

Sustainable Tourism Indicators

Monitoring sustainability performance in the Portuguese tourism industry

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Abstract

To address the challenge of promoting the competitiveness and sustainability of the tourism industry, the Portuguese Government launched in 2017 the Tourism Strategy 2027, a 10-year strategy with the motto “Leading the tourism of the future”.

Tourism Strategy 2027 defines the vision for the Portuguese tourism industry for the next 10 years, defines sustainability as its basis and settles ambitious specific goals in both economic, environmental and social pillars.

The purpose of this paper is to define a system of tourism destination sustainability indicators, oriented towards the decision-making process of tourism destination managers and other stakeholders in the sector and it is supported by a business intelligence platform, freely available on the Turismo de Portugal’s knowledge management website, TravelBI.

This system of indicators covers relevant areas of sustainability management in tourism, such as economic benefits, employment, seasonality, accessibility, pressure, satisfaction of tourists and residents, environmental management and water, energy and waste management.

The project will support the development of regional sustainable tourism observatories and allow users an interactive experience with data, a systematic assessment of their performance and a benchmark of the industry in this field.

Keywords: sustainable tourism indicators; strategy; Portugal

Introduction

Tourism is nowadays one of the world's major economic activities and plays an increasingly important role as a driver of regional development (UNWTO, 2004).

The growth of tourism in recent years has demonstrated its importance as an activity that generates wealth, employment and the development of new economic activities. However, this growth has brought important challenges in terms of making the development model compatible with local communities and with the Sustainable Development Goals.

In a recent report on overtourism in cities, UNWTO (2018) recognizes the need for the sector to "ensure sustainable policies and practices that minimize adverse effects of tourism on the use of natural resources, infrastructure, mobility and congestion, as well as its socio-cultural impact”.

In this context, the development of tourism strategies and policies based on the principles of sustainability emerges as a key policy requirement and demands governments and tourism stakeholders to change their approach in this regard.

Tourism Strategy 2027: focus on sustainability

In Portugal, the very positive results that tourism has registered in recent years reinforce its capacity to generate more revenue, more employment and to extend the activity throughout the year and all over the country. It is recognized, therefore, that tourism has the capacity to be a sustainable activity throughout the year and to add value to the local communities, requiring long-term measures to ensure that these goals are achieved.

The Portuguese Government launched in 2017 the Tourism Strategy 2027, which defines the vision for the Portuguese tourism industry for the next decade: *“To Affirm tourism as a hub for economic, social and environmental development throughout the territory, positioning Portugal as one of the most competitive and sustainable tourism destinations in the world”* (Turismo de Portugal, 2017).

To lead the tourism of the future means to position Portugal as a sustainable destination with a cohesive territory, innovative and competitive, a country that values work and talent. A destination to visit, to invest, to live and to study in. An inclusive, open and creative country that positions itself as a specialized hub for travel & tourism (Turismo de Portugal, 2017).

The Portuguese National Tourism Strategy 2027 establishes five strategic pillars (OECD, 2018):

- To value the territory: using historical-cultural heritage and preserving their authenticity and improving product development to better match consumer needs;
- To boost the economy: promoting the competitiveness of national tourism industry, promoting innovation and attracting foreign investment;
- To promote knowledge, with a strong emphasis on skills and quality jobs and dissemination of knowledge and tourism data and research throughout the tourism industry;
- To generate networks and connectivity: improving air accessibility and promoting mobility and networks between tourism stakeholders.
- To promote Portugal: improving Portugal’s positioning as an attractive destination to visit, invest, live and study.

The principles of sustainable tourism and the Sustainable Development Goals are at the DNA of the Tourism Strategy 2027, which defines sustainability as its basis, in its vision and in its strategic priorities, defining ambitious specific goals in both economic, environmental and social pillars.

In fact, for the first time, the Tourism Strategy 2027 defined specific goals and targets for each of the three pillars of sustainable development. Economic goals cover overnight stays and tourism receipts; social goals cover seasonality, skills and qualifications and residents’ satisfaction and environmental goals cover energy, water and waste (Turismo de Portugal, 2017).

These indicators should be regularly monitored nationally and regionally, with the establishment of regional observatories for sustainable tourism in regional destinations, following UNWTO’s INSTO initiative.

Measuring Sustainable Tourism

UNWTO defines Sustainable tourism as a *“tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities”*. (UNEP & UNWTO, 2005:24)

In this context, making tourism more sustainable means a continual process of making optimal use of environmental resources, respecting host communities and ensuring viable, long-term economic operations, providing fairly distributed benefits among tourism stakeholders.

As a complex economic activity, the goals of making tourism more sustainable face a set of economic, environmental, social and political challenges, which require adequate management and evidence-based public policies.

Several authors acknowledge that the theoretical reflection in tourism was not always accompanied by the creation of adequate measurement instruments, which placed tourism behind other social sciences (Dann et al., 1988). On the other hand, it is recognized that many tourism managers are working today in an environment that "generates" a lot of data, but where knowledge and intelligence are lacking for decision making (UNWTO, 2004).

A commitment to the knowledge and monitoring of sustainability in tourism is essential to achieve progress in the discussion of the challenges facing the sector, in the analysis of potential solutions to mitigate the impacts of tourism and in maximizing the potential of tourism as an economic and phenomenon.

In this context, UNWTO launched the Statistical Framework for Measuring Sustainable Tourism initiative (MST Framework), which aims to integrate current economic focused frameworks and environmental, social and cultural dimensions (UNWTO, 2017).

This is a long-standing and important step towards stabilizing international standards in the measurement of tourism sustainability, capable of supporting the development of reliable, internationally comparable quality statistics.

However, tourist destinations are now confronted with the need to take decisions on public policies to promote sustainability in tourism which requires a rigorous monitoring framework based on knowledge and data. On the other hand, the pilot testing of sustainability monitoring systems in tourism represents a valid contribution to the development of the MST Framework, allowing the analysis of indicators, methodologies and measurement instruments.

In the case of Portugal's Tourism Strategy 2027, the implementation of the action plan to achieve these goals requires the development of a monitoring system to respond to the strategy goals, enabling tourism policy evaluation and providing the private sector with instruments for decision-making.

In this context, the monitoring of indicators associated with sustainability objectives is a fundamental component of tourism destination management in Portugal, to guarantee the adoption of sustainability principles throughout the industry.

The existence of such indicators is essential to tourism management, in the sense of producing relevant information to the sector and for decision making in the management of tourist destinations. It is also one of the pillars necessary for the management of sustainable tourism, along with the planning structure, standards and the allocation of responsibilities (Silva, Mendes and Guerreiro, 2001).

The existence of credible, clear and comparable indicators generates some advantages (UNWTO, 2004):

- Reducing risks or costs, promoting better decision making;
- Preventive action, by identifying emerging issues;

- Corrective and adaptive management, measuring impacts;
- Measuring the performance and implementation of plans, anticipating deviations and promoting continuous improvement;
- Reduced risk of planning errors;
- Greater transparency (accountability), providing public information on the development process.

The definition of the system of indicators for the evaluation of the sustainability of tourist destinations should be based on the methodological recommendations from the main international organizations with responsibilities for the development and production of statistics and indicators of the tourism sector, namely UNWTO, OECD and Eurostat.

Despite the considerable international effort of these organizations in the research of the subject, there remain important gaps in the availability and comparability of statistical information in terms of sustainability and a significant deficit in terms of the use of this information for decision-making in the management of destinations.

Another relevant approach to consider is the categorization of indicators. Dupeyras and MacCallum (2013) use key indicators and supplementary indicators, with the latter being selected by countries according to their priorities. Underlying this distinction is the recognition that not all indicators apply to all destinations. It is up to the researcher to identify the indicators he considers relevant for discussion (Dwyer and Kim, 2003; UNWTO, 2017).

Considering the objectives of this paper, which is focused on the definition of indicators for tourism destination management as a basis for the development of regional observatories for sustainable tourism, these two principles were followed, namely the definition of a limited number of indicators, as well as the stabilization of core indicators, common to all destinations, with additional specific indicators to be defined at regional and local levels.

Based on the methodology defined by UNWTO (2004), as well as ETIS - European system of sustainable destination tourism indicators (European Commission, 2013), an initial list of selected indicators was defined in the scope of this research and a characterization form for each of these indicators, containing:

- the corresponding sustainability pillar;
- the sustainability dimension under evaluation;
- the designation of the indicator;
- the summary description of the indicator and the reasons for its need;
- unit of measurement;
- method of calculation;
- source of information;
- correspondent sustainable development goals (SDG)

In defining the indicators, and to ensure their feasibility and comparability, it has been chosen, as far as possible, to select indicators using secondary data from recognized sources. It is considered that this approach is likely to allow comparability between destinations and the necessary continuity in the collection of such items. Some of the indicators also result from surveys already carried out or planned.

A system of sustainable tourism indicators

As explained, the purpose of this article is to define a set of indicators for measuring sustainability in tourism. This is an area which, as mentioned, has been the subject of some research, particularly at the level of international organizations developing projects in Tourism, such as the UNWTO, the European Commission or the OECD.

Despite all the research produced, the practical application of sustainability measurement in tourism is still not widespread in the management of tourist destinations. This paper intends to be a contribution in this matter.

According to UNWTO (2017) "integrated policies need integrated data". In this sense, the system of indicators proposed by this paper has sought to cover the three pillars of sustainability - economic, environmental and social, granting a broad scope to the exercise and a clear approach towards decision-making.

In the selection of the indicators, the international reference documents in this area, namely the UNWTO and the ETIS System of the European Commission, were followed. Additionally, this exercise intends to define indicators based on those organizations' work for which there is data available or easily obtainable through surveys.

The objective has thus been to stabilize a model of indicators common to all regions, allowing comparability and measuring progress in this regard.

In this context, we present below the proposal of indicators for measuring the sustainability of tourist destinations in each of the dimensions - economic, social and environmental.

Following UNWTO's guidelines for Operation and Management of the UNWTO International Network of Sustainable Tourism Observatories – INSTO (UNWTO, 2016), for each of the sustainability dimensions, core areas to be monitored and their measurement indicators were identified.

Economic dimension

Domains	Indicators
Seasonality	Bednights by month
	% of jobs that are seasonal
	Seasonality rate
	% of establishments open all year
Economic benefits	%Tourism on GDP
	Number of same-day visitors
	Number of tourists
	Daily spending per overnight tourist
	Average length of stay of tourists
	Establishments using local products
Employment	Employment / Total economy
	Employment by gender
	Employment by qualification

In terms of economic sustainability, the paper identifies elements associated with the economic benefits generated by tourism, the level and quality of employment and relevant characteristics to the sustainability of the destination, such as seasonality.

Environmental dimension

Domains	Indicators
Environmental Management	% tourists using different means of access (air, road or marine)
	Carbon footprint
	Number of Blue Flag Beaches
	% excellent or good water quality
	% establishments providing environmental training to employees
	Expenses with environment (local level)
	% establishments with certifications
Energy management	% establishments with low consumption systems
	% establishments with energy reduction goals
	Top 5 energy saving measures
	Direct energy consumption
	Emissions (direct energy)
	Emissions (electricity consumption)
Solid waste management	% establishments separating different types of waste
	% solid waste attributed to tourism
Water management	% establishments taking actions to reduce water consumption
	% use recycled water
	Top 5 measures taken to reduce water consumption
	% of controlled and good quality bathing water

In the environmental dimension, the paper proposes the measurement of indicators in environmental, energy, water and waste management, area which the literature considers the most relevant in this field (UNWTO, 2004; UNWTO, 2017).

Social dimension

Domains	Indicators
Tourist Satisfaction	% tourists satisfied
	% of return visitors

Local Satisfaction	% residents satisfied with the impacts of tourism
	% residents satisfied with tourism in the destination
Pressure	Number of beds per 100 residents
	Tourism Intensity
	Tourism density
	Occupancy rate
Accessibility	% of rooms accessible for people with disabilities

Finally, the social dimension of sustainability is an increasingly important element in terms of tourism policies. The significant growth that tourism worldwide has highlighted some of its negative impacts, bringing the need of compatibility of tourism development models with the well-being of residents, while maintaining high levels of visitor satisfaction. To this extent, the paper considers the domains of tourist satisfaction, as an indispensable variable of any tourism development strategy, the pressure and impact of tourism on the local community and the inclusiveness of tourism. In fact, the issue of accessibility also emerged as a key concern for tourism development, as older persons and those with disabilities become an important market (UNWTO, 2004).

In addition to calculating the indicators for the national level and for each of the NUTS II regions, one of the objectives of this project is to foster the dissemination of this information by the relevant stakeholders in the management of tourism destinations in Portugal.

In terms of communication, in addition to workshops to discuss these issues to be undertaken in the context of the implementation of the Tourism 2027 strategy, a specific area was developed for monitoring sustainability in the Turismo de Portugal knowledge management platform, TravelBI, available at <http://travelbi.turismodeportugal.pt>.

This sustainability branch of knowledge was recently launched and will also integrate the indicators available in each of the regional observatories, as well as guides to good environmental practices to help tourism stakeholders to improve their performance in each of the dimensions of sustainability.

Conclusion

This paper aims to contribute to the deepening of knowledge in terms of the measurement of sustainability in Tourism. Progress in the definition and stabilization of these indicators is crucial to better understand the impacts of tourism and to enable tourism destination managers to face the challenges ahead.

While UNWTO is developing the MST - Measuring Sustainable Tourism project, within the framework of the United Nations' Agenda 2030, this project intends to be a pilot of application of sustainability measurement at tourist destinations, linking a national perspective and the regional perspectives, proposing an integrated management of progress in terms of sustainable tourism development.

As the management of local destinations becomes increasingly important, accentuated by the issue of compatibility with residents, the integration of national and local policies is seen as indispensable to maximize the contribution of tourism to the objectives of Agenda 2030.

Finally, there is a need for global progress in this area. Expanding the use of these instruments and working to improve data comparability and benchmarking are indispensable for decision-makers in tourist destinations to adopt evidence-based practices and thus correct their development strategies and improve the effectiveness of their actions.

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