

05th June 2025

10:15 am

Climate change, water resources and sustainability (PT/ENG) (Room 4)

OC-132 - (541) - WATER RESOURCES AND TOURISM IN WATER-SCARCE REGIONS: THE CASE OF THE ALGARVE AND THE ALENTEJO COAST (PORTUGAL)

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Proposal and Originality

Water scarcity is a critical issue in tourism-intensive regions, especially under the current hydro-climatic change scenario, posing challenges to sustainability. This study employs a multidisciplinary approach, integrating climatic data and water use indicators to investigate the influence of tourism demand on water resources. It also explores the potential impact of regional and national adaptation policies in mitigating future water shortages, considering the scenarios of climate change until 2100.

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Methodology

The study employs statistical analysis of precipitation and temperature from meteorological stations in Algarve and Alentejo regions from 1950 to 2023. Indicators such as hotel capacity, water consumption, and reservoir storage were examined to assess the impact of peak tourism seasons on water resource pressures. Also, national and regional adaptation strategies and policies will also be analysed.

Results and Implications

Results shows a notable reduction in precipitation, particularly during wet periods, which has been further exacerbated over the past two decades. The levels of water in reservoirs in both the Algarve and Alentejo have been below average for the past ten years, frequently dropping below 20% of capacity during the summer months. Concurrently, the development of luxury tourism facilities and a notable increase in the number of guests during peak periods have intensified the pressure on already scarce water resources, underscoring the urgent need for effective management strategies.

Research Limitations

The study is constrained by its exclusive focus on regional climatic data, which may not fully account for the socio-economic factors that influence water consumption.

References Version APA 6th or 7th Edition

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