

# STUDY ON GREEN TOURISM CONSUMPTIONS OF CHINESE TOURIST WITH DIFFERENT ENVIRONMENT PERCEPTION

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**Keywords:** Environment perceptions, Green tourism consumption, NEP, Chinese tourist.

**Abstract:** This study measures the environmental attitudes of Chinese tourists by "New Environmental Paradigm" (NEP) Scale, then investigate the relationship between the tourists' environmental attitudes and green tourism consumption behavior. This paper classifies Chinese tourists into three categories: the harmonious activists, the anthropocentrism and the ecocentrism, The results indicate that tourists holding different environmental attitudes show significant difference in certain basic statistical variables and fulfillment degree of green tourism behavior. There is a contradiction between the environmental attitude and green tourism behavior of the anthropocentrism.

## 1 INTRODUCTION

Today, the media are increasingly direct in informing the public about the effects of global warming. (Lee et al., 2010) However, the scientific and technological advancement is playing a much less important role in reducing energy consumption and greenhouse gas emission (Nawjin and Peeters, 2010), which means people need to change their behavior to achieve this, thereby realize sustainable development.

The tourism industry influences the global climate and environment through the energy consumption and greenhouse gas emission of transportation, accommodation, tourist activity, etc. The strong growth of total (unchecked) tourism emissions within about 50 years from now will exceed the 100% share of sustainable global emissions (Bows et al., 2009). Human need to adopt sustainable tourism style to remit the influence on the climate. National Tourism Administration of China also regards the energy saving, environmental protection and green tourism consumption as an important goal in "the twelfth five-year" tourism plan (National Tourism Administration of China, 2010). The development of green tourism needs not only the effort of government, enterprises and related organizations, but also the activate participation and corporation of the tourists. The tourists can bring the enterprises stress and motivation to develop green tourism, meanwhile

supervise the government and the tourism management department, and promote the development of green tourism positively. This paper studies the tourists' environmental attitudes and green tourism consumption behavior, as well as the interrelationship between them, trying to make a contribution to the green tourism development.

## 2 REVIEWS

In the late 1970s, the World Tourism Organization established a committee focused on the environment, while somewhat later in 1992 the sustainable development of tourism was directly addressed by the Rio Earth Summit (Bohdanowicz, 2006), which marks the beginning of a new era of "protecting environment, respecting nature and promoting sustainable development". The green tourists started to show up in early 1990s. (Kirkpatrick, 1990) The tourism industry began incorporating environmentally responsible or green innovations into their businesses (Kathleen, 2009). In 2010, UNWTO published a report of 'Toward low-carbon tourism' collaborating with other international organizations. Tourism industry starts to catch the attention of public as a competitive industry of low-carbon economy, energy saving and emission reduction.

Green tourism claims can be used to signal that tourism operations taking place in that area do not

harm the environment.(Font and John Tribe, 2001). However, the 'involuntary green travel' was defined as reduced CO<sub>2</sub> emission travel imposed by government regulations (Nawjin and Peeters, 2010).

Many researchers study the green tourism production in different perspectives. There's a obvious positive relationship between corporate social responsibility and financial performance. (Margolis and Walsh, 2001) Pontus Cerin (2003) noted that the enterprises actively engaging in the discussion of environmental protection claim that they get added value \_brand\_from social identity.The objectives of sustainable development must be a part of the overall destination development strategy, the purpose of which is to achieve the highest socioeconomic impact on the local community and to optimize the quality of life of the local population, and its current and future generations. GRAČAN etc. (2010) indicates that the expenditure saving from energy saving and emission reduction becomes the income of enterprise, meanwhile makes profit for environment and society. Gössling (2001) etc. studies on the energy consumption and CO<sub>2</sub> emission of tourism activities.

Large numbers of literatures studies on two aspects: the destruction of tourism on natural resources(Gössling, 1999; Vail and Hultkrantz, 2000) and the measure of protecting environment and reducing the adverse environmental impact of tourism during tourism development (Davis et al., 2001; Page, 2002).Some researchers studied on the environmental guidelines, certification system, the "best practice" and policy formulation and implementation for tourism development. (Bohdanowicz, 2006; Judith, 2010). Other researchers studied on the environmental responsibility of tourism business managers, owners and employees and tourists' awareness and behavior toward green tourism. (Bohdanowicz, 2006; Kathleen, 2009).

However, there's seldom any researches studying on the relationship between environmental attitude and green tourism behavior. (Wang et al.,2010; Luo, Wu, Deng, 2009; Chien-Wen and Chien-Pei, 2008). On the domain of tourism, Formica and Uysal (2002) has encouraged researchers to combine environment attitudes with tourism research, because people's attitude toward the use of nature and resource will affect the decision-making process of destination. There are other researchers studying on the impact of the green attitudes and the production of certain groups. (Gu, Chris and Kaye, 2009) This paper studies on the difference of green tourism consumption behavior among tourists holding

different environmental attitude, in order to contribute to the development of green tourism.

### **3 THEORETICAL FRAMEWORK AND ASSUMPTIONS**

#### **3.1 Environmental Attitudes and Green Tourism Consumption Behaviour**

Environmental attitude is a tendency that people incline to protect the environment in a relatively sustainable and organized way, which is acted in the name of environment protection and should be noticed and concerned. Essentially speaking, the environmental crisis results from the adverse environmental behavior. The theory of reasoned action and the theory of planned behavior claim that the best way to predict people's behavior is to comprehend their behavioral intention. Moreover, the behavioral intention has three influence factors: behavioral attitude, subjective norm and perceived behavioral control, codetermining behavioral intention and behavior. (Yu, Wang and Yang, 2000) According to these theories, and in consideration that previous study indicates environmental attitude and green behavior has certain positive correlation (Luo, et al. 2009; Chien-Wen and Chien-Pei, 2008), this paper proposes this hypothesis:

H1: Environmental attitude has positive influence on green tourism consumption behavior.

#### **3.2 Anthropocentrism, Ecocentrism and Green Tourism Consumption Behaviour**

Values play an important role in individual consumers' behavior, attitude and decision-making, which can enhance the tourists' understanding to green tourism product and behavior, induce the tourists' demand and desire to green tourism consumption, thus promote green tourism consumption behavior. As two kinds of incompatible environmental values, the anthropocentrists emphasize human's subjective initiative, whereas the ecocentrists claim that human exist as part of the nature.

The anthropocentrists regard themselves as the central and most significant entities in the universe, asserting that the whole interests and long-term benefits of human being are the starting and terminal point of handling the man-nature relationship and

conducting ecological practical activities. (Yan, 2006) The anthropocentrists are divided into the absolute anthropocentrism and the relative anthropocentrism. The former have a unilaterally cognitive exaggeration on human's subjective initiative, while the latter respect the absoluteness of human's survival development right, admit the preexistence of nature and finiteness of environmental bearing capacity and natural resources, and pursue the harmonious coexistence, common development and sustainable development of human and nature (Yang Guangsheng, 2010). This paper name the people who advocate absolute anthropocentrism as "the anthropocentrists" and name the people who advocate relative anthropocentrism as "the harmonious activists". The green tourism behavior is the tourism activities process that cannot destroy the natural environment and should save resources and energy as possible. Thus it is clear that the view which is advocated by the harmonious activists is close to the green tourism consumption behavior.

The ecocentrists regard themselves and the nature equally, or regard human as the outcome of natural evolution. Human exist as part of nature and cannot survive without nature. Thus human should coexist harmoniously and develop commonly. (Chen and Yang, 2001) Now, on the basis of accepting biological evolution, species and ecosystem, the ecocentrists have transferred their attention from individual to the construction of nature and environment matrix. Various of species can find their own position in this matrix. This harmony and unity of human and nature are exactly the basis f green tourism behavior. Accordingly, we propose hypotheses as follow:

H2: Tourists hold different environmental values have different green tourism consumption behavior.

H2a: The anthropocentrists are not inclined to green tourism consumption.

H2b: The harmonious activists are inclined to green tourism consumption.

H2c: The ecocentrists are inclined to green tourism consumption.

### 3.3 Athropocentrists, Eocentrists and Environmental Attitude

Environmental values has an impact on the whole inside system of individuals and influence the formation of certain attitude and behavior. The environmental values and environmental attitude cannot replace each other. But previous study has indicated that individual values and environmental attitude are positively correlated (Wang et al., 2010).

Other researchers dividing tourists into different environmental value types according to their environmental attitudes, e.g. eco-centrists, anthropocentrists and equivocators. (Luo et al., 2009) Thus, we propose this hypothesis:

H3: The tourists can be divided into different types according to the environmental attitude.

On the basis of these hypotheses, we can conclude the basic theoretical framework of this study (figure 1). As illustrated in the figure, this study divided tourists holding different types of environmental attitude into three types according to the relationship between environmental values and environmental attitude, then testify the relationship between environmental attitude and green tourism behavior through the discrepancy in green tourism consumption among these three types.

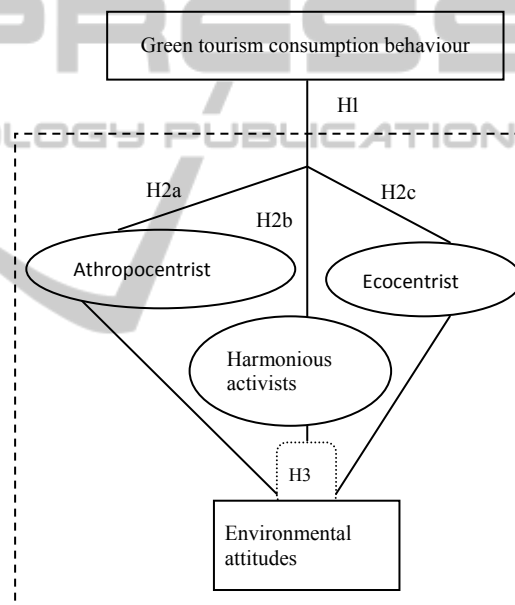


Figure 1: The Relational Model between Environmental Attitudes and Green Tourism Consumption Behavior.

## 4 RESEARCH METHOD

### 4.1 Questionnaire Design

This paper studies on the relationship between environmental attitude and green tourism behavior by questionnaires which refer to New Environmental Paradigm (NEP) and combine with Chinese actual tourism conditions. The respondents are anonymous because personal environmental attitude is sensitive topic to some extent and they might not be reluctant

to state their opinions if they need to sign their names.

#### 4.1.1 Environmental Attitude Scale

The NEP is the most influential and common used environmental attitude scale. The major viewpoints of NEP world view include that: the earth's resources and economic growth has its limits; the solution to environmental problems is not absolutely dependent on technology; care about children's living environment and recognize the value of nature's existence. (Zeng, 2004)

This study measures tourists' environmental attitudes by NEP Scale modified by Dunlap in 1992. The respondents are required to mark the corresponding answers of strongly agree, relatively agree, agree, neither agree nor disagree, disagree, relatively disagree or strongly disagree. In table 1, the odd number questions are positively narrated and scored 1-7, which means higher scores indicate more tendency to NEP. On the contrary, the even number questions are narrated reversed and scored 7-1, which means lower scores indicate more tendency to NEP.

#### 4.1.2 Green Tourism Consumption Behavior Scale

Green tourism consumption is a pattern of consumption in which people respect environmental ethics, focus on the protection of tourism resources and environment, conserve resources and energy maximally while pursuing the highest satisfaction in travel. Green tourists use tourism resources rationally and protect the ecological environment and socio culture in a socially and environmentally responsible manner. (Tourism Times, 2007) In terms of Chinese actual situation, taking into account the differentiation of Chinese tourists' civilization level, all kinds of green tourism promise in our country, civilized travel guide and related research (Chien-Wen and Chien-Pei, 2008; Toronto green tourism association; SHAN SHUI Conservation Center), we designed "green tourism consumption behavior scale", trying to cover all elements of tourism. The respondents are required to mark the corresponding answers of strongly agree, relatively agree, agree, neither agree nor disagree, disagree, relatively disagree or strongly disagree.

Then, we do a pre-survey of more than 50 samples, and delete some unreasonable elements and add some elements meanwhile. Later 10 experts are invited to grade the adjusted questionnaire, in order to make sure the rationality of the questionnaire's

index.

We adopt factor analysis to analyze the environmental attitude and green tourism consumer behavior. a) Extract the elements whose eigenvalues are greater than 1 through the method of principal component analysis and varimax orthogonal rotation, and remove variables whose load is less than 0.40 and common factor variance is less than 0.35; b) Classify the tourists by the scores of environmental attitude through K-Means Q cluster analysis; c) Compare the green tourism consumer behavior discrepancies among tourists holding different environmental attitude through ANOVA.

The Cronbach's  $\alpha$  of environmental attitude part is 0.693. But variable 12 is excluded because its Cronbach's  $\alpha$  is 0.256 and the reliability is very low. The Cronbach's  $\alpha$  of environmental attitude part increases to 0.705. The Cronbach's  $\alpha$  of green tourism consumer behavior part is 0.875. Both of them meet the reliability requirements.

## 4.2 The Implementation of the Questionnaire Survey

The survey was implemented by the graduates of Beijing International Studies University. They were trained before the formal survey. Investigators carried the survey in major tourist attractions and hubs in Beijing, Shanghai, Wuxi, Suzhou, Nanjing, Guangzhou and other cities on November 3rd to 8th, 2010. 1156 questionnaires were handed out and after excluding the disqualified questionnaires (more than 50% missing values or answered regularly), we obtained 871 valid questionnaires. The effective rate was 75.35%.

## 5 DATA ANALYSIS

### 5.1 Sample Profiles

The basic statistics of the sample are shown in table 1. 52.7% of respondents are male; most respondents are young people aged between 19-35 (82.6%); the number of respondents in average income level or above accounts for 63.4%; the workers and students are most (57.9% and 28.6% respectively); among workers, the senior managers, junior managers and employees account for 20.5%, 30.8%, 48.6% respectively; the respondents who have bachelor's degree or above are most (66.5%); 48.4% of the respondents travel 2-5 times per year, then 44.4% travel once a year; more than half of the respondents travel at their own expense (55.6%).

Table 1: Basic statistical characteristics of Sample.

		Frequency	Percentage	Cumulative Percentage
Gender	Male	422	52.7	52.7
	Female	379	47.3	100.0
Age	18 and under	15	1.8	1.8
	19-25	453	53.2	55.0
	26-35	250	29.4	84.4
	36-45	57	6.7	91.1
	46-50	36	4.2	95.3
	51-55	22	2.6	97.9
	56 and above	18	2.1	100.0
Income	Few	200	24.8	24.8
	Below Average Level	87	10.8	35.5
	At Average Level	378	46.8	82.3
	Above Average Level	134	16.6	98.9
	Far above average level	9	1.1	100.0
Employment	Employed	488	57.9	57.9
	Unemployed	12	1.4	59.3
	Student	241	28.6	87.9
	Armyman	23	2.7	90.6
	Home stays	36	4.3	94.9
	Others	43	5.1	100.0
Employers' Position	Senior managers	106	20.5	20.5
	Primary managers	159	30.8	51.4
	Grassroots employees	251	48.6	100.0
Education Background	Junior middle school and the following	41	4.9	4.9
	Technical secondary school /high school	76	9.0	13.9
	(college for) professional training	166	19.7	33.6
	regular college	428	50.8	84.3
	Graduate and above	132	15.7	100.0
Annual Travel Frequency	once	352	44.4	44.4
	2-5 times	383	48.4	92.8
	Above 5 times	57	7.2	100.0
Payment Method	facility trip	190	22.3	22.3
	All-expense tour	474	55.6	77.9
	Both of above	188	22.1	100.0

## 5.2 Tourists' Classification based on Environmental Attitude

### 5.2.1 Factor Analysis

We analyze the remaining 14 variables through the method of principal component analysis and varimax orthogonal rotation. The  $\chi^2$  value of Bartlett test of sphericity is 2703.340 (df = 91, p = 0.000) and the value of Kaiser-Meyer-Olkin is 0.839, indicating that the variables are suitable for factor analysis. Through analysis, we find the common factor variance of variable No.1 is 0.305, less than 0.35, so we exclude it. Then we analyze the remaining 14 variables through the same method. (Table 2). The  $\chi^2$  value of Bartlett test of sphericity is 2577.308 (df=78, p=0.000) and the value of Kaiser-Meyer-Olkin is 0.836, indicating that the variables are suitable for factor analysis. Three factors are extracted finally, whose characteristic roots, variance and cumulative variance contribution rate are shown in table 2. According to the general character of the variables, we name these three factors as human almighty, natural limitation and ecological crisis.

### 5.2.2 Tourists Cluster Analysis based on Environmental Attitudes

We analyze all tourists through Q-type cluster analysis according to the tourists' scores in every environmental attitude factor. After series of trial runs by K-Means clustering method, we cluster the tourists into 3 groups. ANOVA indicates that 3 groups have significant variation in 3 factors (Table 3).

Scheffe post hoc test results showed that the 3 groups have significant variation in each factors. The average score of 3 groups in each environmental factor are shown in Table 4. It should be noted that the factor of "human almighty" is adversely narrated, which means higher scores indicate less tendency to NEP's world view. The other two factors are positively narrated, which means higher scores indicate more tendency to NEP's world view.

The tourists in type 1 support the viewpoint of "human almighty" and "natural limitation" and do not support the "ecological crisis". This group of tourists has realized that the Earth has limits to growth, respected the absoluteness of human's survival development right and pursued the harmonious coexistence, common and sustainable development of human and nature. The paper names

this group of tourists as "the harmonious activists" according to the former analysis in theoretical framework. There are 152 tourists in this group, accounting for 17.0%. The results of cross-analysis (Table 5) show that female tourists are more than male (53.5% > 46.5%) and tourists in this group take a smaller proportion in every basic demographic characteristic (less than 30%).

The tourists in type 2 support the viewpoint of "human almighty". They regard human as the central even the most significant entities in the universe, while denying the ecological crisis and holding neutral attitude toward the finiteness of natural resources. They have a unilaterally cognitive exaggeration on human's subjective initiative and their environmental attitudes are inclined to the anthropocentrism, so they can be named as "the anthropocentrists". There are 354 tourists in this group, accounting for 40.6%. The results of cross-analysis (Table 5) show that male tourists are more than female (59.9% > 40.1%); the majority of this group are below 18 or above 36 (more than 40%); the income gap is great, the employment status are mainly employed, unemployed and others which accounts for more than 40% prospectively and the majority of employed are managers; the discrepancy in education background is great; travel frequently and the tourists who travel more than 5 times per year account for 45.6%; the majority are facility tourists (more than 50%).

The tourists in type 3 have not realized the limitation of nature and not take the bearing capacity of Earth seriously. They also denied "human almighty" and admitted "ecological crisis". Their environmental attitudes are inclined to the ecocentrism, so they can be named as "the ecocentrists". There are 365 tourists in this group, accounting for 42.4%. The results of cross-analysis (Table 5) show that the number of male tourists are as large as that of female (differ only 3.6%); the majority of this group are in age of 19\_35; their income level is low; there's not obvious discrepancy in the employment position; the level of education is high (the education background of undergraduate or above account for more than 40%); travel frequently is lower than type 2; the majority are all-expense tourists.

Table 2: Factor Loading Matrix of Tourists Environmental Attitude.

Factors	Components			Communality Variance
	1	2	3	
Factors 1: human almighty				
14. Humans will learn enough about how nature works to be able to control it.	0.773	-0.065	-0.098	0.611
8. The balance nature is strong enough to cope with the impacts of modern industrial nations.	0.730	-0.187	-0.053	0.571
4. Human ingenuity will insure that we do not make the earth unlivable.	0.711	-0.090	0.126	0.529
6. The earth has plenty of natural resources if we just learn how to develop them.	0.655	0.113	-0.050	0.444
2. Humans have the right to change nature to fit their needs.	0.649	-0.133	0.070	0.444
10. The so-called ecological crisis facing humankind has been greatly exaggerated.	0.563	-0.167	-0.367	0.480
Factors 2: natural limitation				
11. The earth is like a spaceship with very limited room and resource.	-0.051	0.753	0.012	0.570
13. The balance of nature is very delicate and easily upset.	-0.030	0.706	0.245	0.559
7. Plants and animals have as much right as humans to exist.	-0.086	0.668	0.289	0.537
9. Despite our special abilities, humans are still subject to the laws of nature.	-0.224	0.660	0.214	0.532
Factors 3: ecological crisis				
3. When humans interfere with nature, it often produces disastrous consequences.	0.002	0.098	0.820	0.682
5. Humans are seriously abusing the environment.	0.033	0.250	0.741	0.613
15. If things continue on their present course, we will soon experience a catastrophe.	-0.089	0.339	0.533	0.407
Eigen value	2.873	2.239	1.863	
Variance explained %	25.101	20.221	17.334	
Cumulative variance explained %	25.101	45.322	62.657	
The number of variables contained by Each factor	6	4	3	
Cronbach's a	0.777	0.723	0.702	

Note: 1) through sorting "analysis results" get data. 2) extraction method: principal component. Rotating methods: Varimax with Kaiser standardization. Convergence after five iterations.

### 5.3 The Discrepancy in Green Tourism Consumption behavior Among Different Types of Tourists

This paper analyzes the discrepancy in green tourism consumption behavior among different types of tourists through ANOVA analysis ( $\alpha=0.05$ ). First, we exclude the variables which do not meet the precondition of ANOVA ( $p \leq 0.05$ ) through homogeneity test of variances. Then we analyze the remaining variables for the types of tourists' environmental attitude through ANOVA analysis (table 6). The bolded figures are the F-test results whose significance is less than 0.05, which indicates that there's significant discrepancies in green tourism consumption behavior among different types of tourists.

As we can see from table 6, there's significant discrepancies in 15 variables of the 3 groups of tourists, which proves the hypothesis 1 and 2. Scheffe post hoc test results showed that the fulfillment level of the anthropocentrists is much higher than the ecocentrists in the question of "I would choose the scenic spots, travel agencies, hotels and travel guides which provide environmental information". The fulfillment level of the anthropocentrists is much higher than the ecocentrists and the harmonious activists in the question of "I would estimate my carbon emissions and try to choose low-carbon travel". And the fulfillment level of the ecocentrists is much higher than the anthropocentrists in the question of "I would prepare travel belongings to reduce the variety and quantity of purchase on the way" ( $P < 0.05$ ).

In addition, from the mean value we can see that although the anthropocentrists hold a negative attitude toward the limitation of nature and the urgency of ecological crisis, they still are inclined to fulfill various kinds of green tourism consumption behavior (the mean values of positive questions are above 4 and that of negative questions are below 4). The ecocentrists are the most active practioners, their fulfillment level is relatively higher in 10 questions. And the scores of harmonious activists ranked the second in 12 questions, which illustrates the harmonious activists are tend to travel green actively. The analysis above proves the hypothesis 2a and 2b are true, but the hypothesis 2c is false.

## 6 CONCLUSIONS

We can draw the conclusions as follows:

1. According to the discrepancy in environmental attitudes, this paper classified tourists into three categories: the harmonious activists, the anthropocentrists and the ecocentrists. The harmonious activists pursue the harmonious coexistence, common and sustainable development of human and nature; the anthropocentrists have a unilaterally cognitive exaggeration on human's subjective initiative; the ecocentrists respect the ecological environment and care about ecological crisis.

2. The tourists holding different environmental attitudes show significant differences in certain basic statistical variables. In this study, we found there are no significant differences in income, employment, position and travel frequency, but there's notable discrepancies in gender, age, education background and payment. Male tourists are more inclined to anthropocentrism than female; the middle-aged and older tourists are more inclined to anthropocentrism than the youngsters; the higher educated, the easier the formation of ecological ethics; the more they expend on their own, the more tendency to the ecocentrism. The tourists will attach more importance to green tourism consumption with the enhancement of Chinese educational level and the growth of young tourists.

3. There are significant differences in fulfillment level of green tourism behavior among the tourists holding different environmental attitudes. The ecocentrists are the most active practioners in green tourism behavior, then the harmonious activists are following. Thus, H2b and H2c are proved. It is notable that the fulfillment level of the anthropocentrists even exceeds that of the ecocentrists, such as choosing the travel agencies which provide environmental information.

4. The anthropocentrists advocate "human almighty" and deny "ecological crisis", but they also tend to practice various kinds of green tourism consumption behavior, which disproves the hypothesis 2a. This conclusion is contrary to the thoughts that personal attitude to the use of resource will influence his decision-making process, which illustrates the fulfillment level of green tourism behavior might be influenced by other factors. These reasons are worth further studying.



Table 3: The analysis of variance between categories (AVOVA).

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
human almighty	791.235	2	1.565	868	505.579	.000
natural limitation	413.443	2	1.675	868	246.769	.000
ecological crisis	777.593	2	1.428	868	544.562	.000

Table 4: The mean score on various environmental factors of all kinds of tourists.

	harmonious activists (N=152)	anthropocentrists (N=354)	ecocentrists (N=365)
human almighty	5.992	6.092	4.054
natural limitation	5.974	3.669	3.250
ecological crisis	1.190	2.933	4.820

Table 5: Different types of tourists' basic statistical characteristics (1).

		Types of tourists(%)		
		harmonious activists	anthropocentrists	ecocentrists
Gender	Male	46.5	59.9	48.2
	Female	53.5	40.1	51.8
Age	18 and under	20.0	53.3	26.7
	19-25	17.4	38.2	44.4
	26-35	16.8	39.6	43.6
	36-45	22.8	47.4	29.8
	46-50	11.1	52.8	36.1
	51-55	22.7	40.9	36.4
	56 and above	11.1	80.0	10.0
Income	Few	20.0	35.5	44.5
	Below Average Level	13.8	48.3	37.9
	At Average Level	17.2	39.7	43.1
	Above Average Level	18.7	47.8	33.6
	Far above average level	0.0	66.7	33.3
Employment	Employed	16.8	42.6	40.6
	Unemployed	16.7	25.0	58.3
	Student	20.3	36.1	43.6
	Armyman	17.4	34.8	47.8
	Home stays	11.1	52.8	36.1

Table 5: Different types of tourists' basic statistical characteristics (2).

		Types of tourists(%)		
		harmonious activists	anthropocentrists	ecocentrists
Employment	Others	16.3	48.8	34.9
Employers' Position	Senior managers	15.1	44.3	40.6
	Primary managers	15.7	47.8	36.5
	Grassroots employees	17.5	39.0	43.4
Education Background	Junior middle school and the following	19.5	56.1	24.4
	Technical secondary school /high school	14.5	47.4	38.2
	college for professional training	19.9	42.2	38.0
	regular college	15.4	40.0	44.6
	Graduate and above	22.0%	34.8%	43.2
Annual Travel Frequency	once	20.2	38.9	40.9
	2-5 times	16.4	39.7	43.9
	Above 5 times	17.5	45.6	36.8
Payment Method	facility trip	14.7	55.3	30.0
	All-expense tour	18.1	35.4	46.4
	Both of above	17.0	38.8	44.1

Table 6: The differences in green tourism consumer behaviors between tourists types (1).

Green Tourism Consumer Behaviors	Mean			F	Sg.
	harmonious activists	anthropocentrists	ecocentrists		
1. Before visiting somewhere, I would ask for the information of local natural and cultural resources.	<u>5.19</u>	5.29	<u>5.49</u>	<u>3.407</u>	0.034
2. I would choose the scenic spots, travel agencies, hotels and travel guides which provide environmental information.	<u>4.27</u>	4.52	4.08	<u>8.429</u>	0.000
3. I would never buy any wildlife and the products made of them.	4.88	4.85	4.87	0.015	0.985
4. I would avoid using any chemicals including soap, toothpaste, washing-up liquid in the wild.	4.49	4.63	4.61	0.452	0.636
5. If it needs to use the chemical washing-up liquid in the wild, I will be far away from the source of water.	4.53	4.66	4.60	0.508	0.602
6. When I'm seabathing in the beach I would pay attention to reduce trash.	<u>5.40</u>	5.37	<u>5.66</u>	<u>5.632</u>	0.004
7. I wouldn't pick, dig or shin the wild plants at will when travelling.	5.59	5.43	5.61	1.936	0.145
8. I wouldn't cook a meal by bright fire in the wild.	5.05	5.19	5.31	1.747	0.175
9. I wouldn't alarm, chase or feed the wild animals deliberately when travelling.	<u>5.79</u>	5.65	<u>5.92</u>	<u>4.650</u>	0.010

Table 6: The differences in green tourism consumer behaviors between tourists types (2).

Green Tourism Consumer Behaviors	Mean			F	Sg.
	harmonious activists	anthropocentrists	ecocentrists		
10. I wouldn't buy any souvenir at the cost of damaging the environment in the tourist resort.	5.28	5.29	5.42	0.958	0.384
11. I would praise the tourism enterprises which implement environmental protection project, and I hope they will adopt more environmental protection measures.	5.28	5.29	5.42	0.958	0.384
12. I would offset my "carbon footprints" by planting trees or buying "carbon emissions".	5.28	5.29	5.42	0.958	0.384
13. I would estimate my carbon emissions and try to choose low-carbon travel.	3.59	4.06	3.51	10.581	0.000
14. I would prepare travel belongings to reduce the variety and quantity of purchase on the way.	5.44	5.45	5.74	4.980	0.007
15. I would like to use the reusable containers (cotton shopping bag/lunch box/kettle/chop sticks, etc.)	4.06	4.38	4.20	2.537	0.080
16. I would like to have dinner in luxury restaurants.	3.38	3.61	2.99	15.142	0.000
17. I usually bring the toilet things myself when traveling.	5.38	5.23	5.44	1.626	0.197
18. I would switch off the power of the appliances that not in use when I'm in a hotel.	4.88	4.98	4.98	0.238	0.788
19. I don't like the environmental cue card in the guest room.	5.08	4.37	5.13	23.302	0.000
20. I would pay attention to reduce the use and renewal of the towels and bedclothes during the stay in the hotel.	4.32	4.36	4.46	0.499	0.607
21. I usually go to tourist destinations by train, bus, bicycle and so on.	2.89	3.04	2.73	4.578	0.011
22. I always drive to the scenic spots myself.	5.13	4.71	5.54	27.471	0.000
23. I would reduce the copy and print of documents in the business travel.	4.90	5.14	5.31	4.577	0.011
24. I wouldn't take photos where there is a "no photo" sign.	5.42	5.23	5.34	0.747	0.474
25. I wouldn't buy any culture relic for collection or ornament in the tourist resort.	4.71	4.89	5.08	3.351	0.036
26. I would always buy the intangible culture heritage souvenirs made by local people.	4.94	4.81	4.79	0.694	0.500
27. I wouldn't bring my own living habit to tourism destinations.	4.55	4.74	4.37	5.959	0.003
28. I wouldn't enjoy the authentic and traditional cultural performance if possible.	4.83	4.08	4.93	27.408	0.000
29. I would admonish and stop the non-environmental behaviors of the tourists around me.	4.33	4.47	4.11	5.832	0.003
30. I would record my travel knowledge and experience by photos/writings to provide more information to the environmental protectors and share with others.	4.96	4.96	5.05	0.402	0.669

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