# OPTIONS FOR CLIMATE SERVICES MARKET ENHANCEMENT AND RELATED INNOVATION FOR THE TOURISM SECTOR

*DELIVERABLE 3.3 – POLICY BRIEF*

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## OBJECTIVES

Given the societal and economic challenges generated by climate change, it is increasingly important to include climate information in every day decision making. In this study we identified the constraints and enablers shaping climate services (CS) take-up in the tourism sector. Climate services are helping organizations and companies to mitigate, adapt to, and become more resilient to climate change. The market for climate services, however, is still in the early stages of development, with unaddressed gaps existing between supply and demand.

By means of interviews, online surveys and workshops with tourism stakeholders from Austria and Finland we explored the main barriers hampering actual market uptake, identified user needs and assessed CS options and market development needs to improve the match between climate services supply and demand.

## KEY FINDINGS

### CURRENT USE OF CS

The current use of climate services in the tourism sector is rather limited. On the other hand, the use of weather services is quite common (i.e. services addressing the daily or weekly precipitation or temperature). Figure 1 gives an overview of existing and potential weather and climate services in the tourism sector.

Tourism service providers have to cope with weather and climate variability in the first place – in current and future climate. Hence, services that help to deal with weather and climate variability may become more important in the near future and eventually introduce climate change adaptation oriented CS.

Currently, adaptation oriented and customized CS are used mainly by a few ski resorts (e.g. studies on current and future snow reliability and snowmaking potentials, climate proofing of investments etc.) and provincial governments or tourism associations (e.g. commissioned regional studies on climate change impacts).

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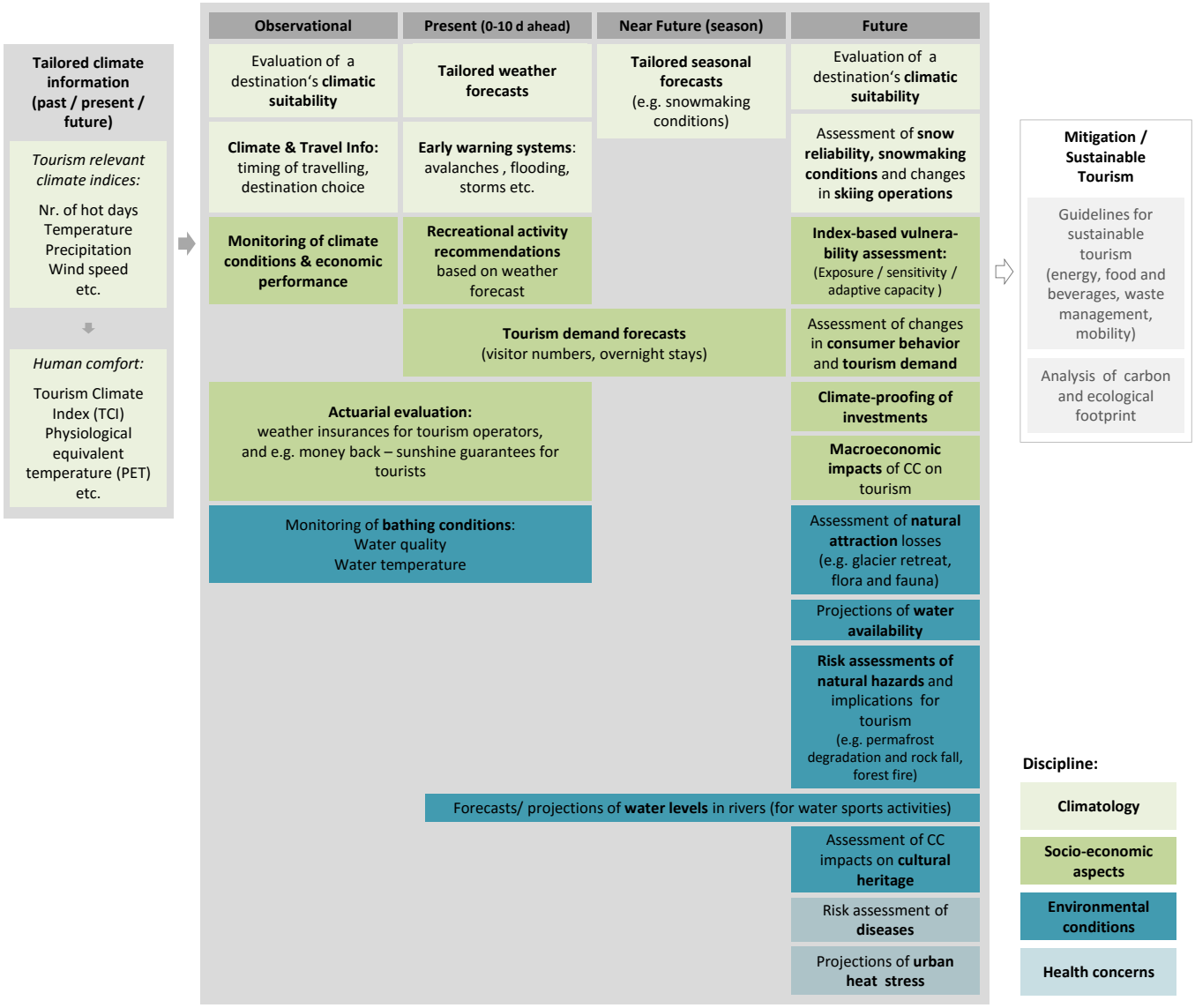


**FIGURE 1: A SET OF THEMES FOR PROVIDING WEATHER AND CLIMATE SERVICES IN THE TOURISM SECTOR**

## USER NEEDS

Tourism stakeholders' needs demand high spatial resolution, i.e. climate change impact assessments and adaptation strategies at local/regional level, presented in a simple and compact way.

Consultancy services are considered highly relevant. Guidance is needed on how to interpret scientific results, what they mean for a particular tourism region, and how to prepare for and adapt to a changing climate. Since climate is only one factor influencing future development, an integrated assessment including general market trends, demographic changes, changes in travel behaviour etc. is needed.

Overall, tourism stakeholders showed higher interest in short-term and seasonal services than in long-term projections. This holds true in particular for tourism service providers; but also for tourism associations and public authorities. The planning horizon is usually not more than five to ten years (e.g. in tourism strategies).

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| | *USER NEEDS* |
|---|---|
| **Applicability & Format** | – High resolution: information at local/regional level<br>– Simple & compact – easily understandable<br>– Consultancy services |
| **Short-term** | – Improved weather forecasts (and seasonal forecasts)<br>– Tourism associations/ Hospitality: activity recommendations based on weather forecasts |
| **Strategic planning** | – Ski resorts: modelling improvements (e.g. foehn events, extreme precipitation, snowmaking)<br>– Public administration: advice on adaptation strategies and investments planning (e.g. cycling infrastructure) |
| **Research** | – General market trends, travel behaviour - in relation to climate (change)<br>– Impacts on summer tourism and shoulder-season tourism<br>– Connections between tourism and related areas, such as agriculture, transport, environment |

## MAIN BARRIERS

The main barriers to the use of CS in the tourism sector include wide-spread low levels of risk awareness, little financial pressure and rather short business decision cycles, which lead to a low prioritization of climate issues. Furthermore, limited capacity of users, lack of knowledge of existing services and their benefits, lack of applicability, and distrust hamper the use of CS.

| | *BARRIERS* |
|---|---|
| **Awareness** | – Risk denial and lack of risk awareness<br>– Lack of knowledge of existing climate services and their benefits |
| **Priorities** | – Climate is only one issue tourism businesses have to deal with and requires additional resources besides their daily business<br>– Low financial pressure (degree of suffering)<br>– Absent long-term risk management/ Short business decision cycles<br>– Higher interest in short-term services |
| **Capacity** | – Limited resources to use or interpret climate data and to provide business/region-specific data.<br>– Financial constraints |
| **Applicability of CS** | – Too coarse spatial resolution<br>– Lack of user-friendliness (too complicated scientific language) |
| **Lack of trust** | – Conflicting messages in the media cause scepticism<br>– Uncertainty of climate scenarios and lack of knowledge how to interpret climate data |

## DRIVERS

**Paris Agreement:** The Paris Agreement represents an opportunity for increased CS take-up as having a "green profile" and showing social responsibility might become more important (or even legally binding) in the future. Generally, this would promote the demand for services that, for example, analyse the

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ecological footprint and climate impact of tourism businesses, or support more efficient use of natural resources (e.g. forecasting products for snow management optimisation).

**"Extreme" seasons:** The growing number of consecutive "extreme" seasons in recent years (in Austria e.g. the warm and snow scarce winter seasons 2014/15-2016/17 or the hot summer season 2017) has started to raise awareness among tourism stakeholders.

**Requirement for subsidy application:** Occasionally, for new applications for investment grants or loans, public and private funding sources require expert reports including the impacts of climate change on planned investments in winter tourism infrastructure. A climatological review and climate proofing of investments as part of (public) funding application has the potential to improve decision making using climate knowledge. However, this may require the implementation of some common minimum standards for CS.

## CONCLUSIONS & RECOMMENDATIONS

**Awareness-raising** is still one of the main drivers for CS take-up. If potential users are not aware of their climate risks, and familiar with the benefits arising from climate services, they will not see a need for CS. The risk awareness of tourism service providers depends on the current level of suffering from climate variability, but also on personal characteristics like age and level of education. The younger generation of tourism service providers tends to be more risk aware.

Even if there is climate risk awareness, **lack of long-term risk management often still hinders the use of CS**. Many interviewed stakeholders indicated that they have rather short business decision cycles (five years ahead at maximum). Thus, if at all, they showed higher interest in weather services and seasonal products. However, dealing with weather variability and using weather services may also increase to some extent the interest in climate services and thus could be used as potential leverage for CS uptake. The use of CS in the tourism sector, however, may be more of a concern for tourism service providers with high investment needs in infrastructure and high vulnerability (e.g. ski lift operators).

**Climate services and their benefits need to be better demonstrated and communicated.** The communication channels of interest groups (e.g. provincial tourism associations) could be used to present the latest findings of tourism related climate research and to demonstrate the added value of CS. This could be also shaped as **communities of users**, as tourist professionals may easier accept recommendations from their peers than from experts outside the tourism sector.

In addition, a platform to present providers and their CS would improve visibility. For example, the climate research network in Austria (CCCA) has an initiative to map climate researchers and their expertise ('Kompetenzlandkarte'). This could be expanded so that climate researchers and CS providers have the opportunity to promote their CS by including a short description and examples of their services. The CCCA is a contact point for researchers, politicians, the media, and the public for all questions concerning climate research in Austria, but the institution seems not to be widely known among private end-users. Hence, the visibility of the CCCA in particular among private companies and organizations as a contact point needs to be enhanced.

In general, **the willingness to pay for CS seems to be rather low**. Nevertheless, tourism regions and businesses that have already suffered from climate variability and extremes are more interested in climate issues and are more willing to pay for customised climate services and


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assessments of future impacts and adaptation options. Better communication and demonstration of the benefits of CS use could increase the willingness to pay for tailored services as well.

In order to increase affordability, **joint acquisition of CS** (or of single CS modules), that are of common interest for several users, could be an option. Here, umbrella organisations and regional tourism associations may act as knowledge brokers.

Countries in which **the use of meteorological data for commercial purposes is associated with high acquisition costs** (e.g. Austria), the provision and take-up of CS may be hindered. It represents a barrier particularly in the product development phase, where for testing purposes the data requirements often comprise several parameters, various locations, etc. Hence, **an open public data policy would facilitate CS provision; also new cooperation models on the supply side of CS could help.**

**The market would benefit from an increase in providers and more intermediaries bridging the gap between research and applicability.** Currently, CS are mainly provided by research institutions alongside to their research and teaching activities. Hence, too little emphasis is put on product development and design, sales and marketing as well as consulting activities. There is a need for intermediaries to establish a better link between science and potential end-users. This is in particular relevant as the use and interpretation of climate data tends to be time consuming and to require specific skills. This may also include enticing consultants to act as purveyors of climate information, i.e. incorporate climate information into their services.

**There is still room for innovative services that** are able to translate and tailor complicated and complex climate information to the needs of decision makers. **Funding schemes** explicitly addressing adaptation and mitigation and the development of prototypes in the tourism sector could help to overcome financial barriers.

**Weather and climate data on their own do not suffice for stakeholders to make decisions, as weather and climate are just one of many factors that influence tourism demand.** Stakeholders emphasise the need for market research about demand in relation to climate (change), considering also general trends in tourism demand and leisure activities as well as demographic changes. They also suggest finding ways to integrate more CS into common tourism consultancy services in order to see climate issues as part of the bigger picture. The crucial question will be: Who takes the innovation leadership on both sides, demand and supply?

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| **Full report:** | Damm A., Köberl J., Harjanne A., Stegmaier P., Pawelek P. (2018). Report on the results of explorations of CS market development options for the tourism sector, EU-MACS Deliverable 3.1. |
| **Website:** | http://eu-macs.eu/tourism |
| | @EU-MACS_H2020 |
| **See also:** | Köberl, J., Damm, A. and Jiménez Alonso, E. (2018). MARCO Deliverable D5.10 - Case Study 9 Report - Tourism. |

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