Preliminary assessment of tourists interest for tourism-tailored climate and environmental products

Liliana VELEA and Alessandro GALLO

Dept. of Humanities, Ca'Foscari University of Venice, Italy

Liliana.velea@unive.it , alekos@unive.it

Motivation

Little climate and environmental information customized for tourism is **easily accessible** for tourists, although it is **available**

- from **climate databases** (e.g., Copernicus Climate Data Store https://cds.climate.copernicus.eu/, European Climate Assessment & Dataset https://www.ecad.eu)

- from Copernicus **Monitoring Programmes** (e.g., for Land https://land.copernicus.eu/ , for Atmosphere https://atmosphere.copernicus.eu, for Marine Environment https://marine.copernicus.eu)

Other information is available as **forecast** (e.g., weather, air quality, UV index).

Studies show that not all weather/climate/environmental information is equally relevant for tourism and its relevance depends on the destination type (e.g., Becken 2010; Falk, 2015; Dubois et al, 2016; Damm et al.2020; Boqué Ciurana and Aguilar, 2021; Eusebio et al, 2021 etc.).

However, the findings do not allow to establish a hierarchy of climate and environmental features of interest for tourism and based on destination type (urban/rural/mountain/seaside), but mainly to identify them.

Aim

To identify some characteristics of a potential climate service of interest for tourists that may contribute to a better user uptake.

- Attention to:
  - information content
  - presentation and delivery form
  - commercial potential

Method

- **Questionnaire** built in Google Forms: 4 questions involve a five-fold Likert -type scale, 1 question - a multiple-choice question.

- **Anonymous** -> segmentation of respondents based on traits that may influence their preference (e.g., age, residence, family or economic status etc.) cannot be performed.

- The survey available in **English, Italian and Romanian** languages.

- Disseminated through e-mails to hotels, travel agencies and local authorities and through social media (Facebook groups) in **Romania and Italy**.

- **127** answers: 116 in Romanian, 5 in English, 6 in Italian.

- Answers analyzed using the facilities of Google Form for surveys, which employs **simple statistics** of the results. The attention focused, in the first two questions, on features receiving marks 4 and 5 (out of 5).

Results

Q: 'Depending on the type of destination, several weather and environment features may contribute to a pleasant vacation. Please rate **how important** might be the following types of information for you **in deciding the time of the year and the destination** for leisure trips (1=not at all important; 5= very important)'.

No	Climate and environmental (CEnv) feature	Number of answers with marks 4 and 5	Percent from the total number of answers
1	Thermal comfort/discomfort	96	75.59
2	Air Quality	95	74.80
3	Clarity of the sea water	88	69.29
4	Average Sea Surface Temperature	87	68.50
5	Presence of green vegetation in the surrounding of the touristic destination	86	67.72
6	Monthly number of days with weather appropriate for outdoor activities	84	66.14
7	Sunburn risk	79	62.20
8	Frostbite risk	78	61.42
9	Pulmonary stress	76	59.84
10	Snow cover	69	54.33
11	Average depth of snow layer	56	44.09
12	Pollen concentration level	50	39.37
13	Season start for flowering of certain species of trees	46	36.22

Results– Availability of CEnv information

No	Climate and environmental (CEnv) feature	Number of answers with marks 4 and 5	Percent from the total number of answers
1	Thermal comfort/discomfort	96	75.59
2	Air Quality	95	74.80
3	Clarity of the sea water	88	69.29
4	Average Sea Surface Temperature	87	68.50
5	Presence of green vegetation in the surrounding of the touristic destination	86	67.72
6	Monthly number of days with weather appropriate for outdoor activities	84	66.14
7	Sunburn risk	79	62.20
8	Frostbite risk	78	61.42
9	Pulmonary stress	76	59.84
10	Snow cover	69	54.33
11	Average depth of snow layer	56	44.09
12	Pollen concentration level	50	39.37
13	Season start for flowering of certain species of trees	46	36.22

Not available for tourists

Not easily available for usual tourist

Available as forecast during certain season

Not available for tourists

Results

Q: 'In particular, if you would go in vacation in a **rural destination**, how important would be the following climate and scenery-related aspects at the destination as **contributors to an enjoyable time** off (1= not at all important; 5=very important).'.

| No	Climate and environmental (CEnv) feature	Number of answers with marks 4 and 5	Percent from the total number of answers
1	Overall weather fit for outdoor activities	101	79.53
2	Thermal comfort	90	70.87
3	Precipitation amount	88	69.29
4	Cold sensation due to wind and/or humidity	87	68.50
5	Presence/absence of precipitation	85	66.93
6	Maximum air temperature	79	62.20
7	Snow cover	68	53.54
8	Sunshine duration	65	51.18
9	Snow depth	57	44.88
10	Pollen concentration level	45	35.43

Results – Availability of CEnv information

No	Climate and environmental (CEnv) feature	Number of answers with marks 4 and 5	Percent from the total number of answers
1	Overall weather fit for outdoor activities	101	79.53
2	Thermal comfort	90	70.87
3	Precipitation amount	88	69.29
4	Cold sensation due to wind and/or humidity	87	68.50
5	Presence/absence of precipitation	85	66.93
6	Maximum air temperature	79	62.20
7	Snow cover	68	53.54
8	Sunshine duration	65	51.18
9	Snow depth	57	44.88
10	Pollen concentration level	45	35.43

Not easily available for usual tourist

Available as forecast /during certain season

Results

Q: 'If climate and environmental information of interest for you would be available, how would you **prefer to access** them or to be delivered to you? (1=not interested; 5= very interested)'.
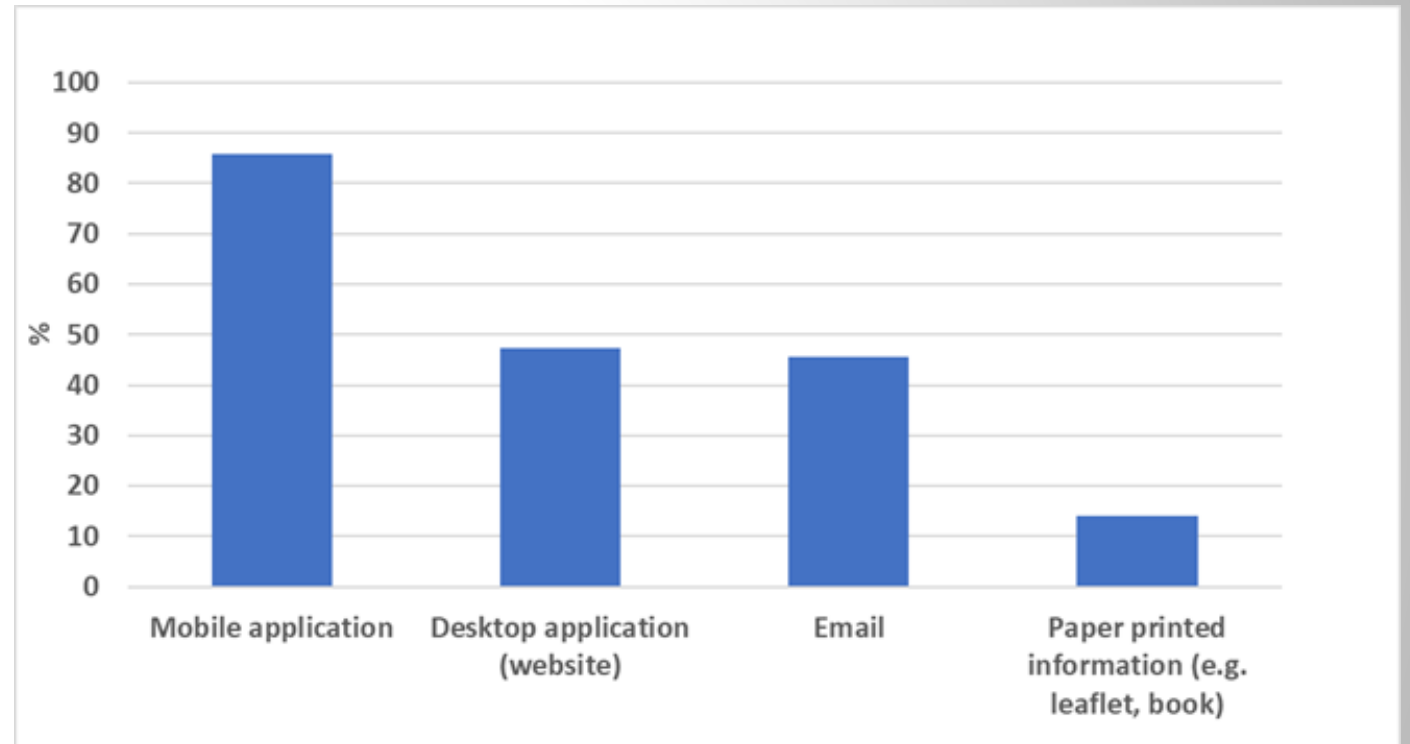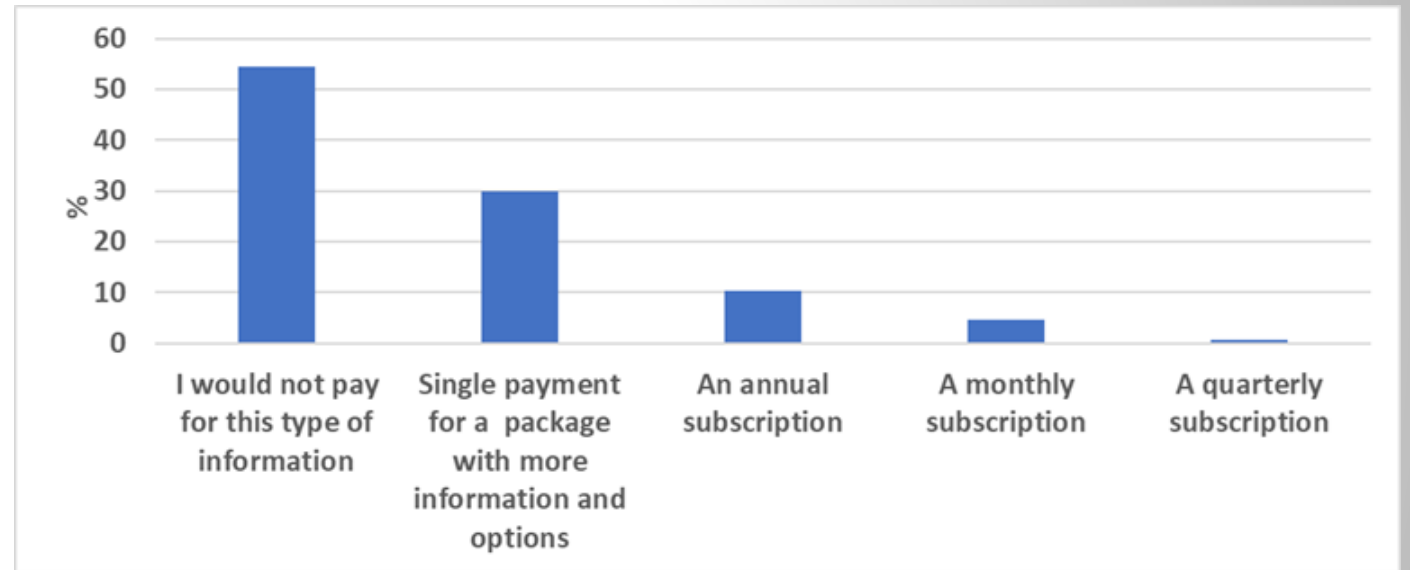
Results

Q: 'Regarding the climate and environmental information of your interest, how would you **prefer it to be presented?** (1=not of interest; 5=of great interest)'.
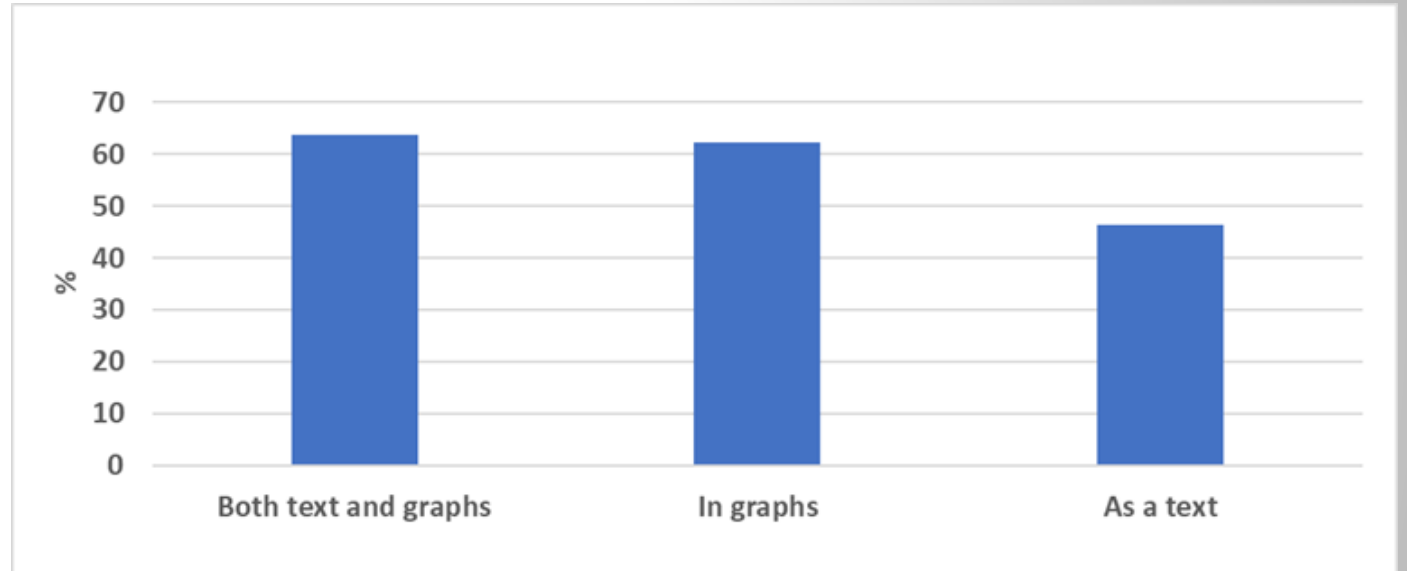
Results

Q: 'For such tailored information related to the climate, weather and environment in a certain touristic destination/s, would you **agree to pay** (please select one option)'.

Limitations

- The number of answers is quite low (127) and thus it does not assure a robust statistical significance of the results;

- Taking into account the channels through which the survey was advertised (e.g. student groups, social media etc.) it might be that a significant part of the respondents are young tourists (i.e. students);

- The structure of the respondents 'pool' in terms of age, social category, income etc., cannot be assessed;

- Given the distribution of answers based on the language of the survey, it might be that the results are skewed toward preference of Romanian tourists (116 answers out of 127 were received for the Romanian version of the survey);

- The survey has a quite general approach, not targeting in depth each of the four destination types considered.

Conclusions

- There is interest for **integrated CEnv information** and the tourists preferences depend on the **destination type**.

- Most appreciated CEnv features**: Thermal comfort** (independent of the destination type)**, air quality** (->urban**), weather for outdoor activities** (->rural), **clarity of water** (->sea)

- Less interest for: snow cover and depth, pollen concentration, season start of flowering for certain tree species

- Users would prefer (80 %) to access such information through **a mobile phone application** and the **information** should be presented in **graphical form** and preferably associated with some descriptive text.

- Most (54%) of the respondents would not pay for such information and only 30% would agree to one single payment for a broader package.

References

- Becken, S. (2010): The Importance of Climate and Weather for Tourism: Literature Review; *Lincoln University*: Lincoln, UK.

- Boqué Ciurana, A. and Aguilar, E. (2021): Which Meteorological and Climatological Information Is Requested for Better Surfing Experiences? A Survey-Based Analysis. *Atmosphere*, 12(3), 293. doi:10.3390/atmos12030293

- Damm, A., Köberl,J., Stegmaier,P., Jiménez Alonso, E. and Harjanne,A. (2020): The market for climate services in the tourism sector – An analysis of Austrian stakeholders' perceptions, *Climate Services*, 17, 100094, doi:10.1016/j.cliser.2019.02.001

- Dubois, G., Ceron, JP., Gössling, S. et al (2016). Weather preferences of French tourists: lessons for climate change impact assessment. *Climatic Change*, 136, 339–351. https://doi.org/10.1007/s10584-016-1620-6

- Eusébio, E., João Carneiro, M., Madaleno, M., Robaina, M., Rodrigues, V., Russo, M., Relvas, H., Gama, C., Lopes, M., Seixas, V., Borrego, C. and Monteiro, A. (2021). The impact of air quality on tourism: a systematic literature review, *Journal of Tourism Futures*, 7(1), 111-130, doi:10.1108/JTF-06-2019-0049

- Falk, M. (2015). Summer weather conditions and tourism flows in urban and rural destinations, *Climatic Change*, 130, 201–222 . doi:10.1007/s10584-015-1349-7