

Bioclimate and tourism information for Austrian health and tourism resorts

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In the course of the general debate about climate change, the discussion also focuses more and more on tourism. Bearing this in mind one has to consider that particularly spa areas and wellness destinations depend in two ways on favorable climatic conditions: First to keep on attracting travelers, second because awarding as well as sustaining a predicate like “spa” base on very strict criteria in order to guarantee a successful therapy which in turn is strongly influenced by the location’s bioclimatic conditions.

This study in the framework of the Tourklim-project analyzed climate-based touristic potentials of Austrian spa and wellness destinations on the basis of several criteria. The Austrian Central Institute for Meteorology and Geodynamics (ZAMG) provided data sets for the analyzed resorts.

After checking data quality, parameters and factors which are of relevance when dealing with tourism climate have been analyzed. The calculation results are presented in clear diagrams which form a tool for gauging and assessing the specific destination. In detail, produced were

- diagrams dealing with the bioclimate thermal component, basing on the Physiologically Equivalent Temperature (PET),
- diagrams summarizing precipitation data, cloud cover, foggy days etc.,
- the Climate-Tourism-Information-Scheme (CTIS) which offers a clear and comprehensive overview summarizing a variety of bioclimatically relevant parameters and factors important for tourism and
- a rating CTIS which emphasizes the analyzed location’s qualities.

For each location, individual characteristics were found which can be recommended for the development of an appealing profile or which are already used for emphasizing the location’s advantages.

Based on data coming from the two climate models REMO and CLM, future developments were estimated for whole Austria. The data was analyzed for the two periods 2021 – 2050 and 2071 – 2100 and compared with the period 1971 – 2000. Based on the predicted developments, different parameters which are of relevance for tourism were assessed in terms of their grade of change.

Regarding the parameters

- skiing potential,
- heat stress,
- cold stress,
- thermal comfort,
- sultriness,
- dry conditions,
- wet conditions,
- windy days,
- days with sunshine and
- foggy days,

regional disparities were analyzed. For both future periods, the developments were qualitatively rated. For each parameter and depending on the region there can be positive as well as negative developments. As e.g. for skiing potential, in the period 2071 – 2100 a clear decrease of days which are suitable for alpine sport was found. For the same period, an increase of days with occurring heat stress is predicted and the same goes for days with sultry conditions. A positive development on the other hand can be stated for the number of days with thermally

comfortable days and there is also a decrease in days with cold stress.

The produced and analyzed material offers an additional supportive basis for elementary planning and can be of help for the destinations when developing strategies and measurements against negative impacts of climate change.