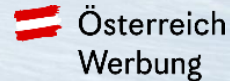


Climate Change Cockpit Tourism

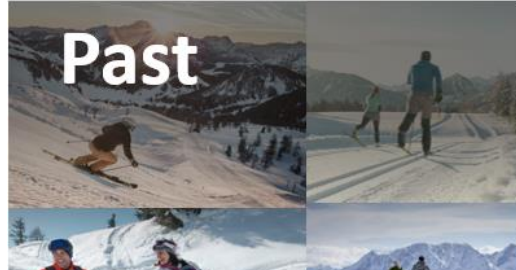
19th October 2023

Data Spaces Discovery Days Vienna

Dennis Pregesbauer



The tourism industry of Austria has a huge problem...



How might we take climate change into account in Austria's tourism planning?



Tourism in Austria 2022

Vacation and business trips of domestic and foreign guests



35,9 Mrd. Euro
nominell

Tourism consumption



20,0 Mrd. Euro
nominell

Direct value added



6,2% nominell
Percentage of GDP



7,8%
Contribution to employment
(Full time equivalence)

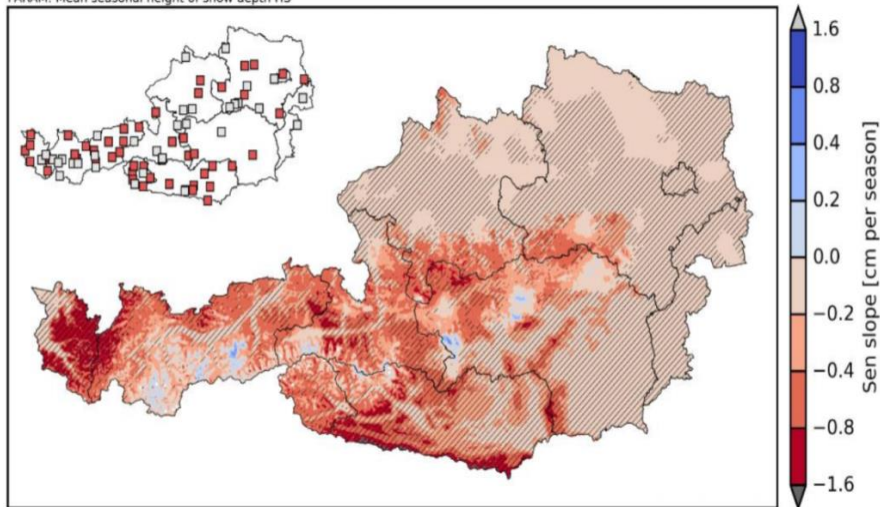
Quelle: Tourismusbericht 2022 | Tourismus in Österreich | BMAW

Impacts of climate change in tourism

Ecological level

Trend of the mean of Austrian snow depth

SNOWGRID-CL (SPARTACUS): Period 1962-2020, NDJFMA
PARAM: Mean seasonal height of snow depth HS



Quelle: Future Snow Cover Evolution in Austria / Trend der mittleren Schneehöhe in Österreich seit 1962

Lack of snow for European ski regions

Weggeschmolzen

Prozent der europäischen Skigebiete, die im gegebenen Szenario von Schneemangel betroffen wären

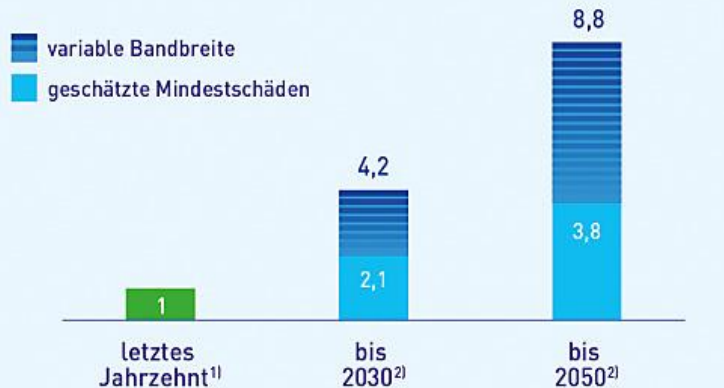
Szenario	nur natürlicher Schnee	25 % Beschneigung	50 % Beschneigung	75 % Beschneigung
4 Grad	98 %	90 %	71 %	74 %
3 Grad	91 %	53 %	27 %	57 %
2 Grad	53 %	25 %	16 %	37 %
1,5 Grad	32 %	14 %	16 %	26 %

Quelle: Schneesimulation, Neun von zehn Skigebiete könnte Schnee ausgehen / Der Standard 2023, [Link zum Artikel](#)

Impacts of climate change in tourism

Economic and social level

Total annual damage in Austria due to climate change



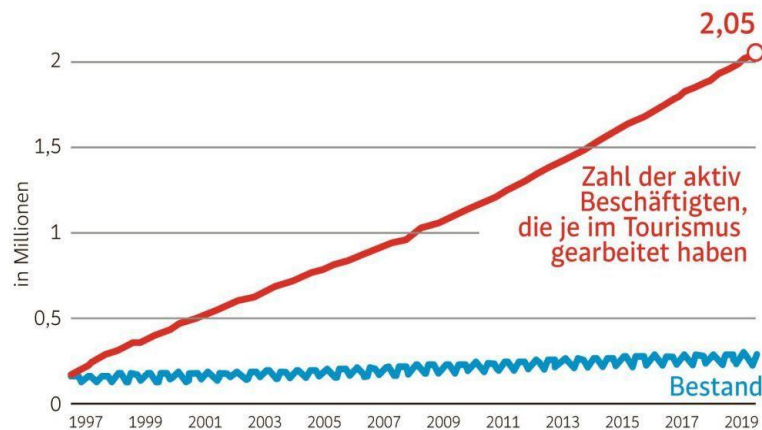
1) Nur große Naturkatastrophen der Kategorie 5 und 6 auf 6-teiliger Skala der Münchner Rück aus den Jahren 2001–2010 berücksichtigt

2) Mögl. Bandbreite ökonom. Schäden globaler Erwärmung von 2°C bis 2050

Auftraggeber: Klima- und Energiefonds; Quelle: COIN

APA-AUFTRAGSGRAFIK

Historic change of people exiting the tourism and hospitality industry



Quelle: Tourismus, Menschen verlassen Tourismus & Gastro / Der Standard 2023, [Link zum Artikel](#)

Proposed solution sketch: Climate Change Cockpit

Climate Change and Scenario Analysis Tool for Winter Tourism

Geospatial Screening

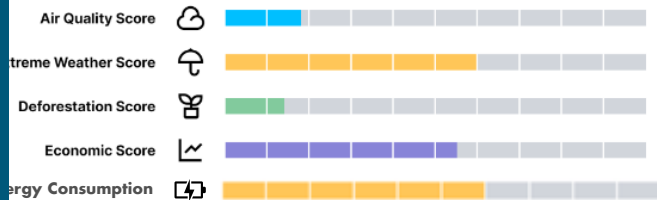
Medium and long-term scenario-based analysis



Draft

OBERGURGL – SCORE INDICATORS

Year: 2022



DISTRICT - PROVINCE INFO

1,358,700	900,000
Regional population	Rural population
1st/320	8,724,100
Regional Priority	Total population

RECOMMENDATIONS

The decrease in the air quality score signals potential environmental health risks. This could lead to increased public



hea
qua
strie



The
cha
Def
rela
mig
prac
fore



he r
hea

Tourism-specific key figures

Presentation of information from an economic, ecological and social perspective

Climate-specific local metrics

Climatic risk factors in tourism (historical, current and forecasts)

Findings, scenarios and options for action

Automated AI-supported evaluation of risk factors, impacts (operational and monetary) as well as options for action (e.g. redesign, offer optimisation, seasonal shift for better value creation).

Unique selling proposition

Impacts on ecological, economic & social level

ECOLOGIC

Accurate and preventive tool to make data-based decisions based on climate change scenarios.



ECONOMIC

Targeted subsidies, policies and investments for tourism regions by the public sector.

SOCIAL

Identification of options for action for various stakeholders from the tourism industry to the government

The logo for BRZ innovation factory is enclosed in a white, tilted rectangular border. The text 'BRZ' is in a large, bold, sans-serif font, while 'innovation' and 'factory' are in a smaller, lowercase, sans-serif font stacked below it.

BRZ
innovation
factory

Thank you for your attention!

Dennis Pregesbauer

Innovation Consultant, Austrian Federal Computing Center

Interested to help shape the green future of tomorrow – let's talk 😊

