

## **Climate services in the tourism sector – examples and market research**

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Tourism is one of the most weather-sensitive sectors. Hence, dealing with weather and climate risks is an important part of operational risk management. WEDDA<sup>®</sup> (WEather Driven Demand Analysis), developed by Joanneum Research, represents a comprehensive and flexible toolbox for managing weather and climate risks. Modelling the demand for products or services of a particular economic sector or company and its weather and climate sensitivity usually forms the starting and central point of WEDDA<sup>®</sup>. Coupling the calibrated demand models to either long-term climate scenarios or short-term weather forecasts enables the use of WEDDA<sup>®</sup> for the following areas of application: (i) implementing short-term forecasting systems for the prediction of the considered indicator; (ii) quantifying the weather risk of a particular economic sector or company using parameters from finance (e.g. Value-at-Risk); (iii) assessing the potential impacts of changing climatic conditions on a particular economic sector or company.

WEDDA<sup>®</sup> for short-term forecasts on the demand for products or services is currently used by various tourism businesses, such as open-air swimming pools, ski areas, and restaurants. It supports tourism and recreation facilities to better cope with (increasing) weather variability by optimizing the disposability of staff, resources and merchandise according to expected demand. Since coping with increasing weather variability forms one of the challenges with respect to climate change, WEDDA<sup>®</sup> may become an important component within a whole pool of weather and climate services designed to support tourism and recreation facilities to adapt to climate change.

Climate change impact assessments at European scale, as conducted in the EU-FP7 project IMPACT2C, provide basic information of climate change impacts on tourism demand not only for individual tourism businesses, but also for regional and national tourism planners and policy makers interested in benchmarks for the vulnerability of their tourism destination. In this project we analysed the impacts of +2 °C global warming on winter tourism demand in ski tourism related regions in Europe.

In order to achieve the climate targets, tailored climate information services – for individual businesses as well as at the regional and national level – play an important role. The current market, however, is still in the early stages. In the ongoing H2020 projects EU-MACS ([www.eu-macs.eu](http://www.eu-macs.eu)) and MARCO ([www.marco-h2020.eu](http://www.marco-h2020.eu)) (Nov 2016 – Oct 2018) Joanneum Research explores the climate services market in the tourism sector. The current use of climate services is reviewed in detail and in an interactive process key market barriers and enablers will be identified in close collaboration with stakeholders from the tourism industry. The analysis and co-development of new climate services concepts for the tourism sector aims to reduce the gaps between climate services supply and demand.