder participation and management:** Most destinations have established some form of stakeholder engagement to enhance tourism management. Common practices include public-private partnerships, which foster cooperation between local authorities, businesses, and tourism providers, promoting sustainable practices. Community involvement through volunteer programs and forums helps create a sense of ownership and improves interaction with tourists. Digital platforms are increasingly used to facilitate communication and efficiency. Innovative examples include the **Azores**, which utilises a collaborative governance model involving community groups, sustainability teams, and local businesses to support sustainable tourism and address changing demands. **Florence** has developed a multi-level management system coordinated by a Steering Committee that includes various stakeholders to create and implement tourism strategies. **Aarhus's** "ReThinker" program integrates volunteers into local events, enhancing community engagement and tourism experiences.

Overall, stakeholder participation focuses on collaborative management, sustainability, and inclusivity, leveraging digital tools and multi-level governance to involve a broad range of stakeholders in tourism development.
- Laws and regulations:** Destinations like Barcelona, Bohinj, Bruges, Dubrovnik, Florence, and Mallorca have implemented various laws and regulations to mitigate the negative impacts of high tourism volumes. **Barcelona, Dubrovnik, and Florence** have introduced restrictions on souvenir shops, bars, and take-away establishments to combat commercial gentrification, and regulated short-term rentals to prevent rising housing costs. **Bruges** has banned new holiday homes and restricted shared accommodations like Airbnb to residents only. Additionally, these cities have limited cruise ship arrivals by capping the number of ships and passengers. Traffic control measures have been enacted in **Bohinj** and **Dubrovnik** to manage vehicle access in sensitive areas, while Bruges has also restricted tourist transport options like boats and horse-drawn carriages. **Mallorca** has introduced regulations as part of its Circular Economy strategy to reduce plastic waste and enhance environmental sustainability. These regulations primarily affect local authorities, residents, tourists, and local businesses, with a focus on managing the impact of tourism on infrastructure and local environments.

- Certification:** Thirteen destinations have adopted certification schemes to promote sustainable tourism. These certifications include both internationally recognised labels, such as EarthCheck, which cover comprehensive sustainability criteria including environmental, social, and economic factors, and local or national certifications tailored to specific regional needs and cultural values. For instance, the **Lika** Quality Label in Croatia supports local food and products, while Lyon offers several labels to promote sustainable practices and regional cuisine. Local certifications address unique challenges and opportunities, enhancing a destination's cultural identity and ensuring community involvement. They often involve extensive capacity-building activities and require regular audits to foster continuous improvement. While certifications demand significant financial and human resources, innovative solutions like **Montafon's** "Host Role Model" program help ease the process for small and medium-sized enterprises (SMEs) by offering workshops and consultations to achieve sustainability goals.

Overall, sustainability certifications are vital for promoting responsible tourism. They enhance a destination's global reputation, support local economies, and adapt to evolving global tourism trends, balancing international standards with local needs and capacities.
- Promotional Campaigns:** Several destinations, including Ahrtal, Benidorm, and Copenhagen, have launched promotional campaigns to bolster their sustainability efforts. These campaigns primarily focus on sustainability, local engagement, environmental protection, and responsible tourism. **Copenhagen's** "Sustainable Choice CPH" encourages eco-friendly activities, while the "Planet Copenhagen Manifesto" highlights the city's environmental goals. **Prague's** "Enjoy and Respect" campaign fosters responsible tourism and sustainable travel habits, also targeting high-quality tourism segments. **Bohinj's** campaigns focus on sustainable mobility and transport, educating tourists about environmental protection. Additional themes include promoting off-season tourism and water protection.
- Digital Solutions:** Half of the destinations analysed have adopted innovative digital solutions to advance sustainable and resilient tourism. Key digital tools include mobile apps for tourism services, which are used in 15 destinations to provide real-time information on transportation, attractions, and eco-friendly options, thereby enhancing visitor navigation and promoting sustainable mobility. For instance, **Florence's** "FeelFlorence" app helps manage tourist flows and suggest less crowded attractions, while **Brussels'** app Floya integrates various transport modes for a seamless travel experience.

Real-time data and monitoring systems are also prevalent, utilised in destinations like **Barcelona** and **Malta** to optimise tourism flows and resource management. These systems, such as the Smart Data platform in **Andalusia** and the Tourism Observatory in Barcelona, aggregate data to support sustainable tourism planning and decision-making. Additionally, digital tools for environmental monitoring, mobility solutions, and augmented reality (AR) are employed to assess and manage environmental impacts, promote sustainable transport, and enrich tourist experiences. AR tools offer immersive experiences by blending digital elements with real-world sights, enhancing cultural and historical engagement. Overall, these digital innovations play a crucial role in balancing tourism growth with sustainability and improving both visitor experiences and operational efficiency.
- Capacity Building:** Capacity building initiatives have been implemented by 18 destinations, including Andalusia, Azores, Gothenburg, and Lower Saxony, among others. These destinations offer a variety of training programs and workshops for tourism stakeholders, focusing on sustainability and addressing specific challenges like resource management, climate change adaptation, resilient tourism development, and the integration of local products. Training also covers business principles, marketing, digitalisation, and new technologies.

In addition to training, these programs are often supplemented by expert consultations, coaching, awareness-raising campaigns, and peer learning activities. Guidelines, manuals, and tools are provided to help companies adopt sustainable practices or achieve certifications. A unique example comes from **Middelfart**, where capacity building includes involving tourists in conservation activities like whale watching and waste picking, raising biodiversity awareness and engaging businesses through educational field trips on sustainability.
- Infrastructure and Product Development:** Nearly half of the destinations have invested in sustainable infrastructure or product development focusing on transport, waste reduction, accessibility, cultural preservation, and energy efficiency, helping to reduce tourism's environmental impact and increase resilience.
- Research and Innovation:** Research and innovation projects support 13 destinations, including Benidorm, Brussels, and Malta, in advancing sustainable and resilient tourism. These initiatives focus on smart technologies, sustainability, and social engagement. For instance, data-driven decision-making is crucial in

destinations like **Malta** and **Benidorm**, where AI and satellite data are used for monitoring environmental factors and tourist flows. Environmental monitoring and conservation efforts are evident in Lower Saxony, Malta, and Valencia, involving real-time tracking and climate adaptation. Cultural tourism is enhanced with VR and AR technologies in places like **Carbonia** and **Cork**, improving visitor experiences and heritage conservation. Additionally, Middelfart and Valongo involve tourists in research activities, such as biodiversity conservation and waste collection, contributing to environmental sustainability.

The analysis of case studies identified several **key success factors** for implementing sustainable tourism strategies. The most frequently cited factors were stakeholder engagement (48%) and funding opportunities (36%). Other important factors included stakeholder support and staff commitment (26%), a clear vision and strategy (24%), and continuous communication with stakeholders (24%).

Strong political will and public commitment were critical, especially for enacting unpopular but necessary changes. Destinations with an open and knowledgeable tourism ecosystem succeeded in fostering innovation. International guidelines helped build capacity and structure strategies, while a clear vision and regular strategy reviews ensured long-term success. A monitoring system for data management and sustainability metrics was essential for informed decision-making.

Perseverance was essential due to the long-term nature of sustainability transitions, alongside with broad stakeholder support, including collaboration with local authorities and companies. Early and continuous stakeholder dialogue helped gain acceptance for new measures. Peer learning, embracing new trends and technologies, and showing visible results also contributed to success. Other factors included creating independent innovation hubs and investing in training.

Across different solution approaches, **stakeholder involvement, funding, and community commitment** were consistently important for strategy adoption, infrastructure investments, and digital solutions.

The **funding** for sustainable and resilient tourism transformation projects in destinations often comes from external sources, with the scale and focus of the projects determining the type of funds used. Larger projects typically receive co-financing from EU and national funding sources, while smaller initiatives, such as stakeholder management or awareness campaigns, are usually funded by the destination management organisation's (DMO) own budget. EU funding programs play a major role, with 22 destinations using funds such as the European Regional Development Fund (ERDF) for monitoring and digitisation projects, and the LEADER program for implementing sustainability measures. Other EU programs like INTEREG, LIFE, and COSME also provide financial support. National and regional funding programs are also significant, particularly for innovation and climate-related projects. Municipalities are a key source of funding for infrastructure investments, whilst private companies, tourism stakeholders, sponsors, and volunteer groups also contribute to the funding of sustainability measures. The regular budget of the DMO remains crucial for smaller or routine projects.

The **key barriers** to implementing sustainable tourism projects, as identified by destinations, include scepticism and resistance from local communities, authorities, and businesses. This resistance, particularly to shifting away from traditional growth models, was a significant obstacle in several cases. Convincing stakeholders required extensive discussions and persuasion efforts. Another major challenge was the lack of resources, including financial, human, and time resources, which made it difficult to carry out sustainability projects. This issue was exacerbated by insufficient national or European co-financing.

Additionally, some destinations faced a lack of support, especially in terms of political or stakeholder backing, which slowed progress in areas like stakeholder participation, capacity building, and infrastructure development. A lack of cooperation between stakeholders, such as local authorities and businesses was also problematic, with complex administrative processes consuming both time and resources.

Other obstacles included conflicts of interest between short-term political goals and the long-term nature of sustainable tourism, conservative mindsets resistant to change, and the instability caused by political election cycles. Laws and regulations sometimes prevented the realisation of new sustainable initiatives, and challenges in data management and communication with stakeholders further complicated the efforts. The lack of technological skills and the waning engagement of stakeholders over time were also highlighted as significant issues.

Destinations emphasised the importance of a clear, well-defined strategy for sustainable and resilient development. This includes understanding the destination's current status, engaging local stakeholders, and aligning with long-term goals. Such strategic approaches help prevent overtourism and promote alternatives while addressing both social and environmental sustainability.

From the destinations' perspective, there are some **lessons learned** and **takeaways** from implementing measures for sustainable and resilient tourism development, which are summarised below.

Comprehensive, long-term planning is essential, especially for infrastructure development. Successful projects require adaptation to global trends and collaboration between tourism organisations at various levels. Pre-established networks and partnerships can significantly enhance planning outcomes.

The sustainable tourism transition is a time-consuming process that demands patience and coordination. Collaboration and innovation can produce replicable solutions, but it's also important to communicate the benefits of sustainability to the local population and stakeholders. Destination Management Organisations (DMOs) should focus on innovation and sustainability management, going beyond traditional marketing roles. They may need to establish independent organisations like innovation labs that remain free from daily operations.

Engaging small and medium-sized enterprises (SMEs) in sustainability efforts can be difficult due to bureaucratic hurdles, but this can be overcome by simplifying certification processes and improving communication. Effective project implementation requires clear communication, stakeholder involvement, and collaborative approaches. Both top-down and bottom-up methods are necessary, and independent teams with long-term commitments are crucial for maintaining project momentum.

Stakeholder engagement and collaboration are vital, requiring regular communication and network building. Motivating stakeholders involves clear communication of the benefits of sustainability efforts, sharing examples of best practices, and demonstrating economic advantages. Transparent communication is also key to increasing local tourism acceptance, especially regarding investments from tourism tax and sustainability initiatives.

Monitoring and data management play a critical role in managing tourism and ensuring sustainable practices. However, it is crucial to clearly communicate monitoring results to all stakeholders. Destinations are encouraged to embrace digital transformation, including tools like pre-booking systems and immersive technologies, which enhance both tourism experiences and operational efficiency.

Peer learning, where destinations exchange experiences and adopt best practices from others, has been a significant success factor. In terms of product and infrastructure development, destinations should focus on inclusivity and accessibility to cater to various market segments. Securing long-term funding is essential for successful tourism projects, with smaller destinations often needing external funding to support their initiatives.

Other important recommendations include protecting culture and heritage, ensuring safety in crisis situations, and making accessibility a standard practice in tourism destinations.

The 50 best practice cases are a valuable resource of information and advice for destinations facing similar challenges and provide a proven framework to address environmental, social, economic and governmental challenges. They act as a guide to ensuring that tourism is not just profitable but also responsible, helping destinations align with global sustainability goals while delivering meaningful, authentic experiences for visitors.

By learning from other successful destinations, stakeholders can implement strategies that have already demonstrated positive results. They can be the starting point for a deeper exchange and for establishing twinning partnerships in sustainable tourism, providing a clear starting point for collaboration between destinations. By first identifying the challenges and respective best practices, a destination can gain valuable insights into what strategies have worked effectively elsewhere, creating a knowledge base that can be deepened through twinning. These practices offer a common ground for dialogue and cooperation, allowing destinations to approach potential twinning partners with concrete examples of their sustainability efforts. Twinning activities allow for deeper exchange, where both parties can refine and expand upon these practices, jointly solving challenges and co-developing innovative solutions. In this way, best practices not only guide initial improvements but also act as catalysts for broader, long-term collaboration through twinning.

In this context, the best practices presented in the appendix are the starting point for the next steps of the project, in which DMOs will begin to confront common challenges and explore in greater depth sustainable issues, for cross-fertilisation and mutual development.

6. Annexes

6.1 Literature list

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6.2 An overview of the key challenges selected relating them to their contributing factors

Table 8: Overview of challenges, drivers, impacts, destination characteristics and solutions

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
Economic dimension						
Creation of local added value through tourism <ul style="list-style-type: none"> - Insufficient use of cultural and natural resources to increase tourism added value - High leakage due to dominance of non-local tourism companies 	Growing tourism demand; New demand segments and types of tourists; <i>Changing of consumer preferences</i> towards sustainable tourism;	High leakage due to dominance of non-local tourism companies; Reliance on imports;	Underutilised potential of tourism; Complex value creation processes; Lack of properly defined framework for value chain coordination; Lack of stakeholder coordination; Limited capacities of the value chain actors	Larger share of economic benefits within community; Job opportunities for locals; Economic empowerment; Increasing the regions resilience to crisis	Local authorities/ government; Local (tourism) businesses; Other sector businesses	Development of local supply chains; Cross-sectoral tourism product development (e.g. gastronomy); Valorising natural and cultural heritage;
Growth-orientated mind-set of destination stakeholders	Economic growth; Growing tourism demand; Growth-orientated mind-set of the tourism sector; Seasonality of tourism demand;	Prioritisation of the traditional business model (quantity over quality); Overcrowding and congestion; Imbalances in the number of residents and visitors; High tourism intensities; Overutilisation of tourist assets; Increased pressures on natural resources	Limited effectiveness of destination governance & management; Level of sustainability mind-set of destinations; Insufficient measurement and monitoring framework	Economic gains; Job creation; Environmental degradation; Cultural erosion; Rise of living costs; Reduction of quality of life of local residents; Degradation of visitor experience; Image loss of destination	Local residents; Local authorities/ government; Local (tourism) businesses; Global tourism players;	Emphasising the quality of tourism experiences over sheer quantity; Rebalance of “growth paradigm”; Targeting specific market segments; Implement regulatory interventions; Introduce non-economic indicators for measuring success

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
						Strengthen participatory approaches;
Dependency of local economy on tourism	Economic growth; Unique tourism products;	Overdependence on tourism; Underdevelopment of other crucial sectors, e.g. education, healthcare, manufacturing and agriculture; Greater vulnerability to economic contraction and exposure to risks; Fluctuations in tourism demand	Iconic tourism destination that is highly attractive to new demand segments; One-sided destination governance with massive development of tourism infrastructure; Effectiveness of destination management; Lack of community participation	Foreign exchange earnings; High share to GDP; Employment opportunities; Lack of housing for residents; Labour shortages (especially for seasonal workers); Environmental degradation	Local authorities/ government; Local residents; Local tourism players; Local economy as a whole; Tourism policy makers & DMOs	Integration of tourism into a broader regional (economic) development (Living-Space-Concept); strategy; Diversification of economy; Strengthen economic cross-sectoral linkages between sectors
High seasonality of tourism	Variations in climate and weather patterns; Public, religious or school holidays as well as travel habits and motivations	For the demand-side: High prices, Crowding and pressure on transport system and infrastructure Reduction of tourist experience quality and satisfaction For the supply-side: Higher risks for businesses due to the instability in income and return on investment, an under- or overutilisation of resources, shortages of seasonal workers	Low effectiveness of destination governance and management; Urban destinations less affected than coastal and rural destinations	Loss of profit potential due to high operating costs; Strain on social and ecological carrying capacities; Under- and unemployment issues in low season; Administrative scheduling difficulties; Creation of feelings of disturbance or even threat among residents; <i>Economic distress in low season,</i>	Local residents; Local tourism businesses; Tourists	Spread of tourist inflows; Differential pricing: Diversified tourism products; Diversifying the market (e.g. multi-segment approach)
Changing consumer preferences towards more sustainability - Increasing demand for sustainable tourism offers (<i>opportunity</i>), - Raising awareness for sustainable tourism among tourists	New demand segments and types of tourists; Changing of consumer preferences towards sustainable tourism; Promotion of sustainable destinations in media	Gap between tourists' attitudes and sustainable behaviour; Overall scarce and/or superficial information on sustainability-related issues; Need for sustainable tourism offers and being at a competitive disadvantage; Not having a suitable sustainable tourism offer and being at a competitive disadvantage;	Unspecific marketing activities not focusing on sustainability; DMO in the role of the first encounter for influencing tourist behaviour, also in regard to sustainability; Lack of awareness of the ideas and practices of sustainable tourism among	Supporting sustainability development of tourism; Improvement of positive tourism impacts on destinations and communities; Creation of new business opportunities	Local authorities/ government; Local residents; Tourists; Tourism service providers	Communication and promotion of sustainable tourism; Raise awareness for sustainable tourism; Influence of attitudes; Establishment of a sustainability marketing strategy; Development of sustainable tourism products; Communication campaigns for sustainable tourism; Foster the

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
	source markets; <i>Rise of new competitors</i>	Not having a suitable sustainable communication strategy	local population (not aware of travel choices and its effects, and the adverse impacts that tourism has); Reluctance to adopt sustainable practices due to perceived obstacles or a lack of understanding (by tourism business) Lack of a holistic approach to communicating sustainability			using destination website for online communication; Targeting tourist markets with a high preference for sustainable tourism
Insufficient use of new and advanced technologies in tourism (Improving the tourist experiences; Digital visitor management; Data management)	Advanced technologies , e.g. <i>artificial intelligence (AI), virtual reality (VR), and the Internet of Things (IoT), Use of social media; Blockchain</i>	Missed digital transformation of destinations and tourism businesses; Privacy and data security as critical concerns;	<i>Effectiveness of destination governance and management, Ability to respond to changes, Quality of technological utilities/facilities,</i> Resistance and closed mind-set to new technologies; Lack of digital skills in the local tourism industry Leveraging data sufficiently and effectively	Development of smart travel facilitation; Facilitating smart destinations; Job creation (new job profiles); Increasing customer experiences; Supporting operational efficiency (effective data management); New business opportunities; Supporting more sustainable tourism practices	Local authorities/ government; Local residents; Tourists; Local tourism businesses; Global tourism players; Technology providers; Transport companies;	Promotion of digital infrastructure and data and knowledge-sharing platforms; AI/VR solutions to enhance visitor experiences, Personalised Apps manage visitor flows; Development of a European Data Space for tourism; Setting up monitoring systems using open, big, real-time data; Building capacities in this field of new technologies; Provision of funding opportunities

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
Spatial and temporal concentration of visitors	Growing tourism demand (esp. from emerging economies, cruise ships, low-cost airlines); Evolution of social media use; Sharing economy and peer-to-peer platforms; Seasonality of tourism	Concentration of visitors in space and time (Overcrowding); Unbalanced tourism growth	Lack of destination governance and management; insufficient visitor management (considering carrying capacities of places); <i>Quality of utilities;</i> <i>Pressures exerted by the productive sectors other than tourism;</i> <i>Level of sustainable consumption and production</i> Coastal and urban destinations are especially affected	<i>Degradation and congestion of local infrastructure and services (e.g. traffic, waste, pollution);</i> <i>Disturbance and displacement of local residents</i> Imbalances of local economy, Inflation of prices, Degradation of commercial infrastructure, Degradation of the environment, <i>Declined quality of tourist experiences,</i> Deterioration of destination image	Local authorities/ government; Local residents; Tourists; Tourism service providers	Improvement of destination governance; Dispersion of visitor flows; Implementation of legally binding rules and regulations; Increase of capacities; Making use of digital solutions; Stakeholder cooperation; Implementation of environmental measures; Data driven tourism monitoring
Increase in the cost of living due to tourism - <i>Increased cost of housing</i> - <i>Increased cost of everyday food</i>	Increased tourism demand	High tourism intensity; Competing demand for housing from locals and visitors; Higher purchasing power of foreign tourists; Increased price levels of leisure facilities; Real estate speculation	<i>Effectiveness of destination governance and management;</i> <i>Lack of regulation regarding housing;</i> <i>Level of sustainable consumption and production;</i> <i>High concentration of capital;</i> <i>Accumulation of foreign-owned businesses;</i> <i>Different income levels and lifestyles of tourists and residents;</i> <i>Growth-focused mindset of the tourism sector</i>	Inflation of real estate prices; <i>Increased cost of living;</i> <i>Increased cost of housing;</i> <i>Increased price level of goods and services;</i> Reduction of availability of certain goods and services; Loss of residents' purchasing power; Rent gap induced tourism gentrification; Replacement of shops catering to local needs by tourism businesses; City modernisation (positive)	Local residents	Implementation of legally binding rules and regulations and specific tourism policies; Stakeholder cooperation; Involving local stakeholders in a participatory way; Data driven tourism monitoring

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
Deterioration and congestion of infrastructure including commercial gentrification -	Growing tourism demand <i>Growth-focused mindset of the tourism sector</i>	Unbalanced tourism growth; “Touristification” – spreading out of tourism accommodation and services; Increased dominance of large tourism businesses; Real estate speculation; City modernisation; Limited local capacities; Limitations on restrictions of urban planning	Lack of destination governance; Insufficient visitor management (considering carrying capacities of places); Lack of facilities to accommodate tourism developments; <i>Pressures exerted by the productive sectors other than tourism,</i> <i>Level of sustainable consumption and production (state)</i>	Commercial gentrification (traditional stores or professions are pushed out); Deterioration and congestion of infrastructure; Rise of real-estate prices; Imbalances of local economy; Reduced accessibility of infrastructure; Reduced quality of life of locals; <i>Replacement of commercial services for residents with those for tourists</i>	Local residents; Local businesses	Improvement of destination governance; Dispersion of visitor flows; Continuous monitoring of imbalances; Implementation of legally binding rules and regulations; Support of local value chains
Deterioration of the destination image	Growing tourism demand; Growth-focused mindset of the tourism sector	Overcrowding; Environmental damages; Cultural erosion; Misconduct of tourists	Lack of destination governance; Insufficient visitor management (considering carrying capacities of places);	Damage of visitor sites and attraction; Reduction of attractiveness of sites (Visual pollution); Deterioration in the perception of safety; Deterioration of the destination image; Negative comments in social media and booking platforms	Destination as a whole	Implementation of strategies and policies to minimise negative impacts of tourism; Visitor management; Marketing for sustainable tourism; Sustainable product development; Creating of social capacities (e.g. community participation, increasing awareness and education);
Socio-cultural dimension						
Lack of qualified and unskilled workers	Unfavourable working conditions in the tourism sector; Seasonality; Demographic shifts;	Lack of qualified and unskilled workers	Level of cooperation and collaboration between stakeholders (incl. recruiting agencies);	Shortage of qualified personnel; Limitations of business operations; Reduced guest experience; Loss of revenues;	Local tourism businesses	Implementing strategies and measures to attract and retain skilled workers; Awareness raising campaigns; Capacity building measures;

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
	Competing other economic sectors		Lack of educational and career opportunities (incl. on-the job training)	Increasing potential for imported labour		Higher wages and more attractive working hours; Employment of elderly employees; Recruiting abroad; Funding programmes
Poor working conditions in the tourism sector - <i>Precarious and irregular work</i> - <i>Low wage levels</i>	Seasonality of tourism; Tourism is a buyers' market resulting in pressure to lower prices	Irregular working hours due to seasonal work; Shift working; Overtime hours; Below-average wages; Low career and developmental opportunities; Physical strains and health risks	Lack of legal regulations and respective policies; Image of tourism; Economic limitations of local tourism businesses to pay higher wages	Low job satisfaction; Moving to other sectors	Tourism businesses; Local residents (Staff working in tourism)	Promotion and facilitation of flexible and innovate working time schemes ("New Work" concepts); Improved wage levels; Stricter controls on compliance with the legal framework;; Reduction of physical strain; Job rotation; Relieving older employees
Insufficient or declining acceptance of tourism	Growing tourism demand	Overcrowding; High tourism intensity; Misconduct of tourists in destinations (e.g. party tourism, nudity); Low satisfaction with tourism development	Lack of destination governance; Insufficient visitor management (considering carrying capacities of places); Economic importance of tourism in region; Involvement of locals in tourism	Reduced quality of life; Protests and hostility (tourismphobia); <i>Alienation of the local community towards tourism,</i> Limited tourism acceptance	Local residents	Community involvement and participation in decision-making processes; Measures for creating a balance between the needs of the locals, tourists, and other participants (stakeholders)
Displacement and marginalisation of the local population	Growing tourism demand; <i>Sharing economy and rise of peer-to-peer accommodation platforms</i>	Overcrowding; Gentrification and touristification; Competition of local infrastructure between visitors and residents; Misbehaviour of tourists in destination; Development of housing market; Growing presence of vacation rentals	Lack of destination governance, Insufficient visitor management (considering carrying capacities of places);	Displacement and marginalisation of local population, Increase of living costs; <i>Alienation of the local community towards tourism</i>	Local residents	Improvement of destination governance; Dispersion of visitor flows; Implementation of legally binding rules and regulations; Awareness raising

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
Accessibility and inclusivity of services and facilities	Demographic changes (aging population); Increasing source markets	Loss of specific demand segments;	<i>Level of accessibility and inclusiveness of services and facilities;</i> Sustainability mind-set of tourism stakeholders (including innovation capacities); <i>Access to and travel within the destination;</i> Inaccessible booking services and related websites; Untrained professional staff capable	Loss of revenue (if potential is not tapped); Potential to improve local economy; Creation of new business opportunities	Tourists; Local tourism businesses;	Tourism for all; Investments in infrastructure; Product development; Promotional activities; Awareness raising; Diversification of consumer needs
Maintenance and conservation of cultural heritage sites	Growing tourism demand; Growing interest in the cultural and natural heritage of the destination	<i>Pressures exerted by the productive sectors other than tourism;</i> Heritage trafficking; Commodification of cultural sites; Overuse and misuse of cultural heritage sites by tourists;	Quality of utilities/facilities; Availability of intact cultural heritage; Lack of funds for the maintenance and conservation of cultural heritage sites; Level of community participation; Presence of local value chains; Destination governance;	Damage of the cultural heritage (monuments, etc.); Loss of cultural diversity; Archaeological looting;	Tourists; Local residents; Local tourism stakeholders; Tourism policy makers & DMOs	Cooperation of tourism and other sectors; Support of local tourism structures (incl. funding and user fees); Increase capacities of local population
Environmental dimension						
Climate protection and climate change mitigation	Climate change (Increase of GHG-emissions)	Increased climate change implications (heat waves, drought, heavy rain, extreme weather events)	Level of sustainable tourism management; Carbon measurement and management; Level of awareness and know-how; Stakeholder cooperation	Health risks, water scarcity; infrastructure damage; Increased operation costs; Loss of biodiversity; Landscape degradation, etc.; Possibly changes in tourism demand	Destination as a whole	Climate protection and mitigation strategies/measures (e.g. new technologies; increasing energy efficiency); Carbon management (Decarbonisation); CO2-Footprint;

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
						Awareness raising; Capacity building measures; Stakeholder Cooperation
Adaptation to climate change	Climate change (Increase of GHG-emissions)	Increased climate change implications (Heat waves, droughts, heavy rain, extreme weather events); Tourisms' dependence on climatic factors	Level of sustainable tourism management; Sensitivity and adaption capacity of destination; Level of awareness and know-how, Stakeholder cooperation	Health risks, water scarcity, infrastructure damage, increased operation costs, loss of biodiversity, landscape degradation, etc.; Possibly changes in tourism demand	Destination as a whole	Climate change adaptation measures; Integration of adaption strategies into the wider scope of destination management, e.g. Risk management incl. emergency plans, etc.: Awareness raising, Capacity building measures
Water scarcity and pollution (including drinking water)	Economic growth; Increased tourism growth; Climate change	Increasing water consumption and pollution; Decreasing supply of water	Lack of adequate management systems; Lack of implementation of technologies/applications; Coastal and arid rural destinations	Water shortages; Increased operational costs Reduced visitor experience;	Local residents; Local tourism business; Local businesses	Understanding water-related risks in the destination; Improvement of water management; Technical measures, <i>Awareness raising and capacity building;</i>
Waste production and pollution - Insufficient circularity in tourism	Increased tourism growth; Seasonality of tourism; Over-Consumption	<i>Increased pressure on natural resource consumption (among others waste production)</i>	Capacity/quality of Waste treatment and disposal; Level of awareness and know-how; Level of sustainable tourism management; Level of cooperation among local stakeholders	Use of natural resources; Increased waste production, Littering; Environmental degradation and loss of biodiversity; Pollution (Contamination of surface and groundwater, emissions, etc.); Loss of landscape attractiveness	Local residents; Local tourism businesses; Local businesses	Improvement of waste management - Reducing (plastic) waste (less packaging) - Reducing food waste <i>Awareness raising and capacity building;</i> Integrating circularity in tourism (Reduce - Reuse – Recycle); Proper disposal of residual waste; Collaboration of stakeholders
Degradation and loss of biodiversity -	Ongoing tourism growth; Climate change; Unsustainable land-use patterns	<i>Increased pressure on natural resource consumption;</i> Overtourism in protected areas; Land consumption; Increased use of natural resources; Pollution (Water, Air) Degradation of landscape; Physical presence of tourist; Mechanical stress;	Level of nature conservation, e.g. protected areas; Insufficient or inadequate visitor management; <i>Level of environmental awareness and education;</i> Nature conservation through tourism-induced revenue;	<i>Degradation of natural habitats and ecosystems;</i> Destruction and loss of ecosystems; Disturbance and loss of biodiversity; Habitat fragmentation; Damages on flora and fauna; Disturbance of fauna;	Local authorities/ government; Local residents; Local tourism businesses; Local businesses	<i>Raising environmental awareness;</i> Capacity building; Adequate visitor management; Concept of sustainable use; Nature interpretation and environmental education;

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
		Unsustainable land-use patterns	Insufficient use of opportunities to “preserving nature and protected areas”	Valorisation of nature / biodiversity through tourism		Fostering synergies between tourism and nature conservation; Financing of nature conservation through tourism; Implementing legal regulations
Sustainable and smart mobility <ul style="list-style-type: none"> - „Lowering transport emissions” - „Enhancing transport efficiency”, - „Smart traffic management”, - “Mobility management in tourism (last mile)” 	Increase of tourism-related transportation; Increase of GHG-emissions; Climate change	<i>Increased pressure on natural resource consumption;</i> Increased pressure on local residents	Level of (sustainable) mobility management; Transportation facilities; Level of accessibility to destination; Lack of mobility offers	High contribution to GHG-emissions of transport sector	Tourism as a whole; Technology providers; Research and Development	Reducing the carbon footprint and environmental impact of transportation; Enhancing the effectiveness and efficiency of local transport systems; Making use of digital technologies and smart traffic (First and last mile); Sustainable and smart mobility management (e.g. Ensuring closed mobility chains, Shared mobility options)
Governance challenges						
Appropriate local tourism strategies and policies to accelerate the transition to sustainable tourism <ul style="list-style-type: none"> - <i>Lack of local policies and regulations to accelerate the transformation to sustainable tourism</i> - <i>Designing local policy and regulations to favour sustainable tourism development</i> 	Ongoing tourism growth; New source markets and demand segments; New enabling technologies; Growing need for resilience	Traditional processes and approaches of destination development in disarray; Changing of DMO roles; Increase in sustainability awareness and requirements; Growing need for resilience and increasing governmental interest in destination governance	Effectiveness of destination governance; <i>Tourism specific laws and Regulations;</i> <i>Inadequate implementation of strategies;</i> <i>Lack of -multi-level coordination causing an uncertain division of responsibility;</i> <i>Lack of awareness of negative impacts of tourism and the importance of sustainable tourism development”;</i> Level of interaction of stakeholders	Economic, ecological and socio-cultural impacts	Local authorities/government; Local residents; Local tourism businesses; Local businesses	Development of local tourism strategies and policies to accelerate the transition to sustainable tourism; Stakeholder involvement; Interdisciplinary & networked cooperation

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
<p>Lack of community participation in tourism activities</p> <ul style="list-style-type: none"> - <i>Entrepreneurship, business ownership, ecosystem governance, etc.</i> - <i>Local residents participation in tourism development</i> 	New source markets; Smarter tourism development and management for both tourists and residents; Growing need for resilience	Evolution of destination management including changing of DMO roles; Increase of “location/living space management” concept; Imbalances in the number of visitors and residents;	<p>Insufficient involvement of local population;</p> Effectiveness of destination governance; Effectiveness of destination management; Level of participatory governance approaches	Economic, ecological and socio-cultural impacts	Local authorities/ government; Local residents; Local tourism businesses;	Development of holistic governance approaches in destination; Increasing overall stakeholder involvement; Engagement of all stakeholders; Interdisciplinary & networked cooperation
<p>Lack of stakeholder management (multi-level, cross-sectoral)</p>	New demand segments and types of tourism; New source markets; Smarter tourism development and management for both tourists and residents; New enabling technologies, Growing need for resilience	Evolution of destination management including changing of DMO roles; Increase of “location/living space management” concept	<p><i>Effectiveness of destination governance and management;</i></p> <p><i>Lack of multi-level coordination causing an uncertain division of responsibility;</i></p> <p><i>Lack of shared goals among the various stakeholders;</i></p> <p><i>Insufficient communication among tourism-related stakeholders;</i></p> <p><i>Level of interaction of stakeholders;</i></p> <p><i>Level of participatory governance approaches;</i></p> <p><i>Tourism specific laws and Regulations</i></p>	Economic, ecological and socio-cultural impacts	Local authorities/ government; Local residents; Local tourism businesses	Development of holistic governance approaches in destination; Fostering multi-level cooperation and multi-sectoral organisation of tourism; Engagement of all stakeholders; Interdisciplinary & networked cooperation
<p>Lack of visitor participation in tourism development</p>						
<p>Resilience building and crisis management</p> <ul style="list-style-type: none"> - Crisis prevention and preparedness (Planning) 	Sudden, unpredictable events	<p><i>Natural and environmental disasters (e.g. fires, floods, landslides, severe rains or windstorms, earthquakes, volcanic eruptions...);</i></p>	<p><i>High vulnerability to unexpected events;</i></p> <p>Ability to respond to changes in destination’s conditions;</p>	Damages to tourism asset; Reduction of tourist arrivals (cancellations and rebooking, etc.);	Local authorities/ government; Local residents;	Building systemic resilience while creating opportunities for future growth;

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
- Risk and response management (Reaction)		<p><i>Health related risks (e.g. epidemics, food poisoning, humanitarian crises...);</i></p> <p><i>Human-made risks (e.g. war, terrorist attacks, social unrest, water and air pollution...);</i></p> <p><i>Financial risks (e.g. economic crises, fiscal crises, exchange rate collapses...);</i></p> <p><i>Technological risks (e.g. transportation accidents, cyberattacks, hazardous material accidents...)</i></p>	<p>Level of preparedness towards crises;</p> <p><i>Risk management;</i></p> <p><i>Change management,</i></p> <p><i>Sustainability and resilience mindset;</i></p> <p>Level of multi-level coordination;</p> <p>Policy shortcomings;</p> <p>Underlying endogenous weaknesses of the destination</p>	<p>Loss of image;</p> <p>Decline of local tourism economy;</p> <p>Loss of revenue</p>	Local tourism businesses	<p>Integration of tourism into broader crisis response and risk management;</p> <p>Establishment of a risk management);</p> <p>Innovation and product diversification;</p> <p>Coordination among various stakeholders (government agencies, private stakeholders, local communities);</p> <p>Development of agile, flexible and well-coordinated tourism policy approaches;</p> <p>Development of trainings;</p> <p>Establishment of measuring and monitoring framework</p>
Lack of awareness of sustainability and resilience among tourism stakeholders	<p>New demand segments;</p> <p>Increasing demand for sustainable tourism;</p> <p>Changing mind-set;</p> <p>New source markets;</p> <p>Climate change;</p> <p>New technologies in tourism</p>	<p>Lack of awareness of negative impacts of tourism and the importance of sustainable tourism development;</p> <p>Constant need to respond to the fluctuating demand of tourists and maintaining competitiveness;</p>	<p><i>Sustainability and resilience mindset;</i></p> <p>Level of adaptation to innovative strategies to make tourism businesses more efficient;</p> <p>Lack of awareness of sustainability and resilience among tourism stakeholders</p>	<p>Encouraging tourists, businesses, and local communities to adopt sustainable patterns;</p>	<p>Local authorities/ government;</p> <p>Local residents;</p> <p>Local tourism businesses</p>	<p><i>Awareness raising and information towards destination stakeholders;</i></p> <p>Awareness programs to educate and inform target audiences;</p> <p>Implementing education and outreach programs;</p> <p>Stronger involvement of local communities in the development and implementation of sustainable tourism;</p> <p>GSTC Criteria as an orientation for sustainability standards;</p> <p>Introduction of sustainable certification schemes</p>

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
<p>Lack of knowledge and skills of tourism stakeholders regarding sustainability and resilience</p>	<p>Changing demands; Changing mind-set; Increasing desire for sustainable tourism; Source markets; Sustainability and innovation; Digital technological advances; Exponential development of science;</p>	<p>Growing importance of sustainable tourism; Meeting new policy requirements; Successful economic transformation; Lack of skills of workforce; Staff shortages; Maintenance of competitiveness</p>	<p><i>Know-how and skills;</i> <i>Sustainability and resilience mindset;</i> Lack of knowledge and skills of tourism stakeholders regarding sustainability and resilience</p>	<p>Economic, environmental and socio-cultural impacts of tourism; Encouragement of tourists, businesses, and local communities to adopt sustainable behaviours; New business opportunities</p>	<p>Local authorities/ government; Local residents; Local tourism businesses</p>	<p>Strengthening the abilities and knowledge of individuals and organisations; Facilitation of new, effective and inclusive training approaches; Managing capacity development through stakeholder collaboration strategies and partnerships; Education and outreach programs; Involving local communities in capacity development; Introduction of sustainable certification schemes</p>
<p>Limited financial resources to support sustainability activities in tourism</p> <ul style="list-style-type: none"> - Policies to address the investment gap for sustainable tourism development 	<p>Policy shortcomings, Changing mind-set; Changing tourism demand; Crisis reactions, e.g. Covid19-Pandemic;</p>	<p>Lack of finances to support sustainability and resilience development; lack of long-term vision; lack of integration into government policy;</p>	<p><i>Adequate financial resources and funding opportunities;</i> <i>Lack of strategic planning;</i> <i>Policy short-comings;</i> Excessive bureaucracy; Economic priority versus environmental priority</p>	<p>Limitations of business operations, Loss of revenues</p>	<p>Local tourism player; Tourism policy makers & DMOs</p>	<p>Development of funding for sustainability improvements of tourism sector; Funding for research and development; Training programs; Infrastructure development; Marketing campaigns; Building knowledge about funding sources</p>
<p>Measurement and monitoring of sustainable tourism</p> <ul style="list-style-type: none"> - Data collection, - Data management, - Measuring resident attitudes to tourism, - Measuring sustainable tourism - Dissemination of results (Dashboards, etc.) 	<p>Growing tourism demand; New demand segments and types of tourists; Changing mind-set; Technological advances;</p>	<p>Overcrowding; Environmental pressures and risks, e.g. climate change impacts, biodiversity risks, etc.</p>	<p><i>Sustainability and resilience mindset;</i> <i>Monitoring and evaluation system;</i> Effectiveness of stakeholder management</p>	<p>Economic, environmental and socio-cultural impacts of tourism</p>	<p>Local tourism players; Global tourism players; Tourism policy makers & DMO</p>	<p>Improving measurement and monitoring of sustainable tourism for a better management of its impacts; Introduction of sustainable certification systems in the destination; Capacity building on sustainable tourism certification; Fostering cooperation and joint approaches regarding the</p>

Key challenges and opportunities	Contributing factors					Examples of solution approaches
	Driving forces	Pressures and risks	State (=destination characteristics)	Impacts of tourism	Main affected Stakeholders	
						implementation of certification schemes

6.3 Sources of best practices

Type of source	Sources	URL/ contact for sources	Comments	Number of cases
Case studies in academic literature	ETC (2021) Encouraging Sustainable Tourism Practices.	https://etc-corporate.org/uploads/2021/09/ETC_SUSTAINABLE_TOURISM_HANDBOOK_vs6_FINAL.pdf	description of 20 case studies	7
	Postma, A., Papp, B., & Koens, K. (2018). Visitor pressure and events in an urban set: Understanding and managing visitor pressure in seven European urban tourism destinations (unpublished). Centre of Expertise Leisure, Tourism & Hospitality.	download Key challenges literature	addressing unbalanced city tourism, contains 7 case studies	5
	UNWTO (2019). 'Overtourism'? Understanding and Managing Urban Tourism Growth beyond Perceptions Volume 2: Case Studies. https://doi.org/10.18111/9789284420643	download Key challenges literature	addressing unbalanced city tourism, contains 18 case studies	3
Repositories and reports	European Capital of Tourism awards 2019-2024	<p>2024 report: https://smart-tourism-capital.ec.europa.eu/best-practices/european-capital-smart-tourism-best-practices_en</p> <p>2023 report: https://smart-tourism-capital.ec.europa.eu/document/download/aba8c74f-9c79-401b-a95a-a274b9060edd_en?filename=2023-leading-practices-in-smart-tourism.pdf</p> <p>2022 report: https://smart-tourism-capital.ec.europa.eu/document/download/2e6be2f1-c2a1-4698-8c0e-879883f9237e_en?filename=Best%20Practice%20Report_2022_Update.pdf</p> <p>2020 & 2019 report: https://smart-tourism-capital.ec.europa.eu/document/download/ec633b6c-16c4-47e4-ab9a-11d2bc4462de_en?filename=Compendium_2020_FINAL.pdf</p>	S+F provided links to cases	69

Type of source	Sources	URL/ contact for sources	Comments	Number of cases
	Best practices selected by the EDEN/Green Pioneer Award 2019, 2022-2024	2024-https://smart-tourism-capital.ec.europa.eu/document/download/be225a00-90d8-4170-96fc-e23a449570f3_en?filename=European_GreenPioneer_BestPractices_2024.pdf 2023-https://single-market-economy.ec.europa.eu/news/best-practices-2023-eden-competition-report-now-online-2023-03-27_en 2022-https://single-market-economy.ec.europa.eu/news/best-practices-2022-eden-competition-report-now-online-2022-03-17_en https://single-market-economy.ec.europa.eu/sectors/tourism/awards-and-outreach-activities/eden/previous-editions/eden-destinations/cyprus_en		5 (2019) 12 (2022) 13 (2023) 8 (2024) → 38
	Best practices selected by Smart Tourism Capital Award 2019-2024	2024-https://smart-tourism-capital.ec.europa.eu/best-practices/european-capital-smart-tourism-best-practices_en 2023-https://smart-tourism-capital.ec.europa.eu/document/download/aba8c74f-9c79-401b-a95a-a274b9060edd_en?filename=2023-leading-practices-in-smart-tourism.pdf 2022-https://smart-tourism-capital.ec.europa.eu/document/download/2e6be2f1-c2a1-4698-8c0e-879883f9237e_en?filename=Best%20Practice%20Report_2022_Update.pdf 2020&2019-https://smart-tourism-capital.ec.europa.eu/document/download/ec633b6c-16c4-47e4-ab9a-11d2bc4462de_en?filename=Compendium_2020_FINAL.pdf		5 (2019) 18 (2020) 15 (2022) 21 (2023) 24 (2024) → 83
	The Compendium of Good Practices for the European Competition of Sustainable Practices	https://smarttourismcapital.eu/best-practices-2020/	This are the Compendium summarising the best practices of the Green Pioneer and Smart Capital awards - SEE ABOVE	SEE ABOVE
	European Green Capitals/Leaf Awards	https://environment.ec.europa.eu/topics/urban-environment/european-green-capital-award_en	Awards regarding different aspects of sustainability	13 (GL) 22 (GC)
	NECSTour Good Practices repository	https://necstour.eu/index.php/goodpractice	Projects of different EU regions	14
	UNWTO Best Tourism villages (2021-2023)	https://www.unwto.org/tourism-villages/en/villages/	Initiative which highlights villages where tourism preserves cultures and conserves biodiversity.	41

Type of source	Sources	URL/ contact for sources	Comments	Number of cases
	Boosting sustainable tourism development and capacity of tourism SMEs through transnational (COS TOURCOOP 2019 3 01) cooperation and knowledge transfer	-	Targeted to SMEs	0
	Sustainable growth and building resilience in tourism empowering support to SMEs to carry out the twin transition	https://eisma.ec.europa.eu/funding-opportunities/calls-proposals/sustainable-growth-and-building-resilience-tourism-empowering-smes-carry-out-twin-transition_en	Targeted to SMEs	0
	Tourism2030 best practice browser	https://destinet.eu/good-practices/good-practice-browser/good-practice-destinations-selection/best-practices-example	from 2014 (VISTAS Award)	0
	Bundeswettbewerb nachhaltige Tourismusdestinationen 2023/2017	https://www.bundeswettbewerb-tourismusdestinationen.de/preistraeger-2022-23 https://www.bundeswettbewerb-tourismusdestinationen.de/images/Dokument/REPORT-Nachhaltigkeit_BuWe_2016-17_Online-Version.pdf	German Competition Sustainable Destinations	4
	Sustainability in Austria	https://www.austriatourism.com/fileadmin/user_upload/Media_Library/NETA/Nachhaltigkeit/Sustainia_Publikation/Nachhaltiges-OEsterreich_Web_DE-21MB.pdf	Sustainability projects in Austria	4
	Sustainable EU tourism destinations community Futurium (europa.eu)	https://futurium.ec.europa.eu/en/sustainable-eu-tourism-destinations-community	Contains the content of the Unbalanced tourism project (see there)	0
	La gestion durable de la fréquentation dans les Grands Sites de France	https://www.grandsitedefrance.com/images/ressources_rgsf/guidefrequentation-rgsf-vf.pdf	Report about crowd management at important heritage sites in France	3
	Data appeal	https://datappeal.io/cremona-harnessing-big-data-to-increase-tourist-flows-and-create-a-data-driven-events-programme/	Article about successful Data management in Cremona (Italy)	1
	Kick-Off meeting	PPT slides	Case examples 1 - 4 on pp. 15-18	0
Completed and under implementation EU initiatives	Global Destination Sustainability Index	https://www.gds.earth/about/	Sustainability awards. As there are just a few information provided, the mention of the awards functions only as an additional aspect for already mentioned destinations	15
	Smart Tourism Destinations	https://op.europa.eu/en/publication-detail/-/publication/9df86541-fba5-11ec-b94a-01aa75ed71a1/language-en	"Study on mastering data for tourism by EU destinations – Main text". 30 Good Practices (Text and Annex A) and 10 Case Studies (Text and Annex B)	17

Type of source	Sources	URL/ contact for sources	Comments	Number of cases
	Unbalanced tourism growth at destination level	https://op.europa.eu/en/publication-detail/-/publication/816f1561-3a32-11ed-9c68-01aa75ed71a1/language-en/format-PDF/source-268441400	Study on Overtourism	13
	Intelligent cities challenge (ICC)	https://www.intelligentcitieschallenge.eu/ https://circular-cities-and-regions.ec.europa.eu/associated-partners/european-commissions-100-intelligent-cities-challenge		1
	DATES – Data Space for tourism	https://www.tourismdataspace-csa.eu/	No relevant use cases	0
	Transition Pathway Stakeholder Support Platform		not available yet	0
	Interreg Meditarreanean	https://interreg-med.eu/projects-results/our-projects/ https://interreg-med.eu/fileadmin/user_upload/Sites/Sustainable_Tourism/Projects/DESTIME_D_PLUS/Good_Practice_Database.pdf		9
	Interreg Europe	https://www.interregeurope.eu/policy-solutions/good-practices/projects?keywords=tourism&projects=	Tourism related projects to be screened and collected	7
	Net Zero Cities	https://netzerocities.eu/mission-cities/	Climate neutrality by 2030. As this refers only to the aspect of climate neutrality, the mention in the inventory functions only as an additional aspect for already mentioned destinations.	47
	European Urban Initiative	https://www.urban-initiative.eu/ia-cities	creative, innovative initiatives to master urban challenges	6
	Urban Agenda for the EU	https://www.urbanagenda.urban-initiative.eu/partnerships/sustainable-tourism	Launched in 2023, partnership, no case studies yet	0
	EU Urban Mobility Observatory	https://urban-mobility-observatory.transport.ec.europa.eu/resources/case-studies_en?f%5B0%5D=landing_page_title%3Atourism	Search by keyword "Tourism"	1
	Urban Innovative Actions	https://www.uia-initiative.eu/en/knowledge-lab/results?keywords=tourism	Search by keyword "Tourism"	3
	S3 Observatory (DG REGIO)	https://ec.europa.eu/regional_policy/assets/s3-observatory/index_en.html	Filter by last category: European Industrial Ecosystem "Tourism", New Smart Specialisation (S 3) partnerships	8

Type of source	Sources	URL/ contact for sources	Comments	Number of cases
	Systemic circular solutions for a sustainable tourism	https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl6-2024-circbio-01-4;callCode=null;freeTextSearchKeyword=tourism;matchWholeText=true;typeCodes=1,0;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=topicSearchTablePageState	No case studies available yet (call closed in Feb 2024)	0
	Regional impact of climate change on European tourism demand Publications Office of the EU (europa.eu)	https://op.europa.eu/en/publication-detail/-/publication/6185be71-faab-11ed-a05c-01aa75ed71a1/language-en	no case studies available	0
	Inforegio database - EU Regional and urban development (europa.eu)	https://ec.europa.eu/regional_policy/projects/projects-database_en	Filter by categories: Keywords "Tourism" Theme "Tourism and Culture" Period "2014-2020"	6
	Workshop on Tourism Data sharing, governance and integration	https://reform-support.ec.europa.eu/events-0/workshop-tourism-data-sharing-governance-and-integration_en	Workshop presentations on data management and governance	1
	Kohesio Project database	https://kohesio.ec.europa.eu/en/projects?keywords=Tourism%20destination&sort=Total-Budget-(descending)&theme=Research-and-innovation&policyObjective=Smarter-Europe	Filter by: Keywords "tourism destination" Theme: "Research and Innovation", "Climate change adaptation...", "Network infrastructure...", ...	2
	SmartCultTour – Smart Cultural Tourism as a Driver of Sustainable Development of European Regions	http://www.smartcultour.eu/deliverables/	SmartCultour Toolkit Deliverable 7.3, pp. 78 "5.2 A deeper insight in some of the SmartCultTour Living Labs" - presentation of 6 living labs (in detail just 3)	3
	TOURISME – Improving sustainable tourism development and capacity of tourism SMEs through transnational cooperation and knowledge transfer	https://www.acrplus.org/en/activities/acr-projects/2-content/2622-tourisme#activities	N/A - EU COSME project focusing on SME actions	0
	Be.CULTOUR	https://becultour.eu/	project to test sustainable human-centred innovations for circular cultural tourism	6
	Excellence Initiative Sustainable Travel Destinations (Germany)	https://www.wissensportal-nachhaltige-reiseziele.de/nachhaltige-destinationen	List of members including description of their activities	13
	TourCert Certification for Destinations	https://tourcert.org/en/community/	high standard certification scheme	8
	Crisis Management and Governance in Tourism	internal paper		4

Type of source	Sources	URL/ contact for sources	Comments	Number of cases
	Pledges to support the transition pathway for tourism	https://single-market-economy.ec.europa.eu/sectors/tourism/eu-tourism-transition/tourism-transition-pathway/commitments/pledges_en https://data.europa.eu/doi/10.2873/775069	Selection by type: DMO, local, regional, national administration	18
Network of contacts	CIPRA	https://www.cipra.org/en/good-practice	Good practice description for certain challenges such as second homes/housing for locals, etc. - Commission Internationale pour la Protection des Alpes	4
	GSTC (Global Sustainable Tourism Council)	https://www.gstcouncil.org/destination-stewardship-report/ https://www.gstcouncil.org/certified-sustainable-destinations/	Top 100 Destination Sustainability Stories GSTC akkreditierte Destinationen	10 (Stories) 9 (Certified)
	TRIANGLE (European Knowledge Alliance for Sustainable Tourism)	https://destinet.eu/who-who/civil-society-ngos/triangle-knowledge-alliance-net	N/A - This is a network of experts which can be consulted during the selection process of best practices	0
	Scithos (Smart City Hospitality)	https://new.scithos.eu/wp-content/uploads/2019/01/Smart-City-Hospitality-The-impacts-of-urban-tourism-beyond-a-triple-p-approach.pdf	Impacts for destinations	3
	Awardees of the prizes launched by the EC	https://eic.ec.europa.eu/eic-prizes/european-capital-innovation-awards_en	European Capitals of Innovation	33
	Alpine Pearls	https://www.alpine-pearls.com/en	Sustainable mobility initiative in Alpine regions	4

6.4 Data collection template

Case study: Destination

1. General Information about the destination

Case study item	Information	Data source
Destination name		
Destination type		
Territorial level (NUTS)		
Country		
Tourist area size (km ²)		
Population		
Importance of tourism in destination (GDP, employees)		
tourist arrivals (2023)		
overnight stays (2023)		
tourism particularities (day visitors, cruise arrivals, etc.)		
Type of tourism		

2. Tourism development

Tourism Development

How has tourism developed during the last ten years (tourist arrivals, overnight stays, visitor segments, seasonality, hotels) to understand the tourism situation and the challenges in the destination?

3. Tourism management in the destination

Organisation of tourism & stakeholders – Tourism organisation?

How is tourism in the destination organised? Which authorities are responsible for tourism? Which are the central stakeholders involved (if GO as challenge)? Additional comments? Are there any other important facts to understand the tourism management?

4. Description of Key challenge

Selection of key challenge

Option 1: Based on our research, the measures for the following challenge are particularly interesting, (whereby the following sub-challenges could be also interesting to be further explored): (Option 2: During our research, the following problem-solving measures (solutions) particularly caught our eye? What challenges led you to introduce/implement the measures? I would like to focus on the challenge xxxx.

Drivers, Impacts, State, Risks of key challenge

Related to the challenge: What are the main causes (drivers/trends, state factors, risks)? What are the most negative or positive impacts?

Stakeholders affected in regard to key challenge

Which stakeholders are mainly affected and how? (e.g. local population, visitors, small businesses, etc.)

Additional comments to understand the key challenge

Are there other important aspects to understand the key challenge in the destination?

5. Solutions (Main Focus)

Measures and strategies to address the key challenge (mitigate negative, benefit from positive impacts)

What strategies and measures have been applied by whom to address the challenge? Who was the initiator of any specific measures (authorities, DMO, businesses, residents, etc.)? Have different stakeholders been involved? (Since) when was the measure implemented? (What are the measures aimed at (root causes, capacities, impacts) and how there were implemented?)

Costs and funding sources?

Innovative aspects

What are unique/innovative/new aspects? Have any digital solutions (including social media) been planned or implemented?

Success factors and barriers regarding the implementation

What were the central challenges when planning, developing, and implementing the measures?

What were the central success factors when planning, developing, and implementing the measures?

Benefits on local communities and positive impacts

What benefits and positive impacts did the solution have for the local community?

Impact measurement

Do you measure the effectiveness of the measures? How? Which indicators have proven successful? Are there other important aspects?

Replicability potential to other destinations with similar characteristics (preliminary consideration)

What needs to be considered when implementing such measures? What could be transferred to other destinations?

6. Learnings and Recommendations

Learnings and Recommendations

What are learnings and recommendations that you'd like to share for destinations with similar challenges (replicability potential)?

Additional comments

Are there other important aspects to understand the strategies/measures chosen?

Useful links/documents

Which material (links/documents) about the implemented measure are you willing to share with other destinations? Please provide them.

Contact email address – Consent needed to be published for other destinations



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