

Communicating and promoting sustainability in tourism: An analysis of the official websites of the Italian regions

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Abstract

This paper analyses the orientation towards sustainability in the online communication of the Italian regions, by evaluating – between December 2019 and January 2020 – the content of official tourism websites and assessing whether this orientation is associated with specific destination characteristics. Sustainability orientation is measured using the Green D-web, a checklist of 35 items of sustainability-oriented content. Destination profiling is assessed through the adoption of sustainable regulations and practices, the intensity of tourism development, and its size and maturity. Green D-web scores between 5 and 32 (out of a maximum of 35) are found with a median value of 19.5. Sustainability orientation is significantly and directly associated with both adoptions of sustainable regulations and practices and intensity of tourism development, while relationships with size and maturity are not significant.

Keywords: sustainable tourism, online communication, tourism websites, Italy, regions

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Introduction

Sustainability is an essential perspective in the governance of tourism destinations (Borges *et al.*, 2014; Del Chiappa *et al.*, 2018; López-Sánchez and Pulido-Fernández, 2014), due to the economic, social and environmental impacts of such activities (UNEP and UNWTO, 2005; Lu and Nepal, 2009; Weaver, 2012) and growing awareness amongst tourists of the need to develop and protect local economies, environment and socio-cultural heritages (Budeanu, 2007; Del Chiappa *et al.*, 2016). Tourists are becoming not just interested in "landscape, leisure & learning" but also "limiting" the exploitation of local resources for tourism purposes (Franch *et al.*, 2008). Other authors refer to "responsible tourism", as a "set of tourist practices that people embrace in order to discover the authenticity of the places they visit, preserving their scenic, natural, socio-cultural, economic, and environmental inheritance, becoming wealth promoters for the local hosting community and protesting against activities that blatantly disregard all these principles" (Del Chiappa *et al.*, 2016, p. 193). Addressing the demands of such tourists represents a crucial driver of success for a destination, and an important marketing tool for destination management organizations (DMOs) (Ritchie and Crouch, 2005).

In this context, DMOs should be capable of measuring, reporting and disclosing their commitment towards sustainable tourism development (McLoughlin *et al.*, 2018) to build a market position aligned with the evolving demand and competitive and socio-economic trends (UNWTO, 2010). DMOs' external communication activities are therefore crucial. Sustainability communication helps build an attractive image for the destination, reflecting the desirable values of transparency, solidarity, and equity (Ghanem and Elgammal, 2017).

Within the mix of communication tools, the official tourism website created by the DMO plays a primary role (Ali and Frew, 2013; Ip *et al.*, 2011); official websites offer information on the local attractions and services, and often also have promotional and marketing functions as well (Luna-Nevarez and Hyman, 2012). DMOs should develop a website aligned with pursuing sustainability in terms of structure, content and services offered (Tölkes, 2018). Evaluation of this alignment is therefore a crucial issue, only partially explored in the literature. While many models have evaluated the quality of tourism websites (Law *et al.*, 2010), much fewer studies have assessed the role and quality of destination websites for sustainability communication (D'Angella and De Carlo, 2016; Ettinger *et al.*, 2018; Font *et al.*, 2017; Garbelli *et al.*, 2017; Ghanem and Elgammal, 2017). This study contributes to filling that gap by investigating the sustainability orientation of the official tourism websites for the Italian Regions and Autonomous Provinces (hereinafter, "Regions"). These are the public local authorities that are responsible for tourism policies and development in Italy.

Methodology

This research uses the methodology developed by D'Angella and De Carlo (2016) and applies it to exploring the websites of regional tourism destinations for their sustainability orientation. The analysis is divided into two steps. First, the sustainability-related content of the Italian regional tourism websites is evaluated. Second, the existence of a significant association between the intensity of the sustainability orientation and the destination profile is assessed.

The sustainability orientation of the websites is measured using the Green D-web, a website evaluation tool that D'Angella and De Carlo (2016) developed from Morrison *et al.* (1999). It is a checklist of 35 items (showed in Table 1), covering seven areas: general, infrastructures, transports, experience, food, shopping, and hospitality. The items are proxies for sustainability-oriented communication as they refer to forms of tourism, services, attractions, or accommodation facilities that are particularly concerned with economic, social and environmental impacts.

The evaluator gives one point every time content related to an item is present in the website; the maximum score is therefore 35.

Table 1. *Green D-web items*

Area of analysis	Items
General	Information regarding green/sustainable/responsible travel [on the homepage] Specific section regarding green/sustainable/responsible travel [inside the website] Green travel featured as a definite segment Green travel tips Green accreditation schemes Climate change
Infrastructures	Carbon-offset options Environmentally friendly attractions Accessible areas or facilities
Transports	Green transport Walking tours/holidays Cycling or mountain bike tours/holidays Tours using local transport Low carbon travel
Experience	Green meetings/ events Farming holidays Volunteer travel Information for backpackers Wilderness tours/holidays Birdwatching tours/holidays Botany tours/holidays Spa and wellbeing holidays Photography tours/holidays
Food	Cooking activities/holidays Food travel Wine tasting tours/holidays Vegetarian or vegan holidays
Shopping	Organic shopping tours Ethical or eco-friendly shops
Hospitality	B&B and guesthouses Campsites and caravan parks Eco-lodges hospitality Farm stays accommodation Accessible hotels Lodgings with ecolabels or other certifications

Source: adapted from D'Angella and De Carlo (2016)

The destination profile is constructed from four variables, as described in Table 2: the level of adoption of sustainable regulations and practices, the rate of tourism development, the size, and the tourism maturity. The measurement of size and tourism maturity is the same as in D'Angella and De Carlo (2016), while original measures are proposed for the level of adoption of sustainable regulations and

practices, and the tourism development. For the former, the “Eco city ranking index”, used in D’Angella and De Carlo (2016), is not available for Italian Regions and is replaced by the BES score; for the latter, the tourism pressure index is preferred to the ratio between international arrivals and the number of inhabitants, as it provides a better estimation of the proportion between tourist flows and locals.

Table 2. *Profile variables*

Variable	Measure	Source
Level of adoption of sustainable regulations and practices	Score in the BES (Fair and Sustainable Wellness) Report ¹	Italian National Institute of Statistics (2017)
Tourism development	Tourism pressure [100*total overnight stays/(365*permanent residents)]	Italian National Institute of Statistics (2018)
Size	Permanent residents	Italian National Institute of Statistics (2018)
Tourism maturity	Variation in the total number of overnight stays (2014-2018) ²	Italian National Institute of Statistics (2014, 2018)

Source: Author's assessment

As suggested by Weaver (2000), profile variables are transformed from continuous to discrete, discriminating with respect to the median value; the absolute values are therefore recoded as "high" or "low" depending on whether they were greater or less than the median value of their distribution. This transformation may oversimplify the data structure but minimizes the effect of any outliers. Verification of the existence of an association between the Green D-web score and the profile variables is then carried out by comparing the average Green D-web score between the two groups identified by "high" or "low" values of the profile variable.

Findings and discussion

Data collection took place between December 2019 and January 2020. The official tourism website of Calabria was offline during the entire period and so discarded. The final sample includes 20 websites, from the remaining 18 Regions and the two Autonomous Provinces of Bolzano and Trento (hereinafter, “Alto Adige” and “Trentino”). The list of websites is available on request.

Table 3 shows the variables values and the median of the distributions; the “Recoding” columns show the recoded discrete value corresponding to each continuous value.

The analysis returns Green D-web scores between 5 and 32, with a median value of 19.5. The websites richest in sustainability content belong to the northern and central Italian Regions, with Alto Adige and Trentino achieving the best results. Seven Regions – all in central-southern Italy, excepting Piemonte – obtain less than 18/35 (the “pass” score), with the worst case of Molise scoring just 5.

The number of detected items varies a lot in the seven areas of the Green D-web tool. In the food area, 62 items were found out of a maximum of 80 (four attributes for 20 sites), with a 77.5% coverage: most websites host information on gastronomic and wine holidays, cooking activities, and vegan/vegetarian holidays. The other areas return good coverage, ranging between 54% and 67%, with only the exception of the general area, whose coverage is less than 30%.

Table 3. *Values of Green D-web score and profile variables*

Region	Green D-web score [0-35]	Adoption of sustainable regulations and practices		Rate of tourism development		Size		Tourism maturity	
		BES score 2017	Recoding	Tourist pressure 2018	Recoding	Population 2018	Recoding	Variation of overnight-stays 2014-18	Recoding
Abruzzo	14	100.79	Low	1.32	Low	1,311,580	Low	0.83%	High
Alto Adige	30	118.40	High	17.15	High	531,178	Low	16.99%	Low
Basilicata	19	95.81	Low	1.27	Low	562,869	Low	23.98%	Low
Campania	11	87.54	Low	1.02	Low	5,801,692	High	20.10%	Low
Emilia-Romagna	23	111.37	High	2.50	High	4,459,477	High	14.87%	Low
Friuli Venezia Giulia	23	110.34	High	2.03	High	1,215,220	Low	18.61%	Low
Lazio	15	102.18	Low	1.71	Low	5,879,082	High	19.07%	Low
Liguria	23	106.99	Low	2.68	High	1,550,640	Low	12.68%	High
Lombardia	24	109.30	High	1.07	Low	10,060,574	High	14.06%	High
Marche	18	107.26	Low	1.73	Low	1,525,271	Low	-14.95%	High
Molise	5	99.42	Low	0.40	Low	305,617	Low	6.91%	High
Piemonte	16	107.62	High	0.95	Low	4,356,406	High	15.61%	Low
Puglia	20	90.96	Low	1.03	Low	4,029,053	High	14.49%	High
Sardegna	17	95.44	Low	2.50	High	1,639,591	High	31.48%	Low
Sicilia	19	86.91	Low	0.83	Low	4,999,891	High	1.80%	High
Toscana	24	109.10	High	3.50	High	3,729,641	High	10.35%	High
Trentino	32	117.05	High	9.19	High	541,098	Low	18.13%	Low
Umbria	16	107.72	High	1.84	High	882,015	Low	1.34%	High
Valle d'Aosta	24	108.46	High	7.86	High	125,666	Low	20.76%	Low
Veneto	21	110.28	High	3.87	High	4,905,854	High	11.91%	High
Median	19.5	107.44	-	1.79	-	1,595,116	-	14.68%	-

No website explicitly mentions on its homepage green, sustainable or responsible travel and just five cases devote a specific section to these forms of tourism. Green travel is featured as a definite segment in three cases and only six websites provide advice and suggestions for sustainable travel. Climate change content is similarly limited, explored in just two websites with a focus on consequences for local mountains and glaciers. Green certifications and accreditation schemes are the only items that all websites (except Molise) show. However, most certifications are loosely related to sustainable tourism: protected origin designation for food and wine, blue flags (for the quality of beaches), orange flags (given to the most beautiful Italian villages) and green flags (for “child-friendly” destinations). Only in Alto Adige, Piemonte and Trentino are certifications strictly linked to sustainability issues, such as the presence of “100% renewable” municipalities in Alto Adige, the recognition of “Biosphere Reserve” for some parks in Piemonte, quality brands such as “Trentino Quality Mark” and “Ecoristorazione Trentino” or certifications such as “Green Way Primiero” (circular economy), “PEFC – Programme for the Endorsement of Forest Certification schemes” (sustainable management of forest resources) and “EMAS – Eco-Management and Audit Scheme” (environmental performance).

The association between the sustainability orientation of communication and the destination profile was verified by comparing the average Green D-web score of the two subgroups of destinations, identified by a “high” or “low” value of the profile variables. First, the normality of the distribution of

Green D-web scores was assessed for all sub-distributions built with profiling variables as grouping factors (i.e. Green D-web scores with high & low BES score, with high & low tourist pressure etc.). Shapiro-Wilk's test was used, as it was developed specifically to test whether a distribution is normal and is considered particularly sensitive to a wide range of non-normality (from asymmetry to long- and short-tailedness), even with samples as small as $n = 20$ (Shapiro and Wilk 1965). All the eight tests on Green D-web scores sub-distributions (high & low subgroups for the four profiling variables) were non-significant, with the test p-values ranging from .096 to .866. In the light of these outcomes, normality distribution of data was assumed. As data was measured with scale (ranging from 0 to 35) and intrinsically independent, it was appropriate to compare average scores with a parametric test (the independent sample T-test), after a preliminary Levene's test for the equality of variances. The results are shown in Table 4.

Table 4. *Levene's and T-test results*

Variable	Average sub-group Green D-web score		Levene's test		T-test t(18)	
	Low	High	F	p value	Test value	p value
Level of adoption of sustainable regulations and practices	16.10	23.30	.065	.802	-3.141	.006*
Tourism development	16.10	23.30	.126	.727	-3.141	.006*
Size	19.0	20.4	2.465	.134	.494	.627
Tourism maturity	18.4	21.0	.622	.441	.933	.363

Source: Author's calculation

A significant association exists between the sustainability orientation of online communication and the adoption of sustainable regulations and practices. Destinations more sensitive to sustainability issues express this orientation in their tourism communication. This is reflected in their websites through content that recalls and suggests environmentally and socially respectful tourism activities.

Similarly, sustainability orientation and tourism development are significantly associated. Destinations most markedly affected by incoming tourist flows share the same approach. This is for two reasons: on the one hand, strong pressure may encourage local decision-makers to focus on more sustainable forms of tourism; on the other hand, attention to sustainability may have made these destinations more attractive for tourists whose decisions are increasingly influenced by sustainability issues.

There is no significant difference in the sustainability orientation of destinations with high and low size; the implementation of sustainability communication policies is therefore a marketing tool available to all destinations. Finally, the orientation towards sustainability is not associated with the tourism maturity of the destination; efforts in this direction can consequently help stimulate destination development, consolidate its results or even trigger a relaunch.

Conclusions

This paper investigates the orientation towards sustainability in online tourism communication by Italian Regions and its association with structural features of the destinations. Previous studies (Baggio *et al.*, 2011; Pencarelli *et al.*, 2011; De Carlo, 2013) have analysed the quality of the official tourism websites of Italian Regions but this work is the first to assess their orientation towards sustainability.

The analysis returns a picture of variable performances. These results confirm Ghanem and Elgammal (2017)'s outcomes, as the majority of the national tourism websites in their sample also lacked an appropriate and complete approach to sustainability communication. Interestingly, the association between the sustainability orientation of online communication and the profile variables fully reflects the outcomes of D'Angella and De Carlo (2016). Both in their study on city websites and in ours, the adoption of sustainable regulations and practices and the degree of tourism development of the destinations are significantly and positively associated with the sustainability orientation of web communication, while size and maturity do not play any role.

The study has implications for scholars and practitioners. Scholars may be interested in the variable coverage of the seven areas explored by the Green D-web tool; future research may assess whether the websites of other destinations share a similar profile and investigate the reasons underlying the uneven communication of different facets of sustainability. The outcomes confirm the robust association between sustainability communication, adoption of sustainable regulations and practices, and tourism development, thus contributing to the debate on the determinants of sustainability communication by tourism destinations. Practitioners are provided with a tool to assess the sustainability orientation of destination websites, together with a comprehensive picture of the performances of regional tourism websites in Italy, one of the most important destinations worldwide. Destination managers may use the approach to benchmark their websites and improve their sustainability orientation.

The study also has some limitations. Focusing on just the websites, it ignores other ways of online communication; specific attention should be paid, in particular, to social media, whose role in the communication of destinations is increasingly important (Leung *et al.*, 2013). Another relevant issue is the use of a counting tool such as the Green D-Web: the need to provide binary evaluations (presence or absence of an item), while potentially reducing the subjectivity of the analysis, also deprives researchers of a finer evaluation grid. Finally, the list of items may be integrated to assess missing aspects such as the reference to the Sustainable Development Goals and the contribution of local tourism activities to their achievement (UNWTO & UNDP, 2017).

The analysis was performed before the Covid-19 pandemic, which deeply affected the tourism market and especially stimulated a greater concern by tourists for greener, more authentic, and off-the-beaten-track experiences (Benjamin *et al.*, 2020; Gössling *et al.*, 2021; Romagosa, 2020). Future research may replicate the study in an "ongoing" or "post-pandemic" setting, to assess whether the Italian Regions increased the sustainability orientation of their tourism websites in response to this trend.

Endnotes

¹The BES Report, edited by the Italian National Institute of Statistics - Istat, evaluates the progress of society from economic, social and environmental points of view. It includes a large set of indicators divided into 12 domains: health; education and training; work and life balance; economic well-being; social relationships; politics and institutions; security; subjective well-being; landscape and cultural heritage; environment; innovation, research and creativity; and quality of services. As the BES report only includes the score for each domain, the average of the 12 scores was used as an overall BES score for each Region.

²A low or negative variation signals high maturity or decline, while a high value suggests low maturity, as the destination is still experiencing growth in visits

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