

# *Perceptions of the environmental impacts of tourism: a comparative study of the attitudes of German, Russian and Turkish tourists in Kemer, Antalya*

*Sultan (Külçür) Baysan*

Social Science Department, Adnan Menderes University, Turkey

---

## **Abstract**

This paper investigates perceptions of the environmental impacts of tourism in an area of mass tourism, Kemer, Antalya, in Turkey. The perceptions and behaviour of sun- and sea-seeking tourists of three different nationalities are evaluated: German, Russian and Turkish. Their willingness to pay and attitudes towards the bodies responsible for protecting the environment are also assessed. The research uses a questionnaire which was translated into three languages (German, Russian and Turkish) and was applied to a total of 460 tourists. The results confirmed that differences in 'environmental awareness' were more strongly associated with differences in nationality, than with educational levels and occupations. Above all, German tourists were more 'environmentally aware' than Russian and Turkish tourists. There were also national differences in tourists' 'willingness to pay' for environmental measures. The results pose important issues for tourism policy in respect of market segmentation and environmental outcomes.

**Keywords:** nationalities, tourist perceptions, environment, Turkey

## **Introduction**

Tourism development induces both positive and negative environmental consequences while, over time, the increasing number of tourists magnifies the pressures on and can lead to severe negative impacts on the

---

environment (Wolfe 1983). Negative environmental impacts have been reported by Cohen (1978), Pigram (1980), Mathieson and Wall (1982), Cater and Goodall (1992), Jenner and Smith (1992), Boers and Bosch (1994), Cater (1995), Croall (1995) and Wheeler (1991, 1995), amongst others. The focus of such studies has mainly been on physical impacts, such as the deterioration of natural resources, the causes and incidence of various kinds of pollution, drinking water shortages, overcrowding and the production of litter. The positive impacts reported include the enhancement of public places, the protection and upgrading of valued places such as national parks and historical sites, and improvements in infrastructure and telecommunication facilities (see Külçür 1997 for a fuller review).

As tourist practices become more widespread, there tend to be marked changes in the environment (Husbands and Harrison 1996); the capacity to absorb large numbers of people will be challenged (WTO 1990) and environmental problems tend to increase. Therefore, there will be a greater need to regulate tourism and the environment, not only to preserve the environment for future generations (WCED 1987), but also in the interests of tourism businesses and the quality of life of local residents.

There have been a number of case studies of tourism impacts. New destinations and small islands have attracted particular attention; for example Ioannides (1995), Pattullo (1996), Long and Wall (1996) have worked on island regions from Cyprus to the Caribbean to Indonesia. However, there have been relatively few studies of the Mediterranean and other mass tourism areas (Cooper and Ozdil 1992; Klemm 1992). Most studies adopt a general perspective and lack detailed research on the specific characteristics of environmental impacts in these localities. For example, Cooper and Ozdil (1992) discussed the environmental impact of tourism in Turkey, giving examples from Antalya, Patara and Pamukkale, all of which have been exposed to the impacts of mass tourism. However, the study was very generalized and did not address the specific implications of the industry in a particular area.

The sustainable tourism literature mostly assumes uniformity in particular tourism market segments but, in reality, these are highly segmented. One of the main influences on tourist values and behaviour is nationality, but researchers have largely neglected this issue in respect of the debate on sustainability. This paper evaluates the profiles of three national groups of tourists – Russians, Germans and Turks – and investigates differences in their perceptions of the environmental impacts of the industry. The Russians are of particular interest because there has been a major increase in the number coming to Turkey as tourists in the 1990s (Table 1) and there have been very few studies of this ‘new’ but significant group of international tourists.

Despite the remarkable growth in the number of Russian tourists, Germans constitute the largest group of foreign tourists in many tourist resorts in Turkey, as in many other international destinations. The third

**Table 1** Market shares of three nationalities of tourists in the Kemer region, 1992–6 (%)

	1992	1993	1994	1995	1996
German	45.4	30.2	27.5	29.6	37.6
Turkish	19.6	38.6	34.3	24.3	29.1
Russian	0.1	0.2	8.0	11.0	8.8
Total (%)	65.1	69.0	69.8	64.9	75.5
Absolute total	329,039	293,925	276,688	585,995	671,495

Source: Directorate of Kemer Tourism Information, Tourism Inventories.

group, the Turks, were chosen not only to provide a comparison of the perceptions of outbound and domestic tourists, but also because there have been few studies of Turks as domestic tourists in the tourism literature in either English or Turkish.

Although the focus of this paper is on nationality, it does not claim that this defines the complete range of behaviour in respect of the environment. Educational level, gender, age, occupation and life styles play roles, alongside nationality (Dann 1993; Pizam and Sussmann 1995). Bearing in mind its limitations (Dann 1993), nationality – taken together with other socio-economic and cultural variables – does help explain variations in tourist behaviour and why, within any one destination, tourists may display contrasting behaviour patterns. This paper contends that nationality does play an important role in explaining behaviour and perceptions, as well as education, where 'the level of environmental knowledge is consistently and positively related to environmental activities' (Uysal *et al.* 1994).

### Research area and methodology

The research was undertaken in the municipality of central Kemer (8,450 population in 1990), in Antalya in Turkey. Tourists were asked about the region, which is situated along the Mediterranean coastline, surrounded by the Olimpos-Beydaglari National Park, and is included in the South Antalya Tourism Development Project (Figure 1). Kemer is a mass tourism area with its sun and sea, nature and quality accommodation products. It also offers more recently promoted alternative types of tourism, such as trekking, hiking, golfing and plateau tourism, and is popular amongst both foreign and domestic tourists (Ministry of Tourism n.d.).

The attractions of the area are its Mediterranean climate, outstanding topography and vegetation, as well as its historical assets. Almost one quarter of the total number of tourists who arrive in Antalya stay in the

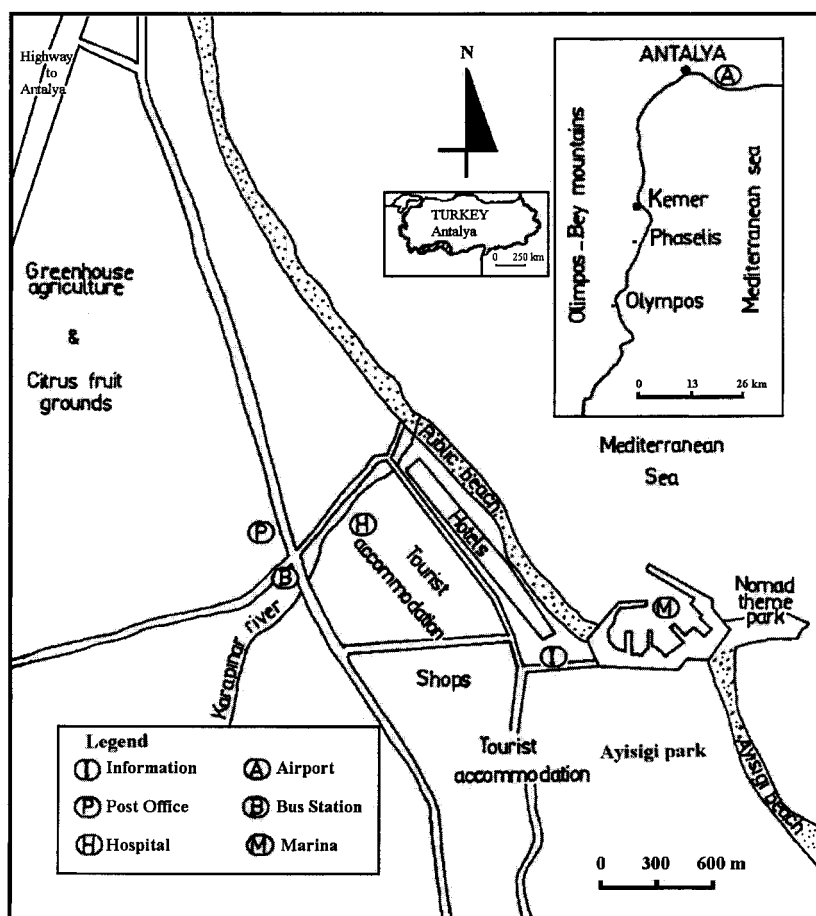


Figure 1 Location of Kemer, Antalya (adapted from A to Z Kemer, supplement to the *Turkish Daily News* in Kemer, July 1999, p. 2).

Kemer region. The region of Antalya itself, with a population of 23,269 in 1990, attracts around 600,000 visitors per year. It has experienced an increase of 104.1 percent in the number of arrivals over the period of 1992–6, and has almost 30 percent of Antalya province's Ministry-licensed bed capacity (over 30,000 places).

In the absence of reliable and appropriate secondary data, questionnaire surveys were undertaken of the three different national groups of tourists. The survey was applied around swimming pools and the beach areas of accommodation establishments, where these existed. There are two beaches in central Kemer. One of these is in front of the hotels, extending from the Karapinar river to the marina (Figure 1). The northern

beach is separated from the Ayisigi beach by the marina and is commonly used by the guests of five- to three-star hotels. This is largely determined by the location of two five-star hotels in proximity to the beach. Three five or four-star hotels, six three-star hotels, four holiday villages and ten *pansiyons* (Bed and Breakfast-type accommodation) gave permission for the application of the survey. Unfortunately, none of the two- and one-star hotels agreed to participate in the survey and, therefore, their guests had to complete the survey on the beach.

The survey excluded day visitors and those staying on yachts. Instead, the target population were tourists, aged over 15, who stayed for at least two nights and who had chosen the 'sun and sea product'. Special interest tourists and all nationalities other than the three target groups were excluded from the investigation. All those sunbathing around the swimming pool or on the beach were asked to fill in the questionnaire, if they belonged to the target population. Consideration was given to only one person in a group or family. The survey was carried out on 22 July and 5 August 1996, which represents the peak season in the area. The off-peak season was not considered because of time and financial constraints. The survey was undertaken on every day of the week between 9.30 and 12.00 a.m. and 2.00 to 4.00 p.m., depending on the daily temperature and the sunbathing behaviour of tourists. This ensured the inclusion of 'early morning' visitors who sought to escape the crowd and high temperatures as well as the majority of 'sunbathers' who emerged later in the day.

The questionnaire included 3 Likert scale, 1 dichotomous, 2 open-ended and 19 multiple choice questions. A five-point scale ranging from 'Strongly Agree'(5) to 'Strongly Disagree'(1) and a four-point scale from 'Very willing'(4) to 'Not at all'(1) was used. The questionnaire was divided into three parts beginning with general questions concerning nationality, the current and total length of stay and holiday motivation, and then explored specific areas. The issues raised in respect of perceptions were: how tourism affected the environment; what effects, if any, stem from tourism activities; whether the tourists are willing to pay for the protection and maintenance of the environment (Wheeradet 1994; Croall 1995); and whether nationality plays an important role in differentiating the impacts of tourism on the environment. Questions were also asked about activities, such as the type of sun protection products used by the tourists and the type of local transport used. Moreover, perceptual questions were asked to find out if there was awareness of and complaints about the negative impacts of the tourism industry (Figure 2). These issues were raised because they are related to some of the main problems arising in many resort areas in Turkey, while only a few studies have reflected these concerns: Morrison and Selman (1991), Cooper and Ozdil (1992) and Korça (1994).

The different nationalities are compared in respect of their use of the environment, and their perceptions of the environmental issues generated

by the tourism industry. Comparative analysis between the three nationalities utilizes Chi-square tests of the existence of significant associations. This leads to the creation of a composite environmental awareness index which permits comparison of the different nationalities. Further details of the research approach, methods and results are presented in Külçür (1997).

### **Background characteristics: national differences**

The analysis is based on a sample of 460 tourists from three nationalities and the survey secured a 94 percent response rate: 166 are Turkish (36.1%), 150 are Russian (32.6%) and 144 are German tourists (31.3%). We begin by considering some of the basic features of the respondents. First, with respect to nationality, the Chi-square test revealed significant associations with the variables of age, education level, accommodation type, group size, total length of stay, holiday motivation, seasonal preference and type of travel organization (Table 2).

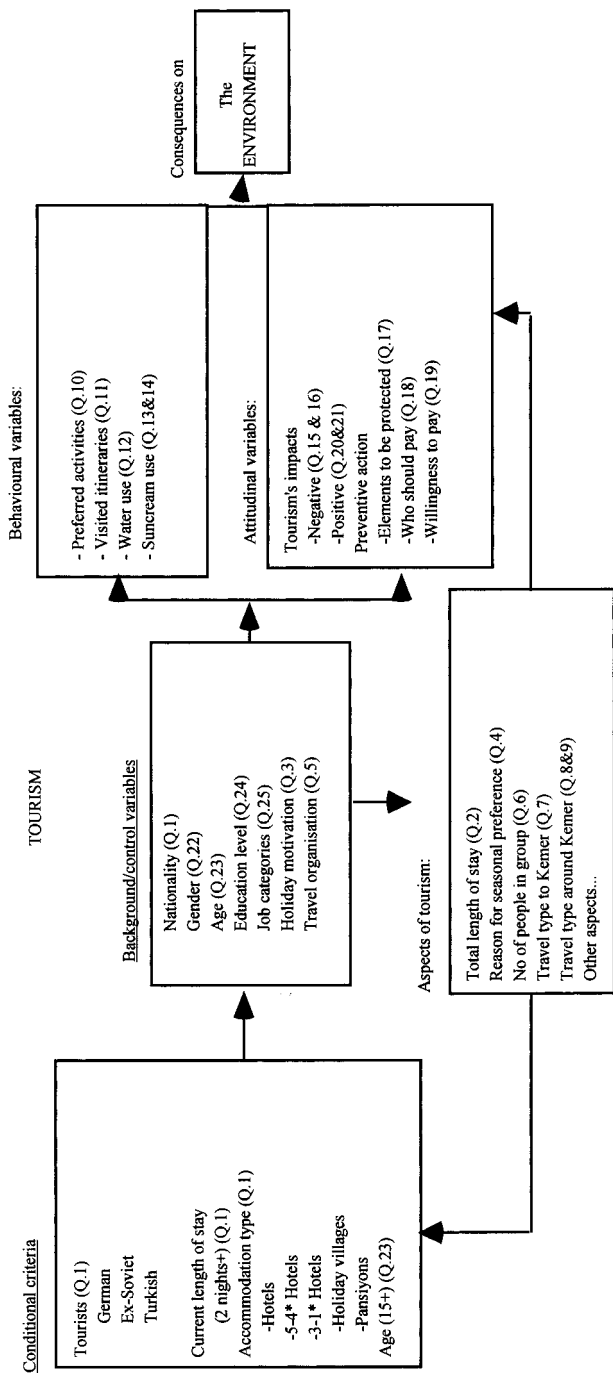
The gender distribution is skewed towards men (58.3% Turkish, 53.5% German) apart from the Russian group where 58 percent were women. The proportion of Russians in the 15–24 age group was less than for Turkish and German tourists (14.7% against 26.7% and 23.8%). The distribution was more even between the ages of 15 and 44 amongst the Turkish and German tourists than the Russians (Table 3). The reason why the Russians were slightly older, compared particularly to the Germans, is probably related to the greater economic independence of the older age groups, because foreign travel is still considered to be more expensive and more 'risky' owing to cultural, social and political differences.

Turning to education, only just over 2 percent of Germans had university degrees, whereas almost 70 percent of Russians, and almost half the

**Table 2** Chi-square associations between background characteristics and nationality

<i>Nationality* by</i>	<i>Value</i>	<i>Degrees of freedom</i>	<i>Significance</i>
Gender	(-)	(-)	x
Age	28.10	8	0.0005
Educational level	159.45	6	0.0000
Accommodation type	47.83	6	0.0000
Group size	38.44	8	0.0000
Total length of stay	37.54	4	0.0000
Holiday motivation	54.44	4	0.0000
Reason for season	14.08	2	0.0009
Travel organization	145.48	2	0.0000

Note: nationality\* indicates German, Russian and Turkish tourists.



Note. (Q.) indicates the question number in the survey.

Figure 2 Conceptual framework: tourist perceptions.

**Table 3** Age distribution by nationality (%)

<i>Age groups</i>	<i>Turkish</i>	<i>German</i>	<i>Russian</i>
15-24	26.7	23.8	14.7
25-34	43.6	26.6	46.0
35-44	23.6	36.4	34.0
45-54	5.5	9.1	2.7
55-64	0.6	4.1	2.6
Total number	165	143	150

Note: 65+ was omitted due to not having any respondents in this group.

Turkish tourists had this level of education. As will be seen later, although Germans had a lower level of formal education compared to the other two nationalities, they seem to be more aware of the environmental consequences of the industry. The reason probably lies in the value attached to, and practices relating to, environmental issues in Germany, where there also tends to be stricter implementation of environmental laws and greater media attention for these issues. However, it also has to be recognized that the German tourist may have been responding in a more 'correct' manner as a result of social and political pressures about environmental issues in Germany, and that their stated opinions may not necessarily accurately reflect their underlying beliefs.

Significance tests were undertaken to test the association between educational levels and the perceptions of tourists. A significant relationship was identified between education and nationality (value 203.39, degrees of freedom 9, level 0.00000). This opened up the possibility that the *specific* market segments from the three countries to this mass resort area may have an important bearing on behavioural and activity differences. The Germans appear to be at the relatively lower end of the market for mass tourists, as measured by formal education, while the Russians and Turkish tourists are different in contrasting ways.

There were also other differences amongst the nationalities. Germans were in smaller groups, especially compared with the Russians. Only about 5 percent of Germans and Turks were in groups of more than 9 people (4.9% each), compared to 15.3 percent for Russians. There were also differences in respect of the organization of tourism. Individual tourists were more prevalent among the Germans (31.5%) followed by the Turks (20.7%). By contrast, only 9.3 percent of Russians were independent travellers.

While most foreign tourists stayed 3 to 14 nights (83.4% of Germans and 79.4% of Russians), domestic tourists stayed fewer nights: almost 90 percent stayed between 2 and 7 nights (86.9%). Since Kemer was 'a burgeoning beach holiday resort attracting groups on package tours' (Brosnohan 1985: 36), this is largely to be attributed to the type of travel organization.



As indicated earlier, most German and Russian tourists travelled to Kemer by means of tour operators (92.6% and 90.1% respectively) and their packages were mostly for two-week stays, compared with Turks who organized their holidays independently and for more varied time periods (61.2%).

Over 80 percent of all the groups came to Kemer in the summer, because of the institutional constraints of the timing of work and school holidays (96.6% of Germans, 84.0% of Russians and 81.8% of Turks). This indicates the strongly institutionalized character of temporal polarization (Hartmann 1986) in the region, a factor which exacerbates the environmental problems stemming from overcrowding, litter, drinking water shortages and the destruction of vegetation through trampling. With this and the other background characteristics of the three national groups in mind, we now turn to their awareness and behaviour in respect of environmental issues.

### **Environmental issues: awareness and behaviour**

A series of Chi-square analyses revealed statistically significant associations between nationality and several variables relating to environmental awareness and behaviour (Figure 2 and Table 4). We first examine the use of transport at the destination, one of the key areas of tourist behaviour. Whilst 94 percent of German and 77 percent of Russian tourists used more environmentally responsible types of transportation (public transport and on foot), over 60 percent of Turks (61.8%) used their private cars around Kemer. This is not only related to being domestic tourists, and having access to their own cars, but also to the type of travel organization, the priority given to considerations of personal 'comfort' and the lower degree of environmental concern. Among the foreign tourists, the Russians (22.7%) were more likely than the Germans (5.7%) to use private means of transport, namely Rent-a-Car services. The Turks (4.5%) and Russians (3.0%) were also more likely to use four-wheel vehicles than were the Germans (0.7%). Given the off-road capacity of these vehicles, their potentially destructive effects on the environment can be very severe. The Germans explained their transport preferences in terms of 'price' and the 'environmentally unfriendliness' of private transport (56.3% and 28.2%, respectively), while the Russians considered 'price' less (52.2%), but attached more importance to the 'comfort' factor (53.5%), as did the Turks (12.5% and 70.8%). Only 6.3 percent of Turks and 3.9 per cent of Russians stated that environmental concerns influenced their use of private transport.

There were also important national differences in the marine activities of the tourists. Almost 85 percent of Germans (84.7%) and over 70 percent of Turks (71.4%) preferred the less harmful activities such as swimming compared to motorboat sports (Hugo 1992). A smaller propor-

**Table 4** Chi-square associations between the behaviour and perceptions of tourists and nationality

<i>Nationality* by</i>	<i>Value</i>	<i>Degrees of freedom</i>	<i>Significance</i>
Travel type around Kemer	127.76	4	0.0000
Reason for type of transport	128.92	6	0.0000
Activities required	66.28	6	0.0000
Agreement on positive impacts	76.20	4	0.0000
Positive impacts of tourism	35.48	10	0.0001
Quality of holidays affected	17.63	4	0.0015
Negative impacts of tourism	74.82	18	0.0000
Environmental elements to be protected	33.53	8	0.0001
Amount of water used by tourists	43.26	4	0.0000
Type of suntan products used	49.75	2	0.0000
Willingness to pay	33.36	4	0.0000
Who should pay	23.62	6	0.0006

Note: nationality\* indicates German, Russian and Turkish tourists.

tion of Russians (60.8%) preferred swimming and this group was more inclined to participate in motorboat-based activities (20.8% against 1.5% Germans and 3.6% Turks). Therefore, in respect of the sphere of preferred activities, the Russians appeared to be the most environmentally non-responsible national group.

Turning from behaviour to perceptions, almost two-thirds of Turkish tourists (62.8%) agreed that tourism has positive environmental effects in the region, while over half the Germans (51.0%) disagreed, and only one-third (30.1%) agreed. The Russians were far more likely to answer 'unsure/don't know' (42.0%), indicating a high degree of indifference or ignorance, while only 40 percent agreed that tourism has positive effects. The uncertainty of the Russians stemmed mostly from their limited holiday experience abroad and being unable to compare the effects of the industry in different environments. However, the Germans – who mostly had long experiences of foreign tourism – seemed more critical of what they perceived to be environmental problems. The 'conservation of historical monuments' was perceived by all three groups to be the main primary positive impact of tourism (45.6% Russians, 41.4% Turks and 34.0% Germans). Following this, German tourists highlighted 'improvements in water quality' (29.0%), while Turks emphasized the 'protection of landscape' (23.4%) and the Russians stressed the somewhat ambivalent 'improvement of roads' (22.1%).

The tourists were also asked if the quality of their holiday had been affected by the environmental problems originating from the industry. Most Russian tourists agreed with this proposition (71.1%) and, while the proportion of similar responses was less amongst the Germans and Turks, they

still accounted for more than one half (56.9% of Germans and 56.1% of Turks). The group who considered that they had been least affected by environmental problems was the Turks (25.8% against 15.4% of Germans and 8.6% of Russians). While the Russians appeared to be the nationality that complained most about the negative environmental problems created by the industry, they also appeared to be one of the least environmentally responsible groups in terms of actual behaviour. The Russian group was clearly differentiated from the other two groups in the use of private transport, oil-based suntan products and participation in motorized marine sports. Interestingly, although Russians were more inclined than the other nationalities to engage in motorboat sports, they also considered these activities to constitute one of the major environmental problems of the region. This underlines the importance, not only of differentiating perceptions and behaviour, but also of studying the particularities of individual market segments. It should also be noted that, although Russians did perceive motorboat activities to be a problem, 'sea pollution' was considered to be the most important problem of the region by Turks and Germans. By contrast, the Russians were more likely to consider that 'littering' and 'overcrowding' were the major problems (Table 5).

The perceptions of the major environmental problems of the area did, of course, inform the tourists' perceived priorities for environmental measures. A higher percentage of German tourists, who participated more in swimming activities than other nationalities, considered that the 'sea and beaches' should be the primary elements to be protected (70.4% against 67.5% Russians and 60.3% Turks). Larger proportions of Turkish and German tourists considered that 'historical monuments' should be protected (20.6% and 13.6% against 8.8% of Russians), while the Russians paid more attention to the protection of the 'built-up area' (17.5% against 8.5% of Turks

**Table 5** Environmental problems in Kemer region as perceived by tourists

<i>Negative effects of tourism:</i>	<i>Turkish</i>	<i>German</i>	<i>Russian</i>
Sea pollution	45.3	25.0	13.3
Littering	13.7	34.8	21.1
Too much building construction	12.8	10.7	14.4
Destruction of vegetation	8.5	2.7	5.6
Noise	6.8	4.5	4.4
Overcrowding	5.1	0.9	21.1
Inadequate quality and quantity of water	5.1	9.8	8.9
Traffic congestion	1.7	7.1	5.6
Use of motorboats in the sea	0.9	4.5	5.6
Total number	117	112	90

Note: ranking is based on the responses of the Turkish tourists.

and 8.0% of Germans). This related to the fact that Russians were relatively more likely than other nationalities to be attracted to the region by its modern built amenities. Domestic tourists are more likely to know that the area is within the boundaries of a national park, but this seems to have had a relatively minor impact on their priorities. They were only slightly more likely to consider that the national park should be the primary object of protection (10.6% against 8.0% Germans and 6.1% Russians).

Water is usually a scarce resource in mass tourism areas in the Mediterranean (Barnett 1995). However, tourists often expect unlimited supplies as part of their tourism experience, and it is estimated that they use 'six times as much water as residents' (Pattullo 1996: 32). The survey results reveal that there were national differences in the awareness of this issue: most Germans were certain that tourists use more water than locals (71.1%). Turkish tourists, in particular, seemed uncertain compared with the other two groups (45.7% against 31.5% Russians and 18.3% Germans).

Oil-free elements are more easily broken down in sea water than are oil-based elements and they have less harmful effects on the marine environment. According to Elkington and Hailes (1992:156) a 'little oil goes a long, long way on water. If enough people wearing enough oil swim in enclosed, calm waters, they can produce an oil slick'. Therefore, attitudes to the type of suntan products used by tourists were also assessed. It was found that the type of product was either 'not important' or 'oil based' for the majority of the Russians and Turks (80.6% and 61.6%). However, the majority of Germans preferred to use oil-free types (61.6%) and, in this respect, their behaviour would seem to be more environmentally compatible.

Tourists were also asked about whether they were willing to pay for safeguarding the environment. This was related to awareness of the problems created by tourism activities and the acceptance of responsibility for these consequences. Following the approach of earlier studies, they were asked if they were willing to pay an extra 2 percent on top of their holiday costs for environmental protection (Kelletat 1993, Wheeradet 1994). Over 85 percent of Turks (85.7%), almost 80 percent of Russians (78.2%) and 70 percent of the Germans (73.5%) were willing to pay. Amongst these, while more Turks were 'very willing' to pay, a higher proportion of Russians and Germans were 'possibly' willing (63.9% and 46.4%). On this basis, foreign tourists were less willing to pay than domestic tourists. It should be noted, however, that an unusually high level of 'no' response to this question (26.4% of Germans, 21.8% Russians and only 14.3% Turks) may confuse the underlying picture.

There is, as yet, little agreement in the sustainability literature as to who are and should be the responsible bodies for the protection of the environment. Smith (1989), for example, notes the difficulty in identifying who are the responsible bodies. However, a recurrent theme in the literature is the need for co-operation between interested parties – that is

governmental organizations, tourism businesses and tourists – with the latter tending to receive less priority (Mason and Mowforth n.d.). When the respondents in this study were asked about this issue, they stressed the role of governmental organizations (the ‘government’ and ‘local municipality’): 47.5% of Russians, 43.1% of Turks and 39.0% of Germans. More foreign tourists appeared to see the ‘international tour companies’ as having a role in protecting the environment (33.8% Germans and 2.0% Russians against 16.0% Turks). Domestic tourists, on the contrary, thought that domestic businesses (‘travel agencies’ and ‘accommodation establishments’) should pay for environmental protection (29.9% against 21.2% of Russians and 11.8% Germans). German tourists generally seemed to be more aware of the problems caused by tourists (15.4% against 11.1% Turks and 9.3% Russians).

### **Environmental awareness: scaled national differences**

This section seeks to bring together the diverse array of information presented thus far on the perceptions and behaviour of tourists. The responses to a number of questions were used to construct a simple composite environmental indicator. The responses given by each nationality to a number of environmentally related issues were initially placed in a table format (Table 6) and the total score was averaged by the 12 environmental indicators. Therefore, the average scores provide a simple but powerful indicator of the level of environmental awareness amongst each nationality.

According to Table 6 and, as would be expected, none of the nationalities approach a ‘perfect’ environmental awareness score of 100 percent of expected responses. Although the three scores are relatively close, German tourists seemed more environmentally aware than the other two nationalities. However, when each element is inspected in detail, the level of environmental awareness varies. For example, Germans were found to be less ‘harmful’ given their higher level of non-participation in motor-boat sports (98.5%), while Turkish tourists were most ‘willing to pay’ (85.7%). The Russians did not hold first rank in respect of any of the constituent elements of the composite environmental index.

Figure 3 presents the scaled environmental indicators for the three national groups. This confirms that the Russians and Turks seemed to be more ‘environmentally negligent tourists’ (Krippendorff 1986) than the Germans. According to Krippendorff, these ‘negligent tourists’ escaped from everyday routine, became ‘egocentrics’ far from home and enjoyed the freedom offered by travel. However, the ‘new tourists’, arguably the Germans in this case, showed more awareness, critical consumerism and adaptability to their environments.

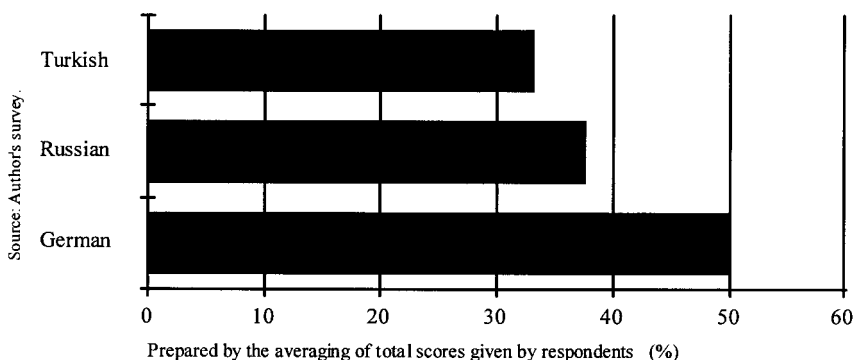
**Table 6** Environmental indicators: national differences (%)

	<i>German</i>	<i>Russian</i>	<i>Turkish</i>
Not using private/rented cars	95.0	79.7	39.6
Travel on foot	54.3	32.0	12.8
Travel by bus/minibuses	40.7	47.8	26.8
Environmentally friendly reason for transport	27.4	3.9	6.3
Not participating in motorboat sports	98.5	76.2	96.2
Perception of motorboats at sea as problem	18.5	5.9	0.9
Agreement on more use of water by tourists	71.1	56.1	34.2
Use of oil-free suntan creams	61.6	19.4	38.4
International tour companies should pay	33.6	22.0	15.8
Domestic businesses should pay	11.7	22.0	29.5
Tourist should pay	15.3	8.5	11.1
Willingness to pay	73.5	78.2	85.7
Total	601.2	451.7	397.3
Average value of environmental indicators	50.1	37.6	33.1

Note: based on percentages of responses given by each nationality to each option.

## Conclusion

Tourism markets can be segmented in many different ways, including by nationality. The preliminary analysis in this paper demonstrates that each of the three national groups of tourists had broadly similar socio-economic characteristics. Furthermore, there were relatively few significant relationships between the educational levels and occupations of the respondents and an array of environmental issues and social characteristic (interestingly their most consistent associations were with nationality). The findings of the study related to nationality have been given particular attention in this study. In spite of all its limitations, such as its 'pluriform' characteristics, the nationality variable seemed to be a more powerful influence on environmental perceptions and behaviour than either education or employment.



**Figure 3** Scale of environmental indicators: national differences (%).

While being aware of Dann's (1993) critiques on the influence of nationality and country of residence on tourism behaviour, this study has shown that there are important differences amongst the three nationalities. To some extent, these are related to differences in the priorities attached to environmental issues in national political agendas, and it is known that German tourists tend to have a greater inclination to consider environmental consequences (van Hoof 1995) and to participate in 'environmentally responsible' holidays (Croall 1995). In broad terms the results of this survey confirm that German tourists appeared to be more 'aware' of the problems caused by the industry, while Russians seemed more 'unsure/don't know' or to be more 'environmentally negligent' tourists. It should, however, be emphasized that since there may be significant cultural and material differences between these national market segments, the expressed 'awareness' may not always accurately reflect the 'real' awareness of the respondents. For example, Russians might be more likely to hire cars and to engage in motorboat sports than Germans, not because they are less 'environmentally aware' but because they are from a more educated and less 'conventional' tourist market segment. Hence, they are more adventurous, active and interested in travelling in the wider area. Germans, however, may be more likely to use oil-free suntan creams simply because they are more available in Germany than they are in Russia or Turkey. The Germans may also feel more obliged to respond to questions in a more 'politically correct' manner because there is strong related peer pressure about these issues in Germany.

Reference was made in the paper to responsible bodies and the willingness of tourists to pay for the protection of the environment. Most tourists were found to be 'possibly' willing to pay for the maintenance of the environment at the 'current level', although there were national differences. This not only reinforces the importance of national differences in tourism attitudes but also the need for critical and detailed appraisal of the market conditions for introducing sustainable tourism programmes. If the perception of tourists in each market segment and nationality is known, it is more likely that a balance can be maintained between the environment and satisfaction level of tourists. It is 'evident that the public is becoming more aware of the perceived adverse effects of tourism on the environment' (Wanhill 1997). Therefore, the pressure is increasing on tourist businesses and governmental organizations to address the need for finding a balance between the needs of the customer and the environment. This paper indicates that national market segmentation should be taken into account in devising marketing and product strategies which seek to achieve such a balance.

Finally, it is argued that, in examining the attitudes and behaviour of Russians, the paper has added to the very limited previous knowledge that exists in respect of this relatively new, but increasingly important, group of international tourists. Future research needs to be undertaken on the perceptions and behaviour, not only of the Russians and the other

nationalities included in this study, but of also of other nationalities. This is especially important where markets are changing rapidly due to the emergence of new groups, such as those from Central and Eastern Europe and also special interest tourists. There is also a need for further research to investigate the perceptions and behaviour of tourists in the off-peak season, as well as other considerations which may influence the impact of tourists on the environments of mass tourism areas.

## Acknowledgements

The author wishes to thank Professors Allan M. Williams and Gareth Shaw for their help and support in the preparation of this paper, which is based on her PhD research undertaken in the Department of Geography at the University of Exeter, UK.

## References

- Barnett, T. 1995. Editorial. *Tourism in Focus* 17(3).
- Boers, H. and Bosch, M. 1994. *The Earth as a Holiday Resort*. Utrecht: Institute for Environmental Communication and Netherlands Institute of Tourism and Transport Studies.
- Brosnahan, T. 1985. *Turkey: A Travel Survival Kit*. Australia: Lonely Planet Publications.
- Cater, E. 1995. Environmental Contradictions in Sustainable Tourism. *The Geographical Journal* 161(1): 21–8.
- Cater, E. and Goodall, B. 1992. Must tourism destroy its resource base? In *Environmental Issues in the 1990s*, ed. A.M. Mannion and S.R. Bowlby, pp. 309–23. Chichester: Wiley.
- Cohen, E. 1978. Impact of Tourism on the Physical Environment. *Annals of Tourism Research* 5(2): 215–37.
- Cooper, C.P. and Ozdil, I. 1992. From mass to ‘responsible’ tourism: the Turkish experience. *Tourism Management* 13(4): 377–86.
- Croall, J. 1995. *Preserve or Destroy: Tourism and the Environment*. London: Calouste Gulbenkian Foundation.
- Dann, G. 1993. Limitation in the use of ‘nationality’ and ‘country of residence’ variables. In *Tourism Research: Critiques and Challenges*, ed. V. Pearce and R. Butler, pp. 88–112. London: Routledge.
- Elkington, J. and Hailes, J. 1992. *Holidays that Don’t Cost the Earth*, Kent: Mackays of Chatham.
- Hartmann, R. 1986. Tourism, seasonality and social change. *Leisure Studies* 5(1): 25–33.
- Husbands, W. and Harrison, L.C. 1996. Practising responsible tourism: understanding tourism today to prepare for tomorrow. In *Practising Responsible Tourism: International Case Studies in Tourism Planning, Policy, and Development*, ed. L.C. Harrison and W. Husbands, pp. 1–15. Canada: Wiley.
- Hugo, M.L. 1992. The concept of compatibility in determining recreation carrying capacity. In *Strategies for Reducing the Environmental Impact of Tourism*, ed. W. Pillmann and S. Predl, pp. 237–50. Vienna: International Society for Environmental Protection.



- Ioannides, D. 1995. A flawed implementation of sustainable tourism: the experience of Akamas, Cyprus. *Tourism Management* 16(8): 583–92.
- Jenner, P. and Smith, C. 1992. *The Tourism Industry and the Environment*. London: Economic Intelligence Unit and Business International Ltd.
- Kelletat, D. 1993. Coastal geomorphology and tourism on the German North Sea coast. In *Tourism vs Environment: The Case for Coastal Areas*, ed. P.P. Wong, pp. 139–65. The Netherlands: Kluwer Academic Publishers.
- Klemm, M. 1992. Sustainable tourism development: Languedoc-Roussillon thirty years. *Tourism Management* 13(2): 169–80.
- Korça, P. 1994. Antalya Halkinin Turizm Gelisimine Karsi Tutumunun Degerlendirilmesi. *Turizm Yilligi*: 191–208.
- Krippendorf, J. 1986. The new tourist-turning point for leisure and travel. *Tourism Management* 7(2): 131–5.
- Külçür, S. 1997. Complementarities or Conflicts? Environmental Impacts in a Turkish Coastal Tourism Area. Unpublished PhD thesis, University of Exeter.
- Long, V. and Wall, G. 1996. Successful tourism in Nusa Lembongan, Indonesia. *Tourism Management* 17(1): 43–50.
- Mason, P. and Mowforth, M. n.d. *Codes of Conduct in Tourism*. Plymouth, UK: University of Plymouth.
- Mathieson, A. and Wall, G. 1982. *Tourism: Economic, Physical and Social Impacts*. New York: Longman.
- Ministry of Tourism. n.d. *Toros Yaylaları*. Ankara.
- Morrison, P. and Selman, P. 1991. Tourism and the environment: a case study from Turkey. *Environmentalist* 11(2): 113–29.
- Pattullo, P. 1996. *Last Resorts*. London: Cassell.
- Pigram, J.J. 1980. Environmental implications of tourism development. *Annals of Tourism Research* 7(4): 554–83.
- Pizam, A. and Sussmann, S. 1995. Does nationality affect tourist behaviour? *Annals of Tourism Research* 22(4): 901–17.
- Smith, V.L. 1989. *Hosts and Guests: The Anthropology of Tourism*. Philadelphia: University of Pennsylvania Press.
- Uysal, M., Jurovski, C., Noe, F.P. and McDonald, C.D. 1994. Environmental attitude by trip and visitor characteristics: US Virgin Islands National Park. *Tourism Management* 15(4): 284–94.
- van Hoof, H.B. 1995. Tourismus in Entwicklungsländer. *Annals of Tourism Research* 22(1): 231–3.
- Wanhill, S. 1997. Introduction-tourism development and sustainability. In *Tourism Development: Environmental and Community Issues*, ed. C. Cooper and S. Wanhill, pp. xi–xvii. Chichester: Wiley.
- WCED (World Commission on Environment and Development). 1987. *Our Common Future: The Brundlandt Report*. New York: Oxford University Press.
- Wheeller, B. 1991. Tourism's troubled times: responsible tourism is not the answer. *Tourism Management* 12(2): 91–6.
- Wheeller, B. 1995. Egotourism, sustainable tourism and the environment: a symbiotic, symbolic or shambolic relationship. In *Tourism: The State of the Art*, ed. A.V. Seaton, C.L. Jenkins, R.C. Wood, P.U.C. Dieke, I.R. Mac Ellan and R. Smith, pp. 647–54. Chichester: Wiley.
- Wheeradet, T. 1994. TAT mulls 'Polluters Pay Principle' concept: tourists may pay fee for sites they visit. *Contours* 6(7–8): 13.
- Wolfe, R.I. 1983. Recreational travel, the new migration revisited. *Ontario Geography* 19: 103–24.
- WTO. 1990. *Tourism to the Year 2000: Qualitative Aspects Affecting Global Growth*. Madrid.

## Biographical note

Sultan (Külçür) Baysan is an assistant professor in the Social Sciences Department of the Education Faculty of Adnan Menderes University, Aydın, Turkey (Adnan Menderes Üniversitesi, Eğitim Fak. 09010 Kepez, Aydın, Türkiye; email: sbaysan@edu.edu.tr)

**Résumé:** Les perceptions d'impacts environnementaux du tourisme: étude comparative des touristes Allemands, Russes et Turques à Kemer, Antalya.

Cet essai examine les perceptions d'impacts environnementaux de tourisme dans une destination de tourisme en masse, Kemer, Antalya, en Turquie. Les perceptions et le comportement de touristes Allemands, Russes et Turques chérchant soleil et mer sont évaluées. Leurs volonté de payer et leurs attitudes envers le corps responsable de la protection environnementale sont aussi évaluées. La méthode de recherche utilise un questionnaire qui a été traduit en trois langues (l'Allemand, le Russe et le Turc) et 460 touristes étaient enquêtés. Les résultats confirment que les différences en ce qui concerne 'la conscience environnementale' étaient fortement associées avec les différentes nationalités, le niveau d'éducation, et la profession des touristes. Par-dessus tout, les touristes Allemands étaient plus 'respectueux de l'environnement' que les touristes Russes et Turques. Il y avait aussi des différences de nationalités de touristes en ce qui concerne 'la volonté de payer' pour des mesures environnementaux. Les résultats posent des problèmes sérieux pour la politique du tourisme à l'égard de la ségmentation du marché et les conséquences environnementaux.

*Mots-clés:* nationalités, perceptions de touristes, environnement, la Turquie

**Zusammenfassung:** Wahrnehmungen der Umweltschläge von Tourismus: ein vergleichendes Studium des Verhaltens von deutschen, russen und türkischen Touristen in Kemer, Antalya

Dieser Artikel untersucht in einem Tourismus Zentrum (Kemer-Antalya, Türkei) die Einflüsse des Tourismus auf die Umwelt. Touristen aus drei verschiedenen Herkunftsländern, welche wegen der Sonne und dem Meer angereist sind, wurden befragt. Diese Nationalitäten sind Deutsche, Russen und Türken. Untersucht worden, ob die betreffenden Personen bereit waren für den Schutz der Umwelt einen zusätzlichen Betrag zu entrichten, desweiteren ihre Meinungen über die hiesigen Umweltorganisationen. Für diese Umfrage wurden Fragebögen in drei verschiedenen Sprachen und mit 25 Fragen ausgearbeitet. Insgesamt wurden 460 Touristen befragt. Es wurde festgestellt, daß die Deutschen Touristen im Vergleich zu den türkischen und russischen Touristen mehr 'Umweltbewusst' waren.

*Schlüsselwörter:* Nationalitäten, Wahrnehmung, Umwelt, Türkei