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DIVERSITY & SUSTAINABILITY:
OPPORTUNITIES AND THREATS ON TOURISM | 2025

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Coimbra, Portugal

BOOK OF ABSTRACTS

08:45 am

Space-time Visitor Behaviour (ENG) (Room 4)

OC-011 - (538) - SPATIAL-TEMPORAL ANALYSIS OF COMFORT PERCEPTION AMONG TOURISTS IN THE MUNICIPALITY OF PORTO (PORTUGAL): GPS-BASED INSIGHTS FOR URBAN PLANNING

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Proposal and Originality

A literature review on outdoor thermal comfort reveals a significant influence of weather conditions on the tourist' behaviour (e.g., Hardy et al., 2017; Yao et al., 2021; Geletič et al., 2023). In recent years, the outdoor thermal comfort issue has posed a significant challenge to urban planning. The use of GPS data is becoming increasingly widespread in the analysis of behaviour and the relationship between meteorological conditions and decision-making processes. The territorial management depends of a proactive approach to achieve the sustainable development of the sector.

Methodology

The present case study of the municipality of Porto (Portugal) was carried out during the summer of 2024 (June to September) and used two complementary methodologies. The geographical positions of tourists were determined using GPS devices (I-GOTU GPS) at their accommodation points (n=103). In addition, a questionnaire was used to assess the respondents' perceptions of their visit (n=198).

Results and Implications

The main findings indicate that extreme climatic conditions have a significant impact on the way tourists approach their visit, including the means of transport used, the places visited and the duration of their stay. The search for green areas, especially those close to rivers, tends to be more frequent on days with exceptionally high temperatures. The average duration of visits is relatively shorter, which can be attributed to the influence of urban characteristics.

Research Limitations

The main constraints pertain to the fieldwork. Only GPS data from one hotel was gathered. Also, the administration of the questionnaire to tourists presents a challenge.

References Version APA 6th or 7th Edition

Yao, Q., Shi, Y., Li, H., Wen, J., Xi, J., & Wang, Q. (2021). Understanding the Tourists Spatio-Temporal Behavior Using Open GPS Trajectory Data: A Case Study of Yuanmingyuan Park (Beijing, China). *Sustainability*, 13, 94.

Hardy, A., Hyslop, S., Booth, K., Robards, B., Aryal, J., Gretzel, U., & Eccleston, R. (2017). Tracking tourists' travel with smartphone-based GPS technology: a methodological discussion. *Information Technology & Tourism*, 17(3), 255–274. <https://doi.org/10.1007/s40558-017-0086-3>

Geletič, J., Lehnert, M., Resler, J., Krč, P., Bureš, M., Urban, A., & Krayenhoff, E. S. (2023). Heat exposure variations and mitigation in a densely populated neighborhood during a hot day: Towards a people-oriented approach to urban climate management. *Building and Environment*, 242, 110564.