Chapter 13
The Blue Flag Label as a Tool to Improve the Quality of Life in the Sun-and-Sand Tourist Destinations

Antonio Chamorro-Mera, Verónica Nobre de Oliveira, and José Manuel García-Gallego

Abstract Environmental impacts generated by tourism can adversely affect competitiveness of tourism destinations, not only through the reduction in the quality of their tourism inputs, but also through a potential fall in demand as a consequence of the emergence of "environmentally sensitive" tourists. The Blue Flag is a tool for to public managers of tourist destinations in order to find a balance between environment and enjoyment of the tourist. It is an eco-labelling of beaches that demands the fulfilment of a set of requirements related to the quality of life: some of them referring directly to the environmental quality, and others to the additional comfort and services that tourists and residents can enjoy.

In order to know the effectiveness of the Blue Flag as a good practice of tourism management, it is important to understand how tourists' environmental concerns influence their choice of holiday destinations. This study evaluates the relative importance that have factors related with the quality of life and the environmental management of the tourism destination in comparison with other factors as massification, recreational activities and night-life. Through a survey to a sample of 819 Portuguese and Spanish tourists, three segments were found: "Concerned about massification", "Concerned about certified quality" and "Concerned about quality without willingness to pay more". The level of awareness of the Blue Flag is very high among tourists, but their willingness to pay a premium to stay in a tourism accommodation located near a beach with Blue Flag is not so high.

Keywords Tourism destination · Green tourism · Ecolabelling · Blue flag · Quality of life · Conjoint analysis

A. Chamorro-Mera (✉) · J. M. García-Gallego
University of Extremadura, Badajoz, Spain
e-mail: chamorro@unex.es; garciagallego@unex.es

V. Nobre de Oliveira
Instituto Politécnico de Leiría, Leiria, Portugal
e-mail: veronica.oliveira@ipleiria.pt

A. M. Campón-Cerro et al. (eds.), *Best Practices in Hospitality and Tourism Marketing and Management*, Applying Quality of Life Research,
https://doi.org/10.1007/978-3-319-91692-7_13

13.1 Introduction: Tourism, Environment and Quality of Life

The concept of quality of life (QOL) can be studied from two scientific approaches: individual QOL and social or community QOL. In the first approach, quality of life is concerned with individuals' subjective experience of their lives. The World Health Organization (1997) defined quality of life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.

QOL is a multidimensional concept, beyond the individual satisfaction with his/her economic situation. Although there is a wide variety of measurement scales, it is common to include dimensions related to physical wellbeing (or health), material wellbeing, social wellbeing or emotional wellbeing, as indicated in the literature reviews performed by scholars such as Dodge et al. (2012), Dolnicar et al. (2012) or Felce and Perry (1995).

Although some of the natural environment conditions directly affect the QOL of individuals (such as air quality, noise or traffic congestion), they have indirect long-term effects on the health status of citizens. For this reason, most indices and scales have not considered the interrelationships between individual QOL and environmental changes, and not include explicitly the natural environment within the dimensions or domains that configure quality of life. Some other scales do include items relating to natural environment within the broader health domain, and only a few of them include the environment wellbeing or quality of environment as a specific dimension (Andereck and Nyaupane 2011; Lazim and Osman 2009; Palomar-Lever 2000; Rahman et al. 2011).

Furthermore, social or community QOL is a specific concept that has into account the life conditions of a territory (country, region, city or tourism destination) and that uses indicators that reflect people's objective circumstances in a given cultural or geographic environment. For instance, indicators such as gross income per capita, life expectancy at birth, infant mortality, mean years of schooling, doctors per capita, homicide rates, etc. Epley and Menon (2008, p. 281) consider that this concept of QOL measures "the liveability in the area or as one measure of the level of attractiveness".

Various indices of community QOL have been proposed by researchers (Diener and Suh 1997; Epley and Menon 2008; Hajduová et al. 2014), public policy institutes and government agencies, such as the Human Development Index (HDI) developed by the United Nations Development Program (UNDP). In contrast to the individual QOL, when assessing social QOL, aspects related to the environmental quality are considered. This is because, as indicated by Malkina-Pykh and Pykh (2008), it is generally accepted that most of the environmental problems do not directly affect individual QOL, but contribute rather to the health or quality of society. Among the measures that are used as environmental indicators are carbon dioxide emissions, water pollution, access to safe water supplies, deforestation or depletion of environmental resources.

From the community QOL perspective, the level of QOL may be managed by politicians and policymakers through economic, social and environmental policies. We agree with Epley and Menon (2008) when they suggest that QOL has become a potent marketing tool for cities and countries and that it can be used as a critical feature of marketing campaigns to promote a region, city or tourism destination.

Nowadays, environmental policy is closely related to the aim of increasing the QOL. One of the most important political and societal problems is how to improve the quality of life of population while living within the carrying capacity of the natural environment and without compromising the long-term human, economical, and ecological capital of the future. That is, how to balance economic wellbeing with environmental wellbeing.

In the case of tourism, the policies should aim at promoting sustainable tourism practices that minimize the negative impacts of tourism on the environment, while the positive economic impacts in the quality of life are kept for the residents of the tourist destinations (job creation, access to infrastructure, social and cultural services). There is a bidirectional relationship between the activities of tourism and the environment in the sense that the environmental impacts they generate may adversely affect the competitive position of the whole of the tourism destination and, therefore, the quality of life of residents. The reason is not only the reduction of the quality of tourism inputs, but also the potential decrease in consumption due to the existence of segments of "environmentally sensitive" tourists, who take into account issues such as environmental quality or sustainability in their choice of destination. In particular, the degradation in quality of the destination devalues the quality of the tourist's experience.

For example, when studying QOL of residents in a tourist destination, Kim et al. (2013) found that when residents perceive the positive economic, social, and cultural impact of tourism, satisfaction with related life domains (sense of material, community, and emotional well-being) increases too. However, when residents perceive the negative environmental impact of tourism, their sense of health and safety decreases as a result. Negative perceptions of environmental impact of tourism (e.g., tourists producing large quantities of waste products or destroying the beauty of the landscape by littering) were found to be a significant predictor of satisfaction with health and safety.

In order to improve the environmental indicators that determine the QOL of a tourist destination, in the last few decades several tools have been developed to implement good practices in tourist destinations management, such as environmental taxes, Best Practice Guidelines, Local Agenda 21, environmental management systems certification or environmental labels.

One of the most widespread environmental labels in the field of tourism is the Blue Flag, which identifies beaches that meet a set of requirements relating to four aspects: (1) quality of bathing water, (2) environmental management of the area, (3) information and environmental education for tourists and residents, and (4) security, services and facilities. A large part of the requirements relates to environmental indicators that affect QOL, such as the absence of wastewater discharges, the separate waste collection in the area or the promotion of sustainable transport. Another

part of the requirements demanded by the Blue Flag refers to more general indicators of QOL, such as security and surveillance, cleaning, accessibility to the beach or the availability of drinking water in it.

To find out if these market-based tools can succeed as good management practices it is necessary to study the attitudes and behaviours of tourists and residents towards the environment, in general, and toward each particular tool. With this general context in mind, the purpose of this paper is to analyse the importance that tourists give to the blue flag when choosing a sun-and-sand tourist destination. The conclusions obtained will serve as a guide for politicians and policymakers regarding their decision about to the level of investment in environmental policies and quality of life.

13.2 Theoretical Context About Blue Flag

According to the International Standards Organization (ISO), the aim of an environmental label is to encourage the demand and the offer of products that cause less pressure on the environment throughout their life cycle, through the communication of verifiable, reliable, and not misleading information on the environmental aspects of the products and services. For tourism accommodation in particular, according to ECOTRANS, in Europe there are about 50 different ecolabeling systems; such as *European Ecolabel*, *Green Globe 21*, *Ecotel* or *Distintivo de Garantía de Calidad Ambiental*. Ecolabels effect on tourists decision making process has been analysed by different authors like Anderson et al. (2013) – about Green Coach Certification for Tourist transportation, among North American tour operators -, Fairweather et al. (2005) –among visitors to one important destination in New Zealand-, Reiser and Simmons (2005) –about Green Globe 21 ecolabel in New Zealand- and Sasidharana et al. (2002) –about the feasibility of adopting ecolabeling schemes for certifying tourism enterprises in developing countries.

Among these instruments, of particular relevance is the Blue Flag certification of beaches. It is awarded annually by the Foundation for Environmental Education to beaches and recreational harbours that meet a set of requirements relating to environmental conditions, safety, and comfort, and provide information targeted at increasing their visitors' environmental awareness. The Blue Flag was born in 1987 and in 2013 awarded to 3850 beaches and marinas in 46 countries from Europe, Africa, America and Oceania.

There are some studies on the value of the Blue Flag, with mixed results, some positive and some negative. Capacci et al. (2015) explore the relationship between Blue Flag achievement and inbound tourist flows by some panel data techniques covering a rather long time span (2000–2012). They compare the attractiveness of certified and non-certified Italian provinces and they suggest that current certification positively affects future foreign tourist decisions to visit the destination.

Lucrezi et al. (2015) interview beachgoers on Blue Flag and non-Blue Flag beaches in South Africa, to assess awareness, knowledge, and attitudes concerning the Blue Flag award, and perceptions of beach features that are also listed as Blue Flag criteria. They also interview Blue Flag managers to examine their opinion of and commitment to the award. Their results show that beachgoers and managers shared positive views of the Blue Flag award, but a lack of knowledge on the award's criteria by beachgoers was reflected in managerial and educational flaws by Blue Flag managers.

This positive assessment of the ecolabel can justify the prices of tourist services on the Blue Flag beaches being higher. In this sense, Rigall-i-Torrent et al. (2011) measured the effects of beach characteristics and hotel location with respect to the beach (such as beach length, width, sand type or beach services) on hotel prices. The study was conducted in Catalonia (Spain) and reveals, among other results, that a Blue Flag increases the price by around 11.5%.

However, there is also some criticism of the Blue Flag system. Mir-Gual et al. (2015) test if the Blue Flag management system really ensures an improvement of environmental and natural features of beaches, or if they are just a mechanism for improving the services and benefits to users. They criticize and warn that the concession of Blue Flag award is strictly focused on services offered to the tourists, and they do not take into account environmental and ecological issues related to the behavior of beaches as natural and fragile systems. They analyze 481 beaches of the Spanish coastline awarded with the Blue Flag over the period 2007–2012 and their results show that the beaches are not characterized for their naturalness; instead they show high levels of human influence and artificialization.

The merits of beach awards are also critically reviewed by McKenna et al. (2011). These authors collect various surveys of beach visitor motivation in Ireland, Wales, Turkey and the USA and they indicate that beach awards play an insignificant role in motivation to visit beaches. Other criteria, such as scenic setting, general ambience, proximity and range of activities available, are much more important than beach awards in attracting visitors to beaches. Moreover, some criteria closely identified with the Blue Flag, notably cleanliness and water quality, are revealed to be important, separately. These authors even suggest that, in some cases, the costs associated with achieving and maintaining such awards may exceed any benefits in terms of increased visitor numbers and spending.

As a consequence of the different results, further studies on the decisions of tourists and the effect of the Blue Flag are needed. It is very probable that the effect of the Blue Flag will not be universal and will vary according to the moment and place where the study will be conducted. Moreover, this effect will be different depending on the level of knowledge about the Blue Flag and other personal characteristics of tourists, such as nationality, socio-demographic profile, reasons for their trip or level of concern with the environment. This study aims at answering some of these questions.

13.3 Objective and Methods

13.3.1 Objectives

This study's main purpose was to evaluate the effect that obtaining a Blue Flag has on attracting tourists to a destination. In this way, we can evaluate if the blue flag may be a good tool to manage the quality of life in tourist destinations. Specifically, and as it was commented before, we set the following objectives:

- Quantifying the level of awareness of the Blue Flag.
- Estimating the importance of the environmental quality of a tourism destination certified with a Blue Flag as against other attributes that influence the choice of that destination.
- Analysing the willingness to pay more for tourism destinations certified with a Blue Flag.
- Identifying the existence of different segments of tourists according to their criteria for choosing destinations.

13.3.2 Methods

To estimate the relative importance of environmental quality as against other aspects of the tourism destination, we chose to use the technique of Conjoint Analysis. This reveals information about the structure of the preferences of tourists, and thus provides insight into the relative importance they give to the different attributes of the tourism destination. In simple terms, the technique consists of presenting to a sample of purchasers a set of products (or stimuli) and asking them to value them (rating or ranking) according to their preferences or purchasing intention. Each product is defined by a combination of attributes, each of which is represented at different levels.

The first step in applying this technique in the present study was to select the set of attributes that will define the different tourism destinations. For this, we first made a literature review of previous studies that have analysed the relevant attributes in the choice of tourism destinations (Table 13.1).

The attributes for choosing a tourist destination used in the 20 studies that have been analyzed can be grouped into 5 types: attributes related to environmental quality, attributes related to massification, attributes related to leisure activities, attributes related to infrastructure and attributes related to prices and fees.

Based on this review and given the objectives pursued in the study, we selected four attributes for inclusion and, for each of the attributes, three levels of presence were identified (Table 13.2).

(a) **Quality of water and beaches.** There have already been studies that have analysed this attribute (Adamowicz et al. 1994; Figini and Vici 2012; Huybers and

Table 13.1 Relevant attributes when choosing tourism destinations

Author	Attributes
Adamowicz et al. (1994)	Water quality
	Existence of a beach
Baarsma (2003)	Leisure
Brau et al. (2009)	Massification
	Characteristics of beach-front
	Environmental impact of bathing establishments and other beach services
	Night-life activities at the beach
	Cost of accommodation per person per night
Figini and Vici (2012)	Social events
	Environmental impact of bathing establishments and other beach services
	Health, sport and wellness tourism
	Cultural and leisure activities offered off-season
	Evening and night opening of shops
Figini et al. (2009)	Massification
	Environmental impact of bathing establishments and other beach services
	Use of the promenade next to the beach
	Entertainment and funfairs by the beach
	Taxes necessary to finance the scenarios
Hanley et al.(2002)	Massification
	Beauty of landscape
Huybers and Bennett (2000)	Activities
	Environmental conditions
	Development/crowdedness
	Rarity of natural attractions
Huybers (2003)	Superstructures
	Massification
	Type of activities that can be done
Kelly et al. (2007)	Leisure activities
Klenosky (2004)	Quality of the area for recreation
	Residential development
	Air quality
	Noise
Needham and Szuster (2011)	Use level/density
	Presence of litter
	Damage to reefs
	Condition of facilities
Ortega and Recio (2006)	Surroundings and location
	Offer and services of leisure
Picón and Varela (2000)	Night-life

(continued)

Table 13.1 (continued)

Author	Attributes
Rahemtulla (1998)	Marine life quality
	Rarity of wildlife
	Development of the beaches
	Local prices
Ramos et al. (2004)	Accommodation and its services
	Holiday atmosphere
	Prices of the product/service
	External services
Reig and Coenders (2002)	Beach and sea water quality
	Surroundings
Riganti (2008)	Rising cost of hotel room
Riera (2000)	Natural attributes
	Infrastructures
	Activities
Shoji and Yamaki (2004)	Environmental tax
Varela et al. (2004)	Entertainment and night-life

Bennett 2000; Rahemtulla 1998; Reig and Coenders 2002). They conclude that it is the key element for almost all segments of tourists when they are choosing a tourism destination. None of these studies, however, have associated this quality with an external certification such as the Blue Flag. Therefore, in the present work we included the following levels for the environmental quality attribute: low quality, good quality, and good quality with Blue Flag certification.

(b) **Massification.** This attribute refers to the number of visitors to be found in a tourism destination, together with the degree of urbanization and congestion of the zone's tourism infrastructures and facilities. There are studies showing that this is not one of the most important attributes in the choice of a tourism destination (Brau et al. 2009; Figini et al. 2009). But it has also been shown to have a major influence on tourists' level of satisfaction with the destination (Apostolakis and Jaffry 2005; Huybers and Bennett 2000; Klenosky 2004; Needham and Szuster 2011; Rahemtulla 1998), with it being expected that tourists' preferences will decrease as massification increases. Thus, we opted to include the following three levels of the massification attribute: not massified, moderately massified, and very massified.

(c) **Recreational activities and night-life.** This attribute refers to the number of leisure activities that exist in the tourism destination for recreation and leisure time. Several studies have shown that this is a fairly important attribute when choosing the destination (Brau et al. 2009; Figini et al. 2009; Picón and Varela 2000; Reig and Coenders 2002; Varela et al. 2004), especially for the younger segment of tourists. Thus, this attribute was included in the study with three possible options.

Table 13.2 Levels of the attributes

Quality of water and beaches	Low quality	This destination has a **low quality** of beach and of water for bathing. In addition, there is neither concern about informing and sensitizing tourists to environmental protection nor any environmental management measures.
	Good quality	This destination has a **good quality** of beach and water for bathing, although **it has not been awarded** the Blue Flag rating.
	Good quality with Blue Flag	This destination has been awarded the **Blue Flag logo**, which is a guarantee of compliance with stringent quality standards in water for bathing and beach, the existence of media for providing environmental information and of environmental education campaigns, the adoption of environmental management measures, the safety of bathers, and some other additional services and structures for tourists.
Massification	Not massified	A destination with **few tourists**, few buildings (few hotels, predominance of scattered houses). Here it is possible to "get away from it all", to rest completely; it is quiet and relaxed.
	Moderately massified	A destination with a **moderate number of tourists** and some areas of urban concentration, sometimes congestion of infrastructure (heavy traffic and jams) and facilities, but a relaxed atmosphere prevails.
	Very massified	A destination with a **large number of tourists**, with dense high-rise buildings near the beach; frequent congestion of infrastructure (heavy traffic and jams) and facilities. An atmosphere of movement and bustle.
Recreational activities and night-life	Few	A **few opportunities for recreational activities** at the beach and of local night-life (bars, restaurants, discotheques...).
	Some	There are **some recreational activities** offered at the beach and some local night-life (bars, restaurants, discotheques...)
	Many	There is a **great variety of recreational activities** at the beach (volleyball and beach soccer, surfing, sailing, areas for aerobics and dance classes,...) and a wide range of local night-life (bars, restaurants, discotheques,...).
Green tax	No tax	No environmental tax of any type.
	5%	Tourists **must pay 5% of the daily cost** of their accommodation as an environmental tax, destined to maintaining and improving the area's natural conditions.
	10%	Tourists **must pay 10% of the daily cost** of their accommodation as an environmental tax, destined to maintaining and improving the area's natural conditions.

(d) **Green Tax.** This attribute refers to the possibility that the tourism destination has implemented a tax surcharge on the price per night of accommodation, and which is earmarked by the competent Public Administration for investments to protect, conserve, and improve the zone's natural resources. The influence of this attribute has been analysed in several studies, such as those of Kelly et al. (2007), Mercado and Lassoie (2002), Reig and Coenders (2002), and Shoji and Yamaki (2004). In the light of this information, we included the attribute "*Green Tax*" in the study with three levels: no tax, 5% and 10% on the cost of accommodation.

Table 13.3 Stimuli presented to the respondents

Quality of water and beaches	Massification	Recreational activities	Environmental tax
Good quality – Blue Flag certified	Moderately massified	Few	10%
Good quality – Blue Flag certified	Very massified	Some	No tax
Good quality	Not massified	Some	10%
Good quality	Very massified	Few	5%
Good quality	Moderately massified	Many	No tax
Low quality	Very massified	Many	10%
Low quality	Not massified	Few	No tax
Good quality – Blue Flag certified	Not massified	Many	5%
Low quality	Moderately massified	Some	5%

Following the selection of attributes and levels, the second step in the application of Conjoint Analysis is to determine how to construct the stimuli. There are several procedures that can be followed for the presentation of the stimuli to elicit a valuation response from the interviewees. We used the full profile method. In this method, the respondent is presented with a single set of stimuli to evaluate. Each stimulus comprises information on all the attributes included in the study. In the present case therefore, each stimulus (tourism destination) consists of three levels each of quality, massification, recreational activities, and Green Tax. The number of possible stimuli was therefore 81 ($3 \times 3 \times 3 \times 3$). However, presenting so many stimuli to the respondent would overload the respondent with information, and adversely affect the quality of the responses. To avoid this problem, we performed an orthogonal design procedure which reduced the combinations to only 9 (Table 13.3). This reduction is carried out in such a way that the information acquired from the use of the resulting subset will be similar to that which would be acquired using all the stimuli. In particular, one ensures the presence of all the attributes and their corresponding levels with equal intensity in the stimuli with this design, without introducing a bias to any given level.

Initially, the tourism destinations were presented to the respondents in a similar form to how they are described in a travel agency brochure. Subsequently, to facilitate the decision-making process, they were presented in a summary form in the questionnaire, and the respondents were asked to list their preferences from 1 to 9.

The survey was directed at Portuguese and Spanish tourists. We worked with a sample of 819 tourists, chosen through convenience sampling, visiting in the District of Leiria (Portugal) and the Region of Extremadura (Spain), over the age of 18, who usually spend their holidays in sun-and-sand destinations. The fieldwork was carried out during 2010, through a self-administered personal survey.

By nationality, 54% were Portuguese, and 46% Spanish. By gender, 57% of the sample were women and 43% men. By age, 21% of the sample were from 18 to 25 years old, 31% from 26 to 35, 27% from 36 to 45, 16% from 46 to 55, and 5% were over 55. By educational level, the sample was distributed into higher education (45%), secondary education (37%), and primary education (18%). By monthly household net income, 20% had an income of less than €1000/month, 42% from €1001 to €2000/month, 19% from €2001 to €3000/month, and 16% above €3000/month.

13.4 Results

Overall, the results of the study showed the level of awareness of the Blue Flag to be very high among these Spanish and Portuguese tourists. Specifically, 84% of respondents stated they knew about the Blue Flag and understood what it means, only 9% said they had heard of it but did not know what it means, and the remaining 7% did not even know about it. By nationality, the Portuguese respondents had the higher level of awareness. Pearson's chi-squared test confirmed that these differences were statistically significant. This difference may reflect the geographical situation of the two nationalities in the sample: in Portugal, the sample was obtained in a coastal region, while in Spain it was obtained in an inland region (Fig. 13.1).

The respondents were presented with nine tourism destinations, and were asked to list them according to their preferences from 1 to 9. The scores provide an insight into the relative importance of the various attributes that describe the tourism destination and the utility of each level of the attributes. As expected, the results confirmed that the ideal sun-and-sand destination can be defined as one that has a Blue Flag, that ensures the good quality of its bathing water and its beach, that is not massified, that has an offer of recreational and leisure activities, and where tourists do not have to pay a Green Tax. But the analysis also allowed us to determine the

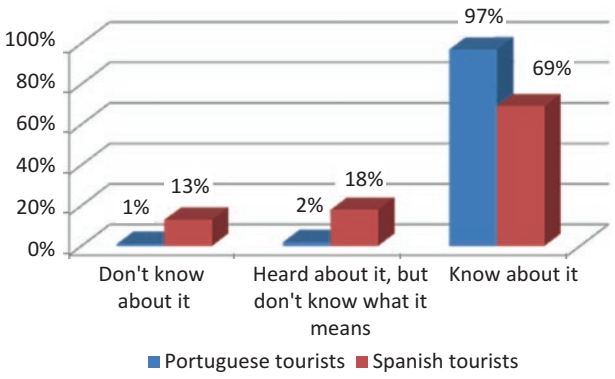

Fig. 13.1 Level of awareness of the Blue Flag

Table 13.4 Estimated utilities and relative importance of the attributes

Attribute	Level	Utility	Importance
Quality of the beach	Low	−2.5385	46.42%
	Good	0.9642	
	Blue Flag	1.5743	
Massification	Not massified	0.7957	25.12%
	Moderately massified	0.3423	
	Very massified	−1.1380	
Activities available	A lot	0.5922	16.78%
	Some	−0.0956	
	Few	−0.4965	
Environmental tax	No tax	−0.1062	11.68%
	5%	−0.2125	
	10%	−0.3187	
Constant		5.2125	

Kendall's tau and Pearson's R coefficients with significance <0.001

Table 13.5 Estimated utilities and relative importance by nationality

		Portugal		Spain	
Attribute	Level	Utility	Importance	Utility	Importance
Quality of the beach	Low	−2.678	47.86%	−2.377	44.77%
	Good	1.001		0.922	
	Blue Flag	1.677		1.455	
Massification	Not massified	0.832	24.28%	0.754	26.09%
	Moderately massified	0.289		0.404	
	Very massified	−1.121		−1.158	
Activities available	A lot	0.573	16.54%	0.614	17.06%
	Some	−0.058		−0.139	
	Few	−0.515		−0.475	
Environmental tax	No tax	−0.049	11.32%	−0.172	12.09%
	5%	−0.099		−0.344	
	10%	−0.148		−0.516	
Constante		5.099		5.344	

Kendall's tau and Pearson's R coefficients with significance <0.001

relative importance of each attribute. As seen in Table 13.4, the "*Quality of water and beaches*" is the key attribute in the formation of the tourists' preferences, determining 46.4% of those preferences. The next in importance is "*Massification*", which contributes 25% to the formation of the tourists' preferences. The attribute "*Recreational activities and night-life*" represents almost 17%, while the "*Green Tax*" attribute is the least important in the choice of a tourism destination (11.7%).

After determining the results for the overall sample, we proceeded to segment it according to the nationality of the tourist. The relative importance and the estimated utility for each attribute level are presented in Table 13.5, which shows that there are

Table 13.6 Estimated utilities and relative importance by segment

Attribute	Level	Concerned about massification		Concerned about certified quality		Concerned about quality without willingness to pay more	
		Utility	Importance	Utility	Importance	Utility	Importance
Quality of the beach	Low	−1.362	28.20%	−2.920	52.66%	−2.327	42.43%
	Good	0.701		0.908		1.232	
	Blue Flag	0.661		2.012		1.095	
Massification	Not massified	1.732	44.54%	0.970	24.96%	−0.103	14.90%
	Moderately massified	0.723		0.284		0.264	
	Very massified	−2.455		−1.255		−0.161	
Activities available	A lot	0.517	16.97%	0.471	13.90%	0.903	23.08%
	Some	−0.062		−0.089		−0.129	
	Few	−0.455		−0.382		−0.774	
Environmental tax	No tax	0.141	10.29%	0.171	8.47%	−0.860	19.59%
	5%	0.282		0.343		−1.720	
	10%	0.424		0.514		−2.581	
Constant		4.718		4.657		6.720	

Kendall's tau and Pearson's R coefficients with significance <0.001

no differences in the order of the attributes either according to their relative importance or according to the order of the estimated utilities of the different levels.

We next sought to identify groups of tourists who might have different preference structures. For this, we performed a Cluster Analysis using the k-means algorithm, with the data being each respondent's estimated utilities. From an analysis of the dendrogram, we considered it appropriate to use k = 3, thus determining three clearly distinct segments (Table 13.6).

Tourists in Segment 1 (14% of the sample) are characterized by attributing greater utility to those tourism destinations with "*good quality of water and beaches*", but without requiring the beaches to have been awarded a Blue Flag. They prefer destinations "*not massified*", with "*a lot of recreational activities and night-life*", and they do not mind paying an additional 10% onto the cost of their daily accommodation in the concept of a Green Tax. With respect to the relative importances, "*Massification*" is the key attribute in their choice of destination (44.5% of the preference structure). It is followed by "*Quality of water and beaches*" (28.2%), "*Recreational activities and night-life*" (17%), and "*Green Tax*" (10.3%). One can categorize this segment as tourists "*Concerned about massification*".

Tourists in Segment 2 (60% of the sample) preferred destinations with "*Blue Flag certification of good quality*", "*not massified*", with "*a lot of recreational activities and night-life*", and without it concerning them if they have to pay a 10% Green Tax. So this segment differs from the previous one in the value they attach to

the Blue Flag as a way to ensure the environmental quality of the zone. With respect to the relative importances, the "*Quality of water and beaches*" is the key attribute in their choice of destination (52.7%). It is followed by "*Massification*" (25%), "*Recreational activities and night-life*" (14%), and "*Green Tax*" (8.5%). One can categorize this segment as tourists "*Concerned about certified quality*".

Finally, tourists in Segment 3 (26% of the sample) preferred destinations with "*good quality of water and beaches*", "*moderately massified*", and with "*a lot of recreational activities*", and they are unwilling to pay an additional Green Tax. With respect to the relative importances, the "*Quality of water and beaches*" is the key attribute in their choice of destination (42.4%). It is followed by "*Recreational activities and night-life*" (23.1%), "*Green Tax*" (19.6%), and "*Massification*" (15%). One can categorize this segment as tourists "*Concerned about quality without willingness to pay more*".

With respect to the profile of the tourists in each segment, gender does not influence the preferences for tourism destinations, but age, household income level, educational level, and the presence of under-age children do (Table 13.7).

Segment "*Concerned about quality without willingness to pay more"* is clearly differentiated from the other two segments because it includes a greater percentage of young people, of non-university educated tourists, and of families with older children (older than 14). This is perhaps the reason they are looking for a certain degree of massification. In contrast, Segment "*Concerned about certified quality*" differs from segment "*Concerned about massification*" in that it includes a greater proportion of families with small children.

To complete the results of the above analysis, we also asked respondents about their willingness to pay a premium to stay in a tourism establishment located near a Blue Flag beach. While 48% of the sample would be willing to do so, for most (60%) of this group the premium should not exceed 5% of the price per night of the accommodation (Fig. 13.2).

We used Pearson's chi-squared test to analyse the relationships between various sociodemographic variables of the tourist (gender, age, marital status, young children, teenagers, education and income) and the willingness to pay. The only significant variables were academic and household income, whereas there was no statistically significant relationship of the willingness to pay with gender, age, marital status, the number of young children, or the number of teenage children. Tourists with higher levels of education are more predisposed to pay a premium for the Blue Flag. And this predisposition to pay also increases as household income increases.

13.5 Conclusions and Practical Implications

Our results constitute support for the following conclusions:

- The quality of the sea water and beaches is the key attribute when choosing a tourism destination.

Table 13.7 Segment profiles

	Concerned about massification	Concerned about certified quality	Concerned about quality without willingness to pay more
Gender			
Female	53.4%	56.4%	58.5%
Male	46.6%	43.6%	41.5%
Age**			
≤ 25	18.6%	18.4%	28.6%
26–35	31.4%	31.4%	30.9%
36–45	30.5%	29.1%	18.9%
45–55	11.0%	16.5%	16.6%
> 55	8.5%	4.5%	5.1%
Household income**			
≤1000€/month	17.2%	17.7%	27.9%
1001–2000€/ month	42.2%	43.8%	43.7%
2001–3000€/ month	17.2%	21.4%	16.7%
>3000€/month	23.3%	17.1%	11.6%
Children 0–14 years**			
Yes	28.8%	38.0%	29.5%
Not	71.2%	62.0%	70.5%
Children >14 years*			
Yes	33.9%	27.9%	41.5%
Not	66.1%	72.1%	58.5%
Educational level**			
Elementary education	8.5%	7.0%	7.4%
Secondary school	33.1%	34.1%	46.8%
University	46.6%	47.9%	38.4%
Ph.D	11.9%	11.0%	7.4%

* Sig. < 0.01; **Sig. < 0.05.

- The possession of a Blue Flag gives additional value to the tourism destination for the tourists concerned about environmental quality when choosing the place for their holiday.
- The existence of a Green Tax is of little relevance in the choice of holiday destination compared to other attributes such as massification and the recreational activities and night-life offer.
- Tourists, on the whole, prefer destinations where they do not have to bear the payment of an additional tax, even though it is earmarked entirely for the conservation of the natural environment of the zone in which they spend their summer holiday.

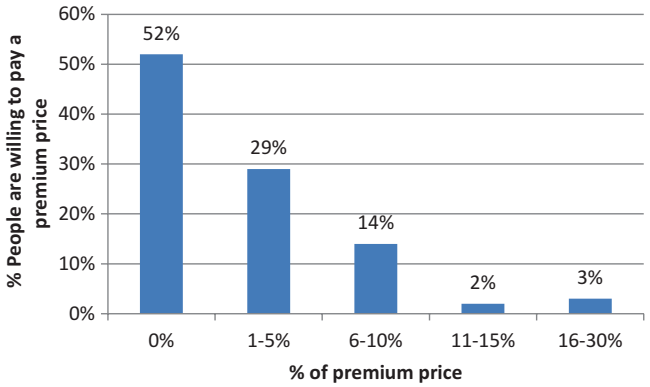

Fig. 13.2 Willingness to pay for accommodation on a Blue Flag beach

These results are similar to those obtained by other researchers in similar studies. For example, Rahemtulla (1998) found that the "Quality of the water and marine life" was the most important attribute in the choice of the Seychelles as a tourism destination, followed by the variety of wildlife, the development and massification of the beaches, and lastly of the prices. The author concluded that environmental quality contributes significantly to the choice of the tourism destination, and that tourists generally confer greater utility to beaches which are less developed and congested.

Huybers and Bennett (2000) also concluded that UK holidaymakers attribute greater utility and more willingness to pay for those destinations where the natural environment is presented as more unexplored and less massified. Huybers (2003) reports similar results with a sample of Australian tourists.

However, the studies of Brau et al. (2009) and Figini et al. (2009) for Rimini (Italy) describe results that differ partially. In those studies, tourists attached more importance to "Night-life activities", followed by the "Characteristics of the beach", while giving less importance to "Massification" and "Environmental impact".

With regard to the nationality of the tourists, our finding is similar to those of similar studies. In a study of the preferences of British, German, French, Italian, and Spanish tourists visiting the island of Tenerife, Ramos et al. (2004) finds that the nationality variable does not affect the tourists' preference levels. Neither do Mercado and Lassoie (2002) find any statistically significant differences in the importance attached to the quality of the water and the cleanness of the beaches according to the continent of origin (Europe, South America, and North America) of visitors to Punta Cana.

In relation to the segments of tourists here identified, the results highlight the existence of a large group of tourists that prefer destinations with "Blue Flag certification of good quality". This group is even willing to pay a Green Tax in order to visit a destination with this quality label.

Finally, with regard to the willingness to pay a higher price, tourists with higher levels of education are more predisposed to pay a premium for the Blue Flag. This

result is consistent with previous studies. For example, Brau et al. (2009) find that tourists with a higher educational level are more concerned about the environment. This predisposition to pay also increases as household income increases. This is also consistent with the results of previous studies on environmentally friendly products and support for environmental causes (e.g., Daniere and Takahashi, 1999; Roberts, 1996; Yan, 2008).

Regarding practical implications, it can be assumed that the environmental impacts generated by tourism can adversely affect the competitive position of tourism destinations and the quality of life of their residents, not only through the reduction in the quality of their tourism inputs, but also through a potential fall in demand as a consequence of the emergence of segments of "*environmentally sensitive*" tourists. It is therefore important to understand how tourists' environmental concerns influence their choice of holiday destinations, as well as their decisions once they are there.

The Blue Flag can be considered as a good tool to manage the balance between the respect for the natural environment and the enjoyment of tourists and residents of a sun-and-sand tourist destination. It also can be considered as a good practice guide to assess the social or community QOL, i.e. the life conditions of a tourist destination. A review of the criteria required to obtain the Blue Flag reveals that obtaining this certification guarantees an improvement of the quality of life of tourists and residents. It serves to enhance and control the quality of bathing water and the conservation of natural environments, but it also serves to improve some indicators such as cleanliness, public safety, traffic noise, public transport services, urban accessibility, etc.

However, do tourists know and value the effort that must be made in order to obtain The Blue Flag? And, therefore, is it a useful tool for the public management of the quality of life of a tourist destination? The objective of this study was to evaluate the effect that the award of a Blue Flag has on the attractiveness of a tourism destination. Overall, the results have shown that Blue Flag certification is indeed of interest for managers of sun-and-sand destinations in that, a priori, it helps attract tourists and maintain the quality of life of the residents.

A first step needed for a system of environmental labelling to be of real value is for it to be clearly recognized by its target public. According to the present survey data, the Blue Flag system of certifying beach destinations has already attained this status.

A second step is to get the certification or label to be taken into account positively in the tourist's process of selecting a product. The present results are quite encouraging in this sense to the extent that a large segment of the tourists (60% of the sample) had a preference for destinations whose quality is guaranteed with a Blue Flag.

In addition, a system such as the Blue Flag will have a greater market value if the tourist is willing to choose a certified tourism destination even though they have to bear higher costs of accommodation. If the percentage of such a premium over the base cost of accommodation is fairly small, i.e., a surcharge of about 5%, then the results of the study are also positive.

One can therefore conclude that the Blue Flag is a good management tool for tourism destinations, and can be of clear interest for managers with which to help maintain or improve the attractiveness of their destination and the quality of life. A Blue Flag award can be used both by managers of the territory and by tourism firms as an instrument of communication in that, for potential visitors, it is a guarantee of quality and security, and differentiates the destination both from others that are nearby and from more distant competitors.

As the main limitation of this study it should be pointed out that the technique of Conjoint Analysis consists of a simplification of the decision-making process and therefore, it is possible that, for some tourists, other attributes of the tourist destination that have not been included in this research could be important. In addition, the environmental awareness of individuals varies considerably from one context to another. Because of that, the results cannot be extrapolated to tourists from other countries or to other types of tourist destinations. In this sense, a future line of research could be to carry out a similar study in countries where the actual implementation of the Blue Flag is smaller than in Spain and Portugal. It would be also relevant to conduct a similar study aimed at residents of a tourist destination.

Acknowledgments This research has been co-financed by the Extremadura Government and FEDER fund (European Regional Development Fund) (Code: GR15007).

References

Adamowicz, W., Louviere, J., & Williams, M. (1994). Combining revealed and stated preference methods for valuing environmental amenities. *Journal of Environmental Economics and Management, 26*, 271–292.

Andereck, K. L., & Nyaupane, G. P. (2011). Exploring the nature of tourism and quality of life perceptions among residents. *Journal of Travel Research, 50*, 248–260.

Anderson, L., Mastrangelo, C., Chase, L., Kestenbaum, D., & Kolodinsky, J. (2013). Eco-labeling motorcoach operators in the North American travel tour industry: Analyzing the role of tour operators. *Journal of Sustainable Tourism, 1*, 750–764.

Apostolakis, A., & Jaffry, S. (2005). A choice modelling application for Greek heritage attractions. *Journal of Travel Research, 43*, 309–318.

Baarsma, E. B. (2003). The valuation of the Ijmeer nature reserve using conjoint analysis. *Environment and Resource Economics, 25*, 343–356.

Brau, R., Scorcu, A., & Vici, L. (2009). Assessing visitor satisfaction with tourism rejuvenation policies: The case of Rimini, Italy. *Journal of Environmental Planning and Management, 52*, 25–42.

Capacci, S., Scorcu, A. E., & Vici, L. (2015). Seaside tourism and eco-labels: The economic impact of Blue Flags. *Tourism Management, 47*, 88–96.

Diener, E., & Suh, E. (1997). Measuring quality of life: Economic, social, and subjective indicators. *Social Indicators Research, 40*, 189–216.

Daniere, A. G., & Takahashi, L. M. (1999). Environmental behaviour in Bangkok, Thailand: A portrait of attitudes, values and behaviour. *Economic Development and Cultural Change, 47*, 525–557.

Dodge, R., Daly, A., Huyton, J., & Sanders, L. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing, 2*, 222–235.

Dolnicar, S., Yanamandram, V., & Cliff, K. (2012). The contribution of vacations to quality of life. *Annals of Tourism Research, 39*, 59–83.

Epley, D., & Menon, M. (2008). A method of assembling cross-sectional indicators into community quality of life. *Social Indicators Research, 88*, 281–296.

Fairweather, J., Maslin, C., & Simmons, D. (2005). Environmental values and response to ecolabels among international visitors to New Zealand. *Journal of Sustainable Tourism, 13*, 82–98.

Felce, D., & Perry, J. (1995). Quality of life: Its definition and measurement. *Developmental Disabilities, 16*, 51–74.

Figini, P., & Vici, L. (2012). Off-season tourists and the cultural offer of a mass-tourism destination: The case of Rimini. *Tourism Management, 33*, 825–839.

Figini, P., Castellani, M., & Vici, L. (2009). Estimating tourism effects on residents: A choice modelling approach to the case of Rimini. In Á. Matias, P. Nijkamp, & M. Sarmento (Eds.), *Advances in tourism economics* (pp. 145–164). Heidelberg: Physica-Verlag.

Hajduová, Z., Andrejovský, P., & Beslerová, S. (2014). Development of quality of life economic indicators with regard to the environment. *Procedia – Social and Behavioral Sciences, 110*, 747–754.

Hanley, N., Wright, R., & Koop, G. (2002). Modelling recreation demand using choice experiments: Climbing in Scotland. *Environmental and Resource Economics, 22*, 449–466.

Huybers, T. (2003). Domestic tourism destination choices: A choice modelling analysis. *International Journal of Tourism Research, 5*, 445–459.

Huybers, T., & Bennett, J. (2000). Impact of the environment on holiday destination choices of prospective UK tourist: Implications for tropical North Queensland. *Tourism Economics, 6*, 21–46.

Kelly, J., Haider, W., Williams, P. W., & Englund, K. (2007). Stated preferences of tourists for eco-efficient destination planning options. *Journal of Tourism Management, 28*(2), 377–390.

Kim, K., Uysal, M., & Sirgy, M. J. (2013). How does tourism in a community impact the quality of life of community residents? *Tourism Management, 36*, 527–540.

Klenosky, D. (2004). *The impact of negative environmental factors on recreation choice behavior*. In Proceedings of the 2004 Northeastern Recreation Research Symposium, pp. 272–280.

Lazim, M. A., & Osman, M. T. A. (2009). A new Malaysian quality of life index based on fuzzy sets and hierarchical needs. *Social Indicators Research, 94*, 499–508.

Lucrezi, S., Saayman, M., & Van der Merwe, P. (2015). Managing beaches and beachgoers: Lessons from and for the Blue Flag award. *Tourism Management, 48*, 211–230.

Malkina-Pykh, I. G., & Pykh, Y. A. (2008). Quality-of-life indicators at different scales: Theoretical background. *Ecological Indicators, 8*, 854–862.

McKenna, J., Williams, A. T., & Cooper, J. A. G. (2011). Blue Flag or Red Herring: Do beach awards encourage the public to visit beaches? *Tourism Management, 32*, 576–588.

Mercado, L., & Lassoie, J. P. (2002). Assessing tourists' preferences for recreational and environmental management programs central to the sustainable development of a tourism area in the Dominican Republic. *Environment, Development and Sustainability, 4*, 253–278.

Mir-Gual, M., Pons, G. X., Martín-Prieto, J. A., & Rodríguez-Perea, A. (2015). A critical view of the Blue Flag beaches in Spain using environmental variables. *Ocean and Coastal Management, 105*, 106–115.

Needham, M. D., & Szuster, B. W. (2011). Situational influences on normative evaluations of coastal tourism and recreation management strategies in Hawai'i. *Tourism Management, 32*, 732–740.

Ortega, J. M., & Recio, M. M. (2006). *Análisis de los Patrones de Elección entre Ofertas de Turismo Rural como Estrategia de Segmentación* [Analysis of choice patterns among rural tourism offers as a strategy for segmentation]. Unpublished manuscript University of Almería, Department of Business Management, pp. 1255–1269.

Palomar-Lever, J. (2000). The development of an instrument to measure quality of life in Mexico City. *Social Indicators Research, 50*, 187–208.

Picón, E., & Varela, J. (2000). Segmenting markets with conjoint analysis: An application to tourism sector. *Psicothema, 12*, 453–458.

Rahemtulla, Y. G. (1998). *Environmental quality and tourism development in the Seychelles: An application of the stated preference Method*. Unpublished master dissertation. University of Alberta, Agricultural Economics Department of Rural Economy.

Rahman, T., Mittelhammer, R. C., & Wandschneider, P. R. (2011). Measuring quality of life across countries: A multiple indicators and multiple causes approach. *The Journal of Socio-Economics, 40*, 43–52.

Ramos, C., Ramos, A., & Ramos, R. (2004). Análisis de las Preferencias del Turista hacia un Destino Turístico Maduro [Analysis of tourist preferences toward a mature tourist destination]. *Investigaciones Europeas de Dirección y Economía de la Empresa, 10*, 131–139.

Reig, G. C., & Coenders, G. (2002). Segmentación del Mercado Turístico Según las Preferencias Ambientales [Tourism market segmentation according to environmental preferences]. *Cuadernos de Turismo, 9*, 109–121.

Reiser, A., & Simmons, D. (2005). A quasi-experimental method for testing the effectiveness of ecolabel promotion. *Journal of Sustainable Tourism, 13*, 590–616.

Riera, A. (2000). Modelos de Elección Discreta y Coste del Viaje: Los Espacios Naturales Protegidos en Mallorca [Discrete choice models and cost of travel: The protected natural areas in Mallorca]. *Revista de Economía Aplicada, 8*, 181–201.

Rigall-i-Torrent, R., Fluvià, M., Ballester, R., Saló, S., Ariza, E., & Espinet, J. M. (2011). The effects of beach characteristics and location with respect to hotel prices. *Tourism Management, 32*, 1150–1158.

Riganti, P. (2008). Assessing the impacts of cultural tourism on small and medium sized european cities: A valuation framework for the city of Syracuse. *International Journal Services Technology and Management, 10*(1), 61–82.

Roberts, J. A. (1996). Green consumers in the 1990s: Profile and implications for advertising. *Journal of Business Research, 36*, 217–231.

Sasidharana, V., Sirakayab, E., & Kerstettera, D. (2002). Developing countries and tourism ecolabels. *Tourism Management, 23*, 161–174.

Shoji, Y., & Yamaki, K. (2004). Visitor perceptions of the inscription on the world heritage list: The use of stated choice methods. *Working Papers of the Finnish Forest Research Institute, 2*, 305–310.

Varela, J. M., Picón, E. P., & Braña, T. T. (2004). Segmentation of the Spanish domestic tourism market. *Psicothema, 16*, 76–83.

World Health Organization. (1997). *WHOQOL measuring quality of life*. Geneva: World Health Organisation.

Yan, J. (2008). *Cultural and attitudinal influences on destination choice: Preferences of Chinese domestic tourists*. Unpublished doctoral dissertation, Faculty of Agricultural Sciences, Georg-August-University Göttingen, Germany.