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Co-developing climate services with local agents: The INDECIS Snow Tourism Index

Jon Xavier Olano Pozo^{1,2}, Anna Boqué Ciurana¹, Alba Font Barnet¹, Antonio Russo², Òscar Saladié Borraz², Salvador Anton-Clavé², and Enric Aguilar¹

¹Centre for Climate Change (C3), Department of Geography, Universitat Rovira i Virgili, Spain (jonxavier.olano@urv.cat)

²Research Group on Territorial Analysis and Tourism Studies (GRATET), Department of Geography, Universitat Rovira i Virgili, Spain (jonxavier.olano@urv.cat)

Meteorological conditions determine the viability and competitiveness of socio-economic activities of any territory for many sectors, like those earmarked as priority areas in the Global Framework for Climate Services (GFCS). Yet, although the tourist sector is not one of those, the INDECIS project does include it.

Climate services, understood as the transmission of processed information from meteorological and climatological data in a way that becomes useful for the end-user in the decision-making process, should be useful to trigger actions that adapt tourism activity to long-term trends and sudden changes of the competitive context, or else mitigate the effects that tourism generates on climatic conditions.

In the framework of INDECIS project, researchers have been carried out different workshops for co-designing climate services in five European tourism destinations. The destination cases have the purpose of responding to the design of climate services taking into account the participation of different stakeholders in vulnerable destinations to Climate Change. As the main output, it has been developed different sectoral tourism indexes, which allow defining the optimum conditions to carry out tourism activities (snow tourism, sun & beach tourism, cultural tourism and outdoor tourism).

The present research shows the preliminary results of the INDECIS Snow tourism Index (ISTI) through the case study of Jacetania's County (Aragon Pyrenees). The ISTI has been co-created with the participation of local stakeholders, the Destination Management Organization (DMO), companies and end-users. Meanwhile, the economic value has been tested with tourism data from the destination, specifically offer and supply regarding the snow tourism activities.

In this sense, the STI is made of three-dimensional perspectives: definition of meteorological conditions that condicionate the snow tourism (1), inclusion of other local variables, such as accessibility, infrastructures and characteristics of the ski stations (2), and consideration of the dynamics and seasonality of the destination (3). The first facet is essential for all users while the second facet is giving value specifically to skiers and the third facet is very useable as a planning

tool for DMOs.

The results allow validating the used methodology for the co-creation of climate services in the tourism sector. Concretely, the STI is a sectorial meteorological index for snow tourism in the Pyrenees' Region. This index, that complements the Tourism Climate Index (TCI) and Holiday Climate Index (HCI), is based on the qualitative data received from the local agents and quantitatively transformed into a three-dimensional index for different users.

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