ADVANCES IN ANALYSING TRAIL ACCESSIBILITY FOR BETTER TRANSPORTATION PLANNING
The Sustainable Tourism Observatory of South Tyrol (Italy)

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STOST – SUSTAINABLE TOURISM OBSERVATORY OF SOUTH TYROL

INTRODUCTION

- Autonomous Province in the Italian Alps
- \( \approx 500,000 \) inhabitants
- 5 small towns + rural areas
- Dolomites UNESCO WHS
- \( \approx 7.5 \) mln. tourist arrivals
  - 4.4 days on average

(Laner, Scuttari, 2019)
STOST – SUSTAINABLE TOURISM OBSERVATORY OF SOUTH TYROL

INTRODUCTION

Establishing the South Tyrol Sustainable Tourism Observatory
Preliminary Study Report

June 2018

October 2018

October 2019
The exploration of place-specific sustainability issues was made through **QUALITATIVE approaches**

- 26 semi-structured interviews (≈ 40 min each)
STOST

Governance and Structure
First results

- 60% of arrivals in summer and 40% in winter over the last 20 years.
- 6% of employees in the accommodation or food and service sector. 65% of them are Italian citizens.
- 17 municipalities, 62 events and 22 accommodation facilities with voluntary certification schemes or strategies for sustainable development.
- 11.1% of total GDP generated in 2017 by the accommodation or food and service sector.
- 0.6% of total buildings in 2018 are hotels and similar establishments.
- Electricity consumption attributable to the accommodation sector amounts to 8.7% of total electricity consumed in 2018.
- Significant difference in prices of real estate among touristic and non-touristic municipalities. Tourists satisfied with prices.
- 8% of total water consumed attributable to the accommodation sector.
- 9% of total waste attributed to the tourism sector.
- 0.6% of total buildings in 2018 are hotels and similar establishments.
- 1.7 million of guest tickets and mobilcards activated in 2018.
- ¼ of the surface is protected land.

- Increasing pressure, increasing (but still uncoordinated) responses
- Need for primary data, especially to estimate GHG from tourism
- Need for further methods to grasp cultural aspects of sustainability

8% of total water consumed attributable to the accommodation sector.
How to analyse trail accessibility with GIS tools for better transportation planning?

Definition of the accessibility criteria

Calculation

Interpretation of results
Eurac & ESRI
The process

Global partner

Data

Local associations

Story map

bit.ly/INSTO19

Berge erleben

AVS
ALPENVEREIN SÜDTIROL

CLUB ALPINO ITALIANO
SEZIONE DI BOLZANO
EURAC & ESRI

THE MAIN DATA SOURCE: GEOKATALOG

http://geokatalog.buergernetz.bz.it/geokatalog/#!
**EURAC & ESRI**

**ACCESSIBILITY CRITERIA**

Criteria

• there should be a physical route to get from the road where the bus stop is to the trail itself (any point of the trail)
• the distance from bus stop to trail should not be a calculated in terms of a distance radius, but of drive-time areas

Categories of accessibility

• Very Accessible/accessible: < 10 min of walk
• Medium: 10-20 min of walk
• Not very accessible/Not at all accessible: > 30 min of walk
Accessibility degree should be calculated first for “primary trails”, then attributed also to the “secondary trails”, by picking the accessibility degree of the most accessible primary trail linked to them, or if linked only to other secondary trails, to the most accessible secondary trail linked to them.
EURAC & ESRI

THE RESULTS
The results

Figure 39: Primary hiking trails by walking distance from bus and train stops, South Tyrol 2018. Percentage values. Source: ESRI Spain and Eurac Research, own elaboration.
Limitations and Future Research

Need to match results with tourism intensity of different regions (select hotspots)

Need to evaluate bus lines and service frequency

Importance to assess the mobility patterns of hikers and the integrated transport system on site.
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Figure 1: Arrivals and overnight stays (left axis) and average length of stay in days (right axis) in all accommodation facilities, South Tyrol – 1998 - 2018. Yearly data in thousands. Source: ASTAT, 2019a, own elaboration.
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1. Tourism Seasonality

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### 1. Tourism Seasonality

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3. Economic benefits at the destination level

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3. Economic benefits at the destination level

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Source: Red Rooster, data available on demand, own elaboration.
4. Governance

Figure 21: Number of “Red Rooster” branded agritourism ventures producing and selling regional products by type of product and year, South Tyrol 2008-2018. Absolute numbers. Source: Red Rooster, data available on demand, own elaboration.
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5. Local and visitor satisfaction

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5. Local and visitor satisfaction

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5. Local and visitor satisfaction

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5. Local and visitor satisfaction

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6. Energy management

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6. Energy management

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*The estimation procedure is based on water consumption coefficients estimated per night and accommodation category in Bundesministerium fur Wirtschaft, Familie und Jugend Wirtschaftskammer Osterreich, Fachverband Hotellerie, Fachverband Gastronomie, Österreichische Hoteliervereinigung (2011).
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10. Mobility

Figure 39: Primary hiking trails by walking distance from bus and train stops, South Tyrol 2018. Percentage values. Source: ESRI Spain and Eurac Research, own elaboration.
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12. Nature Conversation

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12. Nature Conversation

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