ENVIRONMENTAL

SUSTAINABLE EU TOURISM
Shaping the Tourism of Tomorrow

BEST PRACTICE: BENIDORM, SPAIN

Key Challenge

Water scarcity and pollution.

Type of Solution

Adoption of a tourism strategy and monitoring framework; Investments in infrastructure and product development; Research and Innovation; Digital Solutions; Promotional Campaigns.

Case Classification

Type of Destination | Coastal

Territorial Level | < NUTS 3

Size of the Tourist Area | 38.51 km^2

Population | 74,588 in 2024

Type of Tourism | Coastal, maritime and inland water; Sports; Cultural; Gastronomy; Health and wellness tourism.

Tourism Organisation | Local Destination Management Organisation (DMO) is a Non-profit Public-Private Partnership, governed by the Foundation Board chaired by the Mayor of Benidorm.

Main Stakeholders Affected | Local authorities/ government; Local residents; Tourists; All tourism service providers; Local farmers and producers; Local businesses.

Additional Challenges Covered | Resilience building and crisis management; Measurement and monitoring of sustainable tourism.

Context & Background

Designed on the drawing board as a holiday destination in the 1950s, Benidorm has seen its population grow from around 6 thousand in the 1960s to nearly 75 thousand in 2023. Today, Benidorm is one of the leading tourist destinations in the Mediterranean, with 15.3 million overnight stays, and tourism accounting for around 12% of GDP and around 20% of employment. In the late 1970s, a major rethink took place due to extreme drought and extreme water shortages for residents and tourists.

Key Challenge

Benidorm, like many other regions in Spain, suffers from water shortages due to infrequent rainfall and the drying up of rivers. Due to the increase in population and hotel accommodation, there is high pressure on resource consumption, especially water consumption.

Implementation of Solutions: Integrated water management ensures adequate water supplies for the population and tourists, accompanied by awareness-raising and risk prevention measures.

SOLUTION

- *Integrated water management* includes:
  - Infrastructural measures such as a sewage system that separates rainwater and wastewater, allowing to produce compost from wastewater treatment sludge, used in agriculture, and biogas from wastewater treatment, used to generate electricity to power 6 municipal vehicles. An *innovative AI system* controls the aeration in the bioreactor to minimise the energy required to blow air into the tank and ensure the quality of the wastewater.
  - Creation of the *DINAPSIS* in 2017, a *centre for research and innovation* and digital transformation for sustainable water management, funded by the city council.
  - *Water monitoring system* through real-time monitoring of consumption levels, quality of supplied or treated water, incidents, etc. to enable quick decisions. This system is complemented by AI-powered condition monitoring of the main sewer, wastewater and stormwater systems, used to predict the aging of the sewer network and the necessary budget for maintenance up to 50 years in advance. The monitoring process is also supported by around 1,600 installed smart meters.
- Information campaigns such as "*Lo del agua en serio*", initiated by Benidorm City Council and Hidraqua, aimed to raise citizens' awareness of responsible water usage.
- There are *no showers on the beaches*, only seawater footbaths with sensors installed as part of an advanced water quality management system to monitor weekly the hygiene parameters of water, sand and footbaths.
- Measures to prevent risks of climate disasters and long periods of drought are constantly being adopted in collaboration with the municipality, including investments in new technologies and innovative solutions to ensure higher water production. Benidorm was the first municipality with more than 50,000 inhabitants to launch a Climate Change Adaptation Plan (PACC) in 2020.

Replicability potential: Medium (high complexity, requires investments and a lot of time)

Cost & funding source: 230,000 euros for the water monitoring system by municipal funds co-financed at 50% by the European Regional Development Fund (ERDF). In the last seven years, 22.5 million euros have been invested in the renovation of supply, sewerage and rainwater networks as well as digitalising the Municipal Drinking Water and Sewerage Service. Most of the investments were made by the city. Some projects were also financed by the regional or national government.

Success Factors & Barriers

Success factor: High level of stakeholder engagement, as the private sector, the public sector, and the residents worked together.

Barriers: The economic downturn caused by the decline in fishing was also a challenge for financing the necessary infrastructure measures.

Results and Impacts

- Reduction in water consumption despite population growth and increase in hotel overnight stays.
- Achievement of 95% water efficiency (96.4% in August 2023), well above the Spanish average (70%).
- 36% reuse of treated water in agriculture, gardens, and street cleaning.
- Benidorm withstands stress tests at +700% of demand in high season by modulating supply, pressure, efficiency, power, and purification capacity.

Recommendations by the Destinations

- There is a good potential for replication, however, this requires investing in a long-term project.
- Clear objectives and strategies have significantly contributed to the project's success.
- Investments in replacing outdated system elements and maintaining well-functioning infrastructures will pay off in the long term.
- Thanks to the increased efficiency of the water supply, tourism can thrive.

Useful Links

- VISIT BENIDORM

Contact Person

Garcia Castellano, Laura, Promotion and Marketing Specialist, promocion@visitbenidorm.es