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Valuation of Tourism Benefits for Croatia's Protected Areas

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For and on behalf of
Environmental Resources Management

Approve 

Signed:

Position: Partner

Date: 30 March 2010

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1 EXECUTIVE SUMMARY

1.1 KEY FINDINGS

This study demonstrates the significant value that Croatians and international visitors place on maintaining protected areas in Croatia.

Visitors to the four national parks targeted reveal a willingness to pay value of between Euro 100,000 to 2 million per year just to protect the plants, animals, geology and landscape aspects of the parks.

For the two counties assessed, when aggregated for total foreign visits and total county population, the annual willingness to pay values for adults to support the protected areas within the counties are around Euro 4 million for Varaždinska County and Euro 40 million for Šibensko-Kninska County.

Valuation of benefits that visitors gain from visiting protected areas in Croatia, as demonstrated above, is useful to help justify expenditure on protected area management and to inform potential sustainable financing options. The values can also be 'transferred' to other similar contexts to inform decision-making elsewhere.

1.2 BACKGROUND

This report represents one of two study outputs produced by ERM Ltd commissioned by the World Bank that aims to help improve the financial management of protected area conservation in Croatia.

This second output involved designing and conducting a tourist visitor questionnaire survey focussing on Croatians and Foreigners to ascertain their preferences, willingness to pay and travel costs associated with protecting nature and biodiversity in Croatia.

1.3 AIMS

The objective of this second study is to assess the economic value of some of the key benefits of Protected Areas in Croatia relating to people's preferences. It evaluates patterns of demand and the "willingness-to-pay" (WTP) to preserve and improve protected areas by both domestic (Croatians) and international tourists (Foreigners) using both the contingent valuation method (CVM) and travel cost method (TCM) of valuation. The former method (CVM) helps determine the 'recreational use' and 'non-use' value of sites by asking people their 'willingness to pay', whilst the latter (TCM) estimates the recreational use value of sites through comparing the frequency of visits with the costs associated with visiting. The study assesses four national parks, two nature parks and two counties.

1.4 CONCEPT OF TOTAL ECONOMIC VALUE

The concept of total economic value (TEV) is now well-established and provides a useful framework for identifying the various values associated with protected areas. The total economic value of a protected area consists of its 'use' values and 'non-use' values.

A protected area's 'use' values are in turn made up of its direct use values (e.g. recreation, tourism, natural resource harvesting, hunting, gene pool services, education and research), indirect use values (e.g. watershed protection, breeding habitat for migratory, species, climatic stabilization and carbon sequestration), and option values (e.g. future value of information derived from the protected area), while non-use values include bequest values (the benefit of knowing that others benefit or will benefit from the protected area) and existence values (benefit of knowing that the protected area exists even though one is unlikely to visit it or use it in any other way).

1.5 QUESTIONNAIRE APPROACH

Due to budgetary constraints and the practicalities of trying to complete large samples of questionnaire surveys at eight different sites, the questionnaires were designed to be 'self completing'. Interviewing the targeted number of Croatian and foreign respondents at each site proved difficult due to the timing of the surveys so late in the season. The total number of respondents at each site ranged in number from 29 to 448. The sample sizes at three sites were considered too small for the valuation studies. These were both visitor types at Lonsjko Pole and Foreigners at Papuk. The visitor season for both these sites is much earlier in the year and, as inland Nature Parks, they tend to get far fewer foreign visitors anyway.

1.6 GENERAL RESPONDENT AND ACTIVITY QUESTIONNAIRE RESULTS

The most common place of residence for Croatian respondents was generally the capital city, Zagreb. The percentage of people visiting from Zagreb ranged from 6% to 51%. The most common origins of Foreign visitors were Germany, Italy, Slovenia and the Czech Republic.

The percentage of Croatian respondents visiting the Parks on day trips ranged from 18.0% to 90.5%. The most common type of trip for non-Croatian respondents was an independent overnight visit. Exceptions to this were Papuk and Varaždinska County, where day trips were the most common.

Amongst Croatians, the majority of respondents stayed away from home for between 2 and 7 nights. A much higher percentage of Foreigners stayed overnight away from their home of origin when compared to Croatian respondents. Most respondents stayed between 4 and 14 nights.

The average number of Croatian adult travellers per group ranged from 1.2 to 5.1 people. The average number of Croatian children travellers per group ranged from 0.5 to 1.8. The average number of Foreign adult travellers in a group ranged from 0.2 to 5.1 people. The average number of Foreign children travellers per group ranged from 0.5 to 3.8.

The majority of Croatian respondents were not part of a tour group. The only exceptions to this were at Brijuni and Kornati National Parks where boat access is essential to visit the Parks. The majority of foreign respondents were not part of a tour group, except at Brijuni, Kornati and Lonjsko Parks (although the latter is based on a very small sample). At Varazdinska, the proportion of Foreigners on a tour is also high, at 49%.

The level of importance of the protected area in the Croatian's decision to undertake their overall trip range from 2.6 for Kornati to 3.8 for Lonjsko (out of a possible score of 5). The average level of importance for Foreigners visiting the parks in their decision to undertake their overall trip ranged from 1.4 for Lonjsko to 3.8 for Varazdinska County.

Respondents undertook a wide range of activities in the parks. However, walking/hiking, bird/wildlife and relaxation were most popular for both Croatians and Foreigners. Specific to certain parks, climbing (e.g. in Brijuni and Paklenica) and sailing (e.g. in Kornati) were common.

Generally around 30 – 40% of Croatian visitors visit the same park once a year or more often, with the highest proportion being visiting Risnjak (over 45% visit once a year or more). Most Foreigner respondents reported they were unlikely to return to the parks on a regular basis, for example within three or four years. Only around 10% said they visit the same parks once a year or more, except for Kornati which was 20%.

1.7 WILLINGNESS TO PAY QUESTIONNAIRE RESULTS

Most Croatian and foreign visitors thought the entrance fees represented satisfactory to very good value for money. The percentage of respondents who thought the fees were very bad value ranged from 0% to 6% for Croatians and 0% to 37% for foreigners. The percentage of respondents who thought the fees were very good value ranged from 7% to 44% for Croatians and 5% to 25% for foreigners. Papuk respondents gave the highest average rating of 4.1 for value for money (on a scale of 1 to 5) for Croatians and 3.8 for Papuk and Paklenica for foreigners.

The majority of Croatian and foreign respondents considered it quite important to extremely important to them as an individual to protect the features of the protected areas. The average rating on importance to protect the PAs ranged from 3.9 to 4.8 (on a scale of 1 to 5) for Croatians and 3.6 to 5.0 for foreigners. Only a very small proportion of all visitors thought it not at all important to protect them.

Most visitors would be willing to pay a certain amount extra to support the Parks in one way or another. Visitors at each park had slightly different preferences in terms of what they would be willing to pay extra for.

The most common way that Croatian and foreign respondents would be willing to pay to help support the Public Institutions was through visitor entrance fees (39% in Sibensko and 89% in Varazdinska for Croatians and 71% in Sibensko and 95% in Varazdinska). Donations, accommodation taxes and mooring fees were also relatively popular. The proportion of respondents not willing to pay to help support the management was low (0% to 10%).

1.8 SOCIO-ECONOMIC QUESTIONNAIRE RESULTS

The split between male and female visitors was fairly even in all parks, with a slight majority of females at most locations. Slightly more female Croatians responded, whilst slightly more male foreigners responded to the questionnaire.

There was a wide range in ages of respondents, with most aged between 18 to 54 years and with a reasonable number of respondents aged over 55 years.

Most respondents were educated to college/university level, with nearly all educated to at least 18 years of age. This was consistent across all locations.

1.9 CONTINGENT VALUATION WTP ANALYSIS

The table below reveals the average willingness to pay (WTP) values for three samples: Croatians, Eastern Europeans and Other Foreigners. The average WTP values reflect the average maximum amount of money that individuals ***'would be willing to pay per visit to each Park to ensure that the many plants, animals, geological, cultural and landscape features within it are fully protected for people to enjoy without being damaged or extracted'.***

The WTP values are per visit with the exception of for Croatians in the two Counties, where their WTP is an annual payment to support all the protected areas in the County. This is because it may be more likely that an additional annual tax is paid by Croatians rather than have entry fees everywhere. There were insufficient respondents at Lonsjko-Pole and Papuk (foreigners) to do any WTP analysis.

Table 1.1 Croatian Mean Willingness-to-pay and 95 per cent Confidence Interval

Protected Area	Croatian WTP Euro/visit	Eastern European WTP Euro/visit	Other foreigner WTP Euro/visit
Paklenica	€8.53	€11.42	€11.07
Kornati	€13.13	€38.84	€31.31
Brijuni	€9.51	€16.04	€24.09
Risnjak	€7.51	€7.64	€11.17
Papuk	€5.98	-	-
*Sibensko-Kninska	€29.06	€11.83	€10.13
*Varazdinska	€16.27	€20.83	€32.85

* WTP amount is per year for Croatians.

It is interesting to compare these WTP values with the current normal entrance fees of 25 Euro for Brijuni, 5 Euro for Paklenica and Risnjak, and 2.5 Euros for Kornati (albeit with numerous variations in pricing and in the case of Kornati additional costs to get to the site by boat). However, it is important to note that the values relate to a WTP to protect the wildlife, geology, landscape and cultural aspects for current and future generations. This is subtly different to an 'entrance fee' which can include a WTP for other activities. For example, a lengthy boat trip and train ride is included in the Brijuni entrance fee for all day-trippers to the island.

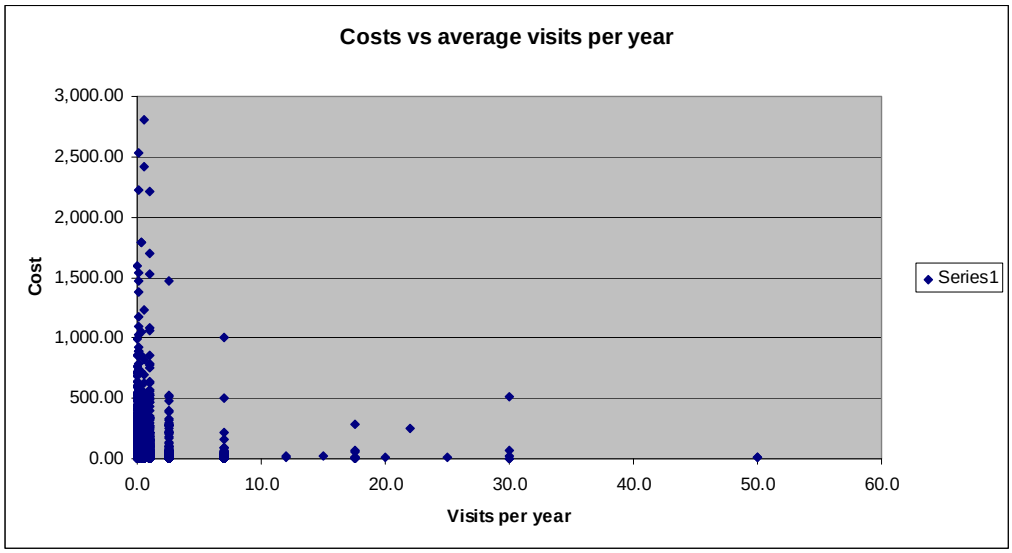
Regression analysis was undertaken to explore the relationship between key variables and WTP values. As expected, income is generally seen to be a significant variable affecting WTP values, except for Foreigners in Sibensko-Kninska County, where the number of visits they make is more significant. Interestingly, age and education level of Croatians are a strong indicator of their WTP.

1.10 TRAVEL COST ANALYSIS

A comprehensive attempt was then made to develop an 'Individual Travel Cost Model' whereby the relationship between total travel costs, frequency of visits and other key variables is established to estimate the average value of someone visiting a park.

However, the analysis did not reveal consistent and reliable values. *Figure 1.1* below shows the spread of costs and stated frequency of associated visits (from less than once every ten years to 50 times a year). It reveals little clear correlation between the travel costs and frequency that people will visit a park.

Figure 1.1 Scatter plot showing travel costs and visit frequency for all Parks



Essentially, a lot of people spend a significant amount of money and time to visits the parks, and generally speaking, the majority of people will only visit them once or very infrequently. Similarly, there are people that live nearby that don't spend so much to get there (although they have to pay significant entry fee), but who will also only go very infrequently.

1.11 APPLICATION OF CVM RESULTS

By multiplying average WTP values and visitor numbers, an estimate of the total WTP to protect key features of the park is derived, as shown below. This covers both recreational and non-use values. It may also capture, to an extent, some of the indirect ecosystem service values, as currently understood by the respondents.

Table 1.2 Aggregated annual WTP values for the parks

Protected Area	Croatian adults (Euro/yr)	Eastern European adults (Euro/yr)	Other foreign adults (Euro/yr)	Total adults (Euro/yr)
Paklenica	135,123	341,289	642,198	**1,118,609**
Brijuni	359,876	268,682	1,430,679	**2,059,237**
Risnjak	35,355	4,316	72,568	**112,240**
Kornati	353,328	331,278	722,031	**1,406,637**
Papuk	283,543	-	-	**-**

The table below reveals significant values and expressed willingness to pay (4 to 40 million Euro per year) by Croatians and visitors associated with protecting wildlife, geology, landscapes and cultural sites within the two Counties. However, it is also important to bear in mind that this table excludes the WTP values expressed by Croatian visitors from outside the Counties. Most Croatian visitors from outside the two counties also stated that they were WTP to protect the features within the County they were visiting.

Table 1.3 Aggregated annual WTP values for the Counties

Public Institution	Croatians living with the counties WTP (Euro/yr)	Eastern European WTP (Euro/yr)	Other foreigner WTP (Euro/yr)	Total WTP (Euro/yr)
Šibensko-Kninska	2,288,000	13,482,337	23,439,630	**39,209,967**
Varaždinska	2,948,124	565,222	209,090	**3,722,436**

Note: This excludes WTP values stated by Croatian visitors that live outside the counties.

1.12 OTHER APPLICATION OF WTP RESULTS

The above values WTP do need to be treated with some caution because the study involved a brief analysis of a complex matter over a large number of sites. As a result, there will be various biases and some uncertainty in the above values, for example, based on the limited time of year the questionnaires were undertaken (mid August to October), and the relatively small sample sizes per site. However, the results and methodology adopted can potentially be used in various ways.

Firstly, the results can be applied directly to cost:benefit analysis studies that compare the costs of guaranteeing the protection described in each questionnaire WTP scenarios. This can be used to help justify such expenditures on protected areas. The WTP values clearly indicate a strong willingness of Croatians and foreigners to help contribute to managing Croatia's valuable natural resources.

Secondly, the results can provide an indication as to the relative order of magnitude of benefits that could be gained from protecting other similar sites. The values could thus be used in 'benefit transfer' applications, preferably in Croatia, but potentially in other Countries in the region too.

Thirdly, it is important to understand that the values represent the level of enjoyment visitors gain from visiting the site PLUS the value that they would get if the protected areas continue to be effectively managed to protect the wildlife and geology etc.

Fourthly, the questionnaire and analytical methodology could be applied to other protected areas in Croatia or elsewhere, to elicit values from visitors at other protected areas.

Finally, the WTP results and associated questionnaire responses should be able to inform the sustainable financing of protected areas in several ways. For example, they can be used to help inform the setting of visitor entrance fees, marketing the sites to different nationalities, informing the provision of alternative or improved services, and to inform capturing potential 'non-use' values associated with international visitors and non-visitors and Croatians.

1.13 APPLICATION OF TCM RESULTS

The travel cost method valuation suggests an overall average consumer surplus value of Euro 2,000 to 3,000 per visitor, including both Croatians and Foreigners. This seems an 'unbelievably' high value which should not be trusted. However, it does clearly demonstrate a high value that all types of visitor place on visiting the parks. The analysis has provided insight into the complexities involved in people's decisions to travel and visit protected areas.

Having said that, the travel cost data that was collected could be used in an 'economic impact assessment' of the protected areas. Such an analysis would show how much money is spent by visitors on their holidays and to the protected areas and the proportion of that money that is attributable to the protected area. Such studies are commonly undertaken to highlight how important protected areas can be for local, regional and national economies.

For example, a simple analysis of average frequency of visits and average travel cost per visitor associated with their visit to the park reveals some interesting information, as shown on the table below.

Table 1.4 Overall Average Frequency and Attributable Costs of Visits

Origin of visitors	Average frequency of visit to park visited	Average cost attributable to each park visit (Euro/visit)
Croatians	1.8 times per year	68
Eastern Europeans	Once every 2.5 years	162
Other foreigners	Once every 3.2 years	264

Unfortunately, what is not known in this study is 'where' the travel costs were actually spent, in terms of either the 'local economy' surrounding the protected areas, the wider regional or 'county economy', or the wider 'national Croatian economy'. On the other hand, estimates of this information could be made based on other studies elsewhere and professional judgement. Any future applications of this approach should consider modifying the questionnaire accordingly.

CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

This report represents one of two study outputs produced by ERM Ltd (supported by Oikon, Pescares and Robert Wright, an academic econometrician), commissioned by the World Bank that aims to help improve the financial management of protected area conservation in Croatia.

This second output involved designing and conducting a tourist survey focussing on Croatians and Foreigners to ascertain their preferences, willingness to pay and travel costs associated with protecting nature and biodiversity in Croatia. This report summarizes the results of analysis.

The other related output is a report comprising a review of protected area financing in Croatia and a desk review of best practice in sustainable financing mechanisms and of government commitment levels in the EU and elsewhere in the world to protected area financing (ERM 2010).

As part of the study the project team also conducted a workshop in conjunction with the World Bank and Ministry of Culture to disseminate the results from the two draft outputs detailed above. The workshop provided valuable feedback to enhance the finalisation of both two reports. In addition, a summary of the workshop output is provided in the review of sustainable financing report.

1.2 AIMS

The objective of this second study is to assess the economic value of some of the key benefits of Protected Areas in Croatia relating to people's preferences. It evaluates patterns of demand and the "willingness-to-pay" (WTP) to preserve and improve protected areas by both domestic (Croatians) and international tourists (foreigners) using both the contingent valuation method[1] (CVM) and travel cost method[2] (TCM) of valuation. The former method

(1) Contingent Valuation is a method of estimating the value that a person places on a good. The approach asks people to directly report their willingness to pay (WTP) to obtain a specified good, or willingness to accept (WTA) to give up a good, rather than inferring these values from observed behaviour in regular market place.

(2) The travel cost method is used to estimate economic use values associated with ecosystems or sites that are used for recreation. The basic premise of the travel cost method is that the time and travel cost expenses that people incur to visit a site represent the "price" of access to the site. Thus, peoples' willingness to pay to visit the site can be estimated based on the number of trips that they make at different travel costs. This is analogous to estimating peoples' willingness to pay for a marketed good based on the quantity demanded at different prices.

(CVM) helps determine the recreational and non-use value of sites, whilst the latter (TCM) is better at estimating the recreational value of sites.

The intention is that the results will be of use in undertaking cost:benefit analyses (CBA) of protected area (PA) investments to help justify and influence the design of projects for financing protected areas. In addition, it will also be used to inform different sustainable financing options of protected areas within Croatia. The values can also potentially be 'transferred' to other similar contexts to inform decision-making elsewhere.

The intention was to assess demand and WTP estimates for both local tourists and international tourists at the following sites:

1. National Park Brijuni;
2. National Park Paklenica;
3. National Park Risnjak;
4. National Park Kornati;
5. Nature Park Lonjsko polje;
6. Nature Park Papuk;
7. Public Institution in Šibensko-Kninska County; and
8. Public Institution in Varaždinska County

It is important to point out that this study did not set out to determine the economic impact (eg visitor and management expenditures and jobs supported) associated with the protected areas. Such information can be extremely useful to help promote the value of nature conservation, but was outside the scope of this study.

1.3 CONCEPT OF TOTAL ECONOMIC VALUE

The concept of total economic value (TEV) is now well-established and provides a useful framework for identifying the various values associated with protected areas. The total economic value of a protected area consists of its use values and non-use values.

A protected area's use values are in turn made up of its direct use values (e.g. recreation, tourism, natural resource harvesting, hunting, gene pool services, education and research), indirect use values (e.g. watershed protection, breeding habitat for migratory, species, climatic stabilization and carbon sequestration), and option values (e.g. future value of information derived from the protected area), while non-use values include bequest values (the benefit of knowing that others benefit or will benefit from the protected area) and existence values (benefit of knowing that the protected area exists even though one is unlikely to visit it or use it in any other way).

PAs have numerous use and non-use values where tourism represents one of the major direct-use values. This study explores the use benefits associated with tourism in the PAs and also investigate some of the non-use values associated with preserving and protecting PAs.

1.4 LINKS TO PREVIOUS STUDIES

It is interesting to note that a relatively similar market research study was conducted in 2006 (TOMAS 2006). This was the first national and systematic survey of attitudes and expenditures of visitors to Croatia's national and nature parks. The survey obtained 2,258 responses between June to October 2006, covering six national parks and two nature parks (including Paklenica, Brijuni and Kornati). Further details are also provided in the Croatian sustainable financing review (ERM, 2010).

1.5 STRUCTURE OF REPORT

Section 1 introduces the study.
Section 2 provides a brief outline of the methodology used.
Section 3 provides the results of tourist questionnaire surveys, focussing on the background data and statistics.
Section 4 details the results of the CVM and TCM analyses.
Section 5 concludes by applying the results of the analyses to the parks and highlighting some key observations.

2 METHODOLOGY

2.1 APPROACH

2.1.1 The questionnaire survey

The data collected in the tourist questionnaire surveys can be categorized into several broad groups:

- Socio-economic information (age, education, income, etc);
- Information on the current visit (locations, expenditures, travel costs, details of packages, etc);
- Perceptual information on the current visit (what is good/bad, suggested improvements, etc); and
- Willingness to pay (WTP) scenarios for maintaining the key features of the protected areas for now and for generations to come, and WTP for particular associated enhancement options.

Due to budgetary constraints and the practicalities of trying to complete large samples of questionnaire surveys at eight different sites, the questionnaires were designed to be 'self completing'. The response rate was to be enhanced by having trained assistants to hand out the questionnaires and assist respondents with completing them. In addition, the surveys needed to be short (maximum two pages) to help ensure a high response rate. *Annex A* includes four example questionnaires covering a national park and a Public Institution targeting both Croatians and foreigners.

A pre-test survey was conducted at two parks and in a County at the end of July to validate the relevancy and sensitivity of questions, and ensure respondents understood them. After a successful piloting session, only minor modifications were required to finalise the questionnaires.

2.1.2 Sampling

In order to estimate a robust demand relationship, the original aim was for each protected area to have an approximate sample size of 200 respondents per visitor type (Croatians and Foreigners), giving an overall sample size of 400. This was to provide a total sample size of 3,200 across all sites. Various interception locations were identified at each site to try to ensure a good mix of the types of visitor.

As is explained later, the analysis of willingness to pay values for Foreigners is split into those coming from neighbouring and Eastern European countries, and all others. This was considered important to highlight the difference in preferences and willingness/ability to pay between these two groups (1).

(1) See Table 3.2 for breakdown of countries in the two groups.

Eight protected areas are included in the survey and analysis. These parks were chosen by the World Bank and Ministry of Culture in an attempt to capture the regional heterogeneity, and comprise:

a) National Park Brijuni (marine/island area, high number of visitors)
b) National Park Paklenica (mountain area, medium number of visitors)
c) National Park Risnjak (mountain area, low number of visitors)
d) National Park Kornati (marine/island area, low number of (registered) visitors)
e) Nature Park Lonjsko polje (wetland area)
f) Nature Park Papuk (mountain area)
g) Public Institution in Šibensko-Kninska County (marine, coastline, inland areas)
h) Public Institution in Varaždinska County (continental, Mura-Drava river basin area)

2.1.3 Questionnaire finalization and implementation

The project team drafted and finalised the design of the questionnaires in coordination with the World Bank team. Following selection and training of local students, the questionnaires were conducted between mid August and October, catching the end of the peak visitor season and part of the off season.

Data were entered into an Excel database, and then cleaned and checked for errors. Statistical analysis was performed using basic analytical techniques and an econometric modelling package.

2.1.4 Actual number of respondents per site

Interviewing the targeted number of Croatian and foreign respondents at each site proved difficult due to the timing of the surveys so late in the season. The total number of respondents at each site ranged in number from 29 to 448. The sample sizes at three sites were considered too small for the valuation studies. These were both visitor types at Lonsjko Pole and Foreigners at Papuk. The visitor season for both these sites is much earlier in the year and, as inland Nature Parks, they tend to get far fewer foreign visitors anyway. Note that for the WTP analysis, it was decided to split the Foreigners into Eastern Europeans and Other Foreigners, to enhance precision of the values.

Table 2.1 Actual Number of Respondents per Site

	National Park				Nature Park		Public Institution	
Number of respondents	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaždinska County**
Croatian	175	167	112	171	*9	191	203	178
Foreign	273	233	147	198	*20	*5	215	202
Total	**448**	**400**	**259**	**369**	**29**	**196**	**418**	**380**

* Sample sizes too small for valuation purposes.

3 QUESTIONNAIRE RESULTS

3.1 INTRODUCTION

This section summarises the responses to each question (see *Annex A* for a copy of the questionnaires). The Section begins with the visitor trip details, followed by the activities taken and frequency of visits, then the 'willingness to pay' (WTP) responses, followed by socio-economic aspects.

3.2 TRIP DETAILS

3.2.1 Origin of visitors

The most common place of residence for Croatian respondents was generally the capital city, Zagreb. The percentage of people visiting from Zagreb ranged from 6% to 51%. The only exceptions to this were at Papuk Nature Park and Sibensko-Kninska County, where the most common place of residence of respondents was Osijek and Sibenik respectively, the closest major conurbations.

Table 3.1 Qu 1 - Origin of Croatian Visitors

	National Park				Nature Park		Public Institution	
Nearest City	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
Zagreb	38.9%	30.1%	34.8%	32.7%	44.4%	12.0%	5.9%	51.1%
Zadar	13.1%	0.6%	0.9%	2.9%	11.1%	-	5.4%	2.2%
Rijeka	6.3%	4.8%	27.7%	4.7%	-	-	-	6.2%
Karlovac	5.7%	1.2%	3.6%	1.2%	-	-	-	1.1%
Varazdin	5.1%	6.6%	-	4.1%	-	-	-	12.9%
Slavonski Brod	4.0%	-	0.9%	-	-	9.9%	-	7.9%
Vinkovki	2.9%	-	-	1.2%	-	3.7%	1.0%	0.6%
Split	2.9%	9.0%	6.3%	5.8%	11.1%	0.5%	2.0%	1.7%
Pula	2.3%	21.1%	4.5%	1.8%	-	-	1.0%	3.4%
Dubrovnic	1.7%	1.2%	0.9%	1.2%	11.1%	-	-	-
Durdevac	-	3.6%	-	-	-	0.5%	-	-
Pazin	1.7%	4.2%	2.7%	-	-	-	-	0.6%
Rovinj	-	4.8%	0.9%	-	-	-	-	-
Osijek	1.7%	0.6%	0.9%	4.1%	-	34.6%	1.5%	2.2%
Bjelovar	1.1%	-	1.8%	2.3%	-	-	-	2.2%
Sibenik	0.6%	-	-	9.9%	-	-	71.4%	-
Sisak	0.6%	-	0.9%	2.3%	22.2%	-	-	-
Slatina	-	-	-	0.6%	-	8.9%	-	-
Požega	-	-	-	1.8%	-	15.7%	0.5%	-
Delnice	-	0.6%	4.5%	-	-	-	-	-
Other	11.4%	11.4%	8.9%	23.4%	-	14.2%	11.3%	7.9%

Based on the following number of respondents: Paklenica 175, Brijuni 167, Risnjak 112, Kornati 171, Lonjsko 9, Papuk 191, Sibensko-Kninska 203, Varaždinska 178.

The most common origins of Foreign visitors were Germany, Italy, Slovenia and the Czech Republic. The parks attract a wide range of visiting nationalities from Europe and beyond. Those respondents considered as being 'Eastern European' (for example from Hungary, Poland and Serbia Slovenia) are highlighted below with a *. In the TOMAS (2006) study, the main nationalities were as follows: Germany (12%), Italy (10%), France, Czech Republic and Poland (about 7% each) followed by Hungary, Slovenia and Great Britain (about 6% each).

Table 3.2 ***Qu 1 - Origin of Foreign Visitors***

	National Park				Nature Park		Public Institution	
Country	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž-dinska County**
Germany	34.8%	20.2%	23.1%	18.7%	10.0%	40.0%	25.6%	2.5%
*Slovenia	9.2%	10.3%	4.1%	10.6%	-	-	3.3%	46.0%
*Czech Republic	8.8%	1.7%	2.0%	2.5%	-	-	9.8%	12.9%
Holland	8.4%	3.4%	7.5%	0.5%	-	-	0.9%	0.5%
Italy	7.0%	27.5%	23.8%	26.3%	-	-	7.4%	2.5%
*Poland	6.2%	1.7%	0.7%	6.1%	-	-	6.0%	3.0%
France	5.5%	1.7%	7.5%	2.0%	-		1.9%	1.0%
*Hungary	5.1%	0.9%	-	3.0%	-	-	9.8%	15.3%
Austria	4.0%	8.6%	1.4%	12.6%	5.0%	-	8.4%	1.9%
Ireland	-	6.4%	0.7%	-	-	-	-	-
UK	1.1%	3.4%	4.1%	-	-	-	8.8%	-
Spain	0.7%	2.1%	8.8%	0.5%	-	-	3.7%	1.0%
*Serbia	-	2.6%	-	1.5%	-	-	-	-
Switzerland	0.4%	0.4%	3.4%	0.5%	25.0%	-	1.9%	-
Belgium	0.7%	1.3%	3.4%	4.0%	60.0%	-	-	1.5%
Other	8.1%	7.7%	6.1%	11.1%	-	60.0%	12.6%	7.9%

Based on the following number of respondents: Paklenica 273, Brijuni 233, Risnjak 147, Kornati 198, Lonjsko 20, Papuk 5, Sibensko-Kninska 215, Varaždinska 202

* Visitors from these countries are categorised as 'Eastern European'. These foreigners are analysed separately in the WTP analysis.

3.2.2 Type of trip

The percentage of Croatian respondents visiting the Parks on day trips ranged from 18.0% to 90.5%. This was frequently the most common type of trip undertaken. Exceptions were at Paklenica and Kornati where the most common type of trip was an independent overnight visit. The number of respondents visiting the parks on a package vacation or for business reasons was generally low.

Table 3.3 ***Qu 2 - Type of Trip Taken by Croatians***

	National Park				Nature Park		Public Institution	
Type of trip	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
Package vacation	11.0%	4.2%	5.6%	3.6%	0.0%	2.6%	4.1%	0.6%
Independent (overnight)	45.3%	16.8%	35.2%	50.9%	0.0%	6.3%	12.8%	5.6%
Day trip	18.0%	55.1%	52.8%	40.2%	75.0%	90.5%	72.4%	86.4%
Business Trip	22.1%	12.0%	2.8%	3.6%	25.0%	0.0%	5.1%	4.5%
Other	3.5%	12.0%	3.7%	1.8%	0.0%	0.5%	5.6%	2.8%

Based on the following number of respondents: Paklenica 172, Brijuni 167, Risnjak 108, Kornati 169, Lonjsko 8, Papuk 190, Sibensko-Kninska 196, Varaždinska 177.

The most common type of trip for non-Croatian respondents was an independent overnight visit. Exceptions to this were Papuk and Varaždinska County, where day trips were the most common type of visit. Although still a relatively small percentage, a greater number of Foreigners visited the Parks as part of a package vacation compared to Croatian respondents.

Table 3.4 ***Qu 2 – Type of Trip Taken by Foreigners***

	National Park				Nature Park		Public Institution	
Type of trip	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
Package vacation	23.4%	11.2%	19.9%	14.2%	60.0%	0.0%	15.0%	0.0%
Independent (overnight)	68.0%	64.8%	65.8%	56.9%	25.0%	20.0%	63.6%	10.3%
Day trip	7.8%	14.6%	8.9%	4.6%	0.0%	40.0%	14.0%	88.1%
Business Trip	0.0%	3.4%	0.7%	2.5%	0.0%	20.0%	2.3%	1.0%
Other (e.g. boating)	0.7%	6.0%	4.8%	21.8%	15.0%	20.0%	5.1%	0.5%

Based on the following number of respondents: Paklenica 269, Brijuni 233, Risnjak 146, Kornati 197, Lonjsko 20, Papuk 5, Sibensko-Kninska 214, Varaždinska 194.

3.2.3 *Length of stay*

Amongst Croatians, the majority of respondents stayed away from home for between 2 and 7 nights. A small number of longer term stays (over 14 nights) were recorded at nearly all locations, though most frequently at Paklenica and Kornati parks. In Risnjak and Papuk parks, most respondents did not stay overnight.

Table 3.5 ***Qu 3 – Length of Stay for Croatians***

	National Park				Nature Park		Public Institution*	
Number of nights	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
0	0.7%	35.7%	53.7%	23.9%	25.0%	82.4%	-	-
1	13.2%	13.4%	8.3%	8.2%	0.0%	5.9%	-	-
2 to 3	43.7%	23.2%	21.3%	18.9%	25.0%	8.6%	-	-
4 to 7	22.5%	20.5%	10.2%	30.2%	50.0%	1.6%	-	-
8 to 14	14.6%	5.4%	3.7%	15.7%	0.0%	0.5%	-	-
15 to 28	4.6%	1.8%	2.8%	1.9%	0.0%	0.5%	-	-
>29	0.7%	0.0%	0.0%	1.3%	0.0%	0.5%	-	-

Based on the following number of respondents: Paklenica 151, Brijuni 112, Risnjak 108, Kornati 159, Lonjsko 4, Papuk 187.
Note, information not obtained from respondents in Sibensko-Kninska and Varaždinska County.
* Visitors in Public Institutions not asked this question.

A much higher percentage of Foreigners stayed overnight away from their home of origin when compared to Croatian respondents. Most respondents stayed between 4 and 14 nights. The number of long terms stays recorded (over 14 nights) was also much greater than for Croatian respondents.

Table 3.6 ***Qu 3 – Length of Stay for Foreigners***

	National Park				Nature Park		Public Institution	
Number of nights	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
0	1.5%	2.8%	9.2%	0.5%	-	20.0%	-	-
1	1.5%	1.8%	0.7%	2.2%	-	0.0%	-	-
2 to 3	3.1%	4.1%	14.2%	7.1%	-	0.0%	-	-
4 to 7	25.7%	41.9%	9.2%	45.1%	-	40.0%	-	-
8 to 14	44.1%	32.3%	39.7%	33.7%	-	0.0%	-	-
15 to 28	22.6%	14.3%	24.1%	7.1%	-	20.0%	-	-
>29	1.5%	2.8%	2.8%	4.3%	-	20.0%	-	-

Based on the following number of respondents: Paklenica 261, Brijuni 217, Risnjak 141, Kornati 184, Lonjsko 0 (no responses), Papuk 5.
Note, information not obtained from respondents in Sibensko-Kninska and Varaždinska County.
* Visitors in Public Institutions not asked this question.

3.2.4 *Number and type of people in group*

The average number of Croatian adult travellers per group ranged from 1.2 to 5.1 people. It is likely that the average figure of 5.1 adults recorded at Paklenica may be a result of misreading of the question and reflects the presence of tour or business groups. The average number of Croatian children travellers per group ranged from 0.5 to 1.8 people.

Table 3.7 Qu 4 - Number and type of people in group for Croatians

	National Park				Nature Park		Public Institution	
People	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž-dinska County**
Average number of adults	5.1	1.3	1.2	1.2	1.2	1.5	1.8	1.9
Average number of children	1.8	1.7	0.9	0.5	1.5	0.6	0.9	1.4

Based on the following number of respondents for number of adults question: Paklenica 151, Brijuni 166, Risnjak 112, Kornati 171, Lonjsko 9, Papuk 2, Sibensko-Kninska 203, Varaždinska 136.
Based on the following number of respondents for number of children question: Paklenica 101, Brijuni 20, Risnjak 60, Kornati 140, Lonjsko 2, Papuk 173, Sibensko-Kninska 203, Varaždinska 59.

The average number of Foreign adult travellers in a group ranged from 0.2 to 5.1 people. Again, it is possible that the average figure of 5.1 adults recorded at Lonjsko may be a result of misreading the question and reflects the presence of package groups. The average number of Foreign children travellers per group ranged from 0.5 to 3.8 people. The high number for Lonjsko will be biased by the small sample size.

Table 3.8 Qu 4 - Number and type of people in group for Foreigners

	National Park				Nature Park		Public Institution	
People	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaž-dinska County**
Average number of adults	2.2	2.2	2.0	2.4	5.1	0.2	2.3	2.7
Average number of children	2.2	1.0	2.1	0.6	3.8	0.6	0.5	1.5

Based on the following number of respondents for number of adults question: Paklenica 245, Brijuni 232, Risnjak 147, Kornati 197, Lonjsko 19, Papuk 5, Sibensko-Kninska 215, Varaždinska 134.
Based on the following number of respondents for number of children question: Paklenica 120, Brijuni 161, Risnjak 51, Kornati 121, Lonjsko 13, Papuk 5, Sibensko-Kninska 215, Varaždinska 25.

3.2.5 *Proportion on a tour*

The majority of Croatian respondents were not part of a tour group. The only exceptions to this were at Brijuni and Kornati National Parks where boat access is essential to visit the Parks.

Table 3.9 Qu 5 – Proportion of Croatians on a 'tour'

	National Park				Nature Park		Public Institution	
Member of a tour group?	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž-dinska County**
Yes	33.1%	65.5%	21.6%	77.2%	33.3%	22.5%	24.6%	26.3%
No	65.7%	30.9%	78.4%	22.2%	66.7%	77.5%	75.4%	73.7%
Don't know	1.2%	3.6%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%

Based on the following number of respondents: Paklenica 169, Brijuni 165, Risnjak 111, Kornati 171, Lonjsko 9, Papuk 191, Sibensko-Kninska 142, Varaždinska 175.

The majority of Foreign respondents were not part of a tour group, except at Brijuni, Kornati and Lonjsko Parks (although the latter is based on a very small sample). At Varazdinska, the proportion of Foreigners on a tour is also high, at 49%.

Table 3.10 Qu 5 – Proportion of Foreigners on a 'tour'

	National Park				Nature Park		Public Institution	
Member of a tour group?	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž-dinska County**
Yes	10.5%	67.0%	17.0%	53.8	90.0%	0.0%	14.4%	49.0%
No	88.8%	32.6%	83.0%	46.2	10.0%	100.0%	85.6%	51.0%
Don't know	0.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Based on the following number of respondents: Paklenica 261, Brijuni 233, Risnjak 147, Kornati 197, Lonjsko 20, Papuk 5, Sibensko-Kninska 208, Varaždinska 200.

3.2.6 *Importance of Protected Area for Trip*

The level of importance of the protected area in the Croatian's decision to undertake their overall trip was determined based on a scale of 1-5 (with 1 being of no importance and 5 being the main reason). The results suggest that the level of importance for each protected area is wide ranging and fairly well distributed. This is reflected in the mid range average scores of 2.6 to 3.8.

Table 3.11 Qu 6 – Importance of the Protected Area for Overall Trip for Croatians

	National Park				Nature Park		Public Institution	
Level of importance	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
(1) Not at all	9.6%	15.3%	19.6%	38.6%	11.1%	11.1%	18.0%	7.6%
(2) Minor	25.1%	9.8%	11.6%	19.9%	0.0%	14.8%	19.2%	12.4%
(3) Quite	16.2%	15.3%	17.0%	8.8%	33.3%	14.3%	31.7%	17.6%
(4) Major	19.8%	23.3%	17.0%	8.8%	11.1%	16.4%	20.4%	23.5%
(5) Main	24.6%	32.5%	34.8%	24.0%	44.4%	40.2%	10.8%	38.8%
(6) Don't know	4.8%	3.7%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%
Average (1-5)	3.3	3.5	3.4	2.6	3.8	3.6	2.9	3.7

Based on the following number of respondents: Paklenica 167, Brijuni 163, Risnjak 112, Kornati 171, Lonjsko 9, Papuk 189, Sibensko-Kninska 167, Varaždinska 170.

The level of importance for Foreigners visiting the parks in their decision to undertake their overall trip was also wide ranging and fairly well distributed. This is reflected in the mid range average scores of 1.4 to 3.8 (again based on a level of importance of 1 to 5). However, compared to Croatian respondents, visiting the parks was generally less important to Foreigners in their decision to undertake the trip as a whole. This is as to be expected, as there are so many other reasons for foreigners to visit Croatia, rather than to just visit a single protected area.

Table 3.12 Qu 6 - Importance of the Protected Area for Overall Trip for Foreigners

	National Park				Nature Park		Public Institution	
Level of importance	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
(1) Not at all	9.2%	24.9%	24.5%	32.3%	65.0%	40.0%	12.2%	3.0%
(2) Minor	29.8%	24.9%	21.8%	17.7%	30.0%	0.0%	23.4%	9.6%
(3) Quite	30.9%	27.1%	37.4%	20.7%	5.0%	0.0%	32.5%	20.2%
(4) Major	15.3%	13.5%	14.3%	22.7%	0.0%	0.0%	27.9%	39.9%
(5) Main	13.0%	8.3%	2.0%	6.6%	0.0%	40.0%	4.1%	27.3%
(6) Don't know	1.9%	1.3%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%
Average (1-5)	2.9	2.6	2.5	2.5	1.4	3.0	2.9	3.8

Based on the following number of respondents: Paklenica 262, Brijuni 229, Risnjak 147, Kornati 198, Lonjsko 20, Papuk 5, Sibensko-Kninska 197, Varaždinska 198.

3.3 ACTIVITIES AND FREQUENCY OF VISITS

3.3.1 Main activities

Respondents undertook a wide range of activities in the parks. However, walking/hiking, bird/wildlife and relaxation were most popular. Specific to certain parks, climbing (e.g. in Brijuni and Paklenica) and sailing (e.g. in Kornati) were common.

Table 3.13 Qu 9 – Main activities for Croatians

	National Park				Nature Park		Public Institution	
Activity	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
Just passing	8.6%	5.4%	20.5%	9.4%	0.0%	8.9%	18.2%	9.6%
Driving	0.6%	40.7%	10.7%	3.5%	22.2%	8.9%	11.3%	7.3%
Walking/ hiking	81.7%	0.6%	81.3%	2.3%	33.3%	77.5%	36.0%	36.0%
Climbing	25.1%	33.5%	6.3%	11.7%	0.0%	22.0%	5.9%	2.8%
Bird/ wildlife	26.3%	18.0%	30.4%	1.8%	100.0%	40.3%	14.8%	11.2%
Culture	4.6%	7.8%	1.8%	4.7%	11.1%	2.1%	7.4%	42.7%
Picnic/ eating	20.6%	9.6%	11.6%	0.6%	22.2%	35.6%	17.7%	18.0%
Cycling	1.1%	0.0%	2.7%	21.1%	33.3%	3.1%	5.9%	0.6%
Horse riding	0.6%	14.4%	0.9%	0.0%	33.3%	0.5%	10.8%	0.6%
Diving	0.0%	8.4%	0.0%	1.2%	0.0%	0.0%	7.4%	0.0%
Snorkellin g/swim	1.1%	0.6%	0.9%	15.8%	0.0%	0.5%	2.0%	0.0%
Sailing	0.0%	18.0%	1.8%	57.3%	0.0%	0.0%	2.0%	0.0%
Boat trip	0.0%	4.2%	0.0%	2.3%	11.1%	0.0%	32.5%	0.0%
Staying overnight	8.6%	42.5%	5.4%	36.3%	22.2%	2.1%	24.6%	1.1%
Relaxation	45.7%	11.4%	32.1%	1.2%	33.3%	46.1%	47.8%	35.4%
Group tour	1.7%	0.0%	1.8%	63.7%	0.0%	2.1%	3.9%	7.9%
Other	-	0.0%	0.0%	0.0%	11.1%	2.1%	0.5%	0.6%

Based on the following number of respondents: Paklenica 175, Brijuni 167, Risnjak 112, Kornati 171, Lonjsko 9, Papuk 191, Sibensko-Kninska 203, Varaždinska 178.

Foreigner respondents also undertook a wide range of activities, with walking/hiking, bird/wildlife, culture and relaxation being especially popular. Snorkelling and sailing were common in Kornati.

Table 3.14 Qu 9 – Main activities for Foreigners

	National Park				Nature Park		Public Institution	
Activity	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
Just passing	8.4%	8.2%	17.7%	5.6%	35.0%	20.0%	21.9%	7.4%
Driving	2.2%	3.0%	10.2%	2.0%	45.0%	20.0%	9.8%	4.0%
Walking /hiking	85.7%	18.9%	70.7%	7.1%	10.0%	80.0%	34.9%	28.2%
Climbing	17.2%	0.9%	0.7%	1.0%	45.0%	40.0%	3.3%	4.0%
Bird/ wildlife	32.2%	20.2%	24.5%	9.1%	0.0%	40.0%	20.0%	19.3%
Culture	16.8%	28.8%	11.6%	7.1%	60.0%	40.0%	20.9%	77.2%
Picnic/ eating	17.2%	3.4%	18.4%	11.6%	15.0%	20.0%	13.5%	10.4%
Cycling	1.5%	5.6%	6.8%	0.0%	5.0%	0.0%	1.9%	1.0%
Horse riding	1.1%	0.0%	0.7%	0.0%	50.0%	0.0%	0.0%	0.0%
Diving	0.4%	0.9%	0.0%	11.1%	0.0%	0.0%	6.5%	0.0%
Snorkelli ng/swim	3.7%	9.9%	2.7%	51.5%	0.0%	0.0%	22.8%	0.5%
Sailing	0.4%	0.4%	0.0%	24.7%	5.0%	0.0%	13.0%	0.0%
Boat trip	0.4%	12.0%	0.0%	28.3%	0.0%	0.0%	31.2%	0.0%
Staying overnigh t	7.0%	3.9%	5.4%	3.5%	0.0%	0.0%	6.5%	1.0%
Relaxatio n	33.3%	39.1%	39.5%	65.7%	25.0%	60.0%	42.8%	41.6%
Group Tour	0.7%	30.0%	0.7%	0.5%	20.0%	0.0%	1.9%	4.0%
Other	0.0%	3.4%	1.4%	0.5%	5.0%	0.0%	1.9%	3.5%

Based on the following number of respondents: Paklenica 175, Brijuni 233, Risnjak 147, Kornati 198, Lonjsko 20, Papuk 5, Sibensko-Kninska 215, Varaždinska 202.

3.3.2 Frequency of visits

Generally around 30 – 40% of Croatian visitors visit the same park once a year or more often, with the highest proportion being visiting Risnjak (over 45% once a year or more).

Table 3.15 Qu 10 - Frequency of Visits to the Protected Area- Croatians

	National Park				Nature Park		Public Institution	
Frequency of visit to park	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaž-dinska County**
Never again	13.8%	17.9%	9.1%	34.8%	0.0%	6.8%	19.8%	12.1%
Less than once in ten years	9.2%	5.6%	6.4%	5.0%	0.0%	5.8%	4.0%	6.3%
Once every five to ten years	12.6%	13.6%	7.3%	8.7%	0.0%	3.1%	6.9%	15.5%
Once every three to four years	9.8%	17.3%	13.6%	16.1%	22.2%	3.7%	6.4%	12.1%
Every other year	13.8%	12.3%	14.5%	5.0%	0.0%	4.2%	5.4%	5.7%
Once a year	23.0%	19.8%	21.8%	16.1%	44.4%	25.7%	33.7%	16.7%
Two or three times a year	8.0%	8.6%	15.5%	13.0%	11.1%	31.9%	14.4%	20.7%
Four to ten times a year	6.9%	2.5%	10.9%	1.2%	22.2%	14.1%	7.4%	10.9%
More than ten times a year	2.9%	2.5%	0.9%	0.0%	0.0%	4.7%	2.0%	0.0%

Based on the following number of respondents: Paklenica 174, Brijuni 162, Risnjak 110, Kornati 161, Lonjsko 9, Papuk 191, Sibensko-Kninska 202, Varaždinska 174.

Most Foreigner respondents reported they were unlikely to return to the parks on a regular basis, for example within three or four years . The percentage of respondents not expecting to the visit the parks again ranged up to 34.3% (for Sibensko-Kninska County). Only around 10% said they would visit the same parks again once a year or more, except for Kornati which was 20%.

Table 3.16 Qu 10 - Frequency of Visits to the Protected Area- Foreigners

	National Park				Nature Park		Public Institution	
Frequency of visit to park	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaž-dinska County**
Never again	13.7%	26.9%	28.5%	25.0%	-	0.0%	34.3%	11.8%
Less than once in ten years	30.3%	36.1%	27.8%	8.7%	-	60.0%	21.7%	8.7%
Once every five to ten years	20.7%	15.4%	17.4%	11.7%	-	20.0%	11.1%	13.8%
Once every three to four years	17.0%	10.6%	13.2%	16.3%	-	0.0%	13.0%	23.6%
Every other year	6.3%	3.1%	5.6%	14.3%	-	0.0%	7.2%	11.3%
Once a year	9.2%	7.5%	6.3%	19.4%	-	0.0%	11.1%	15.4%
Two or three times a year	1.8%	0.0%	1.4%	4.6%	-	0.0%	1.0%	8.2%
Four to ten times a year	0.4%	0.0%	0.0%	0.0%	-	20.0%	0.5%	6.7%
More than ten times a year	0.7%	0.4%	0.0%	0.0%	-	0.0%	0.0%	0.5%

Based on the following number of respondents: Paklenica 271, Brijuni 227, Risnjak 144, Kornati 196, Lonjsko 0 (no responses), Papuk 5, Sibensko-Kninska 207, Varaždinska 195.

3.4 WILLINGNESS TO PAY QUESTIONS

3.4.1 Value for money

Although responses were generally wide ranging, most Croatian visitors thought the entrance fees represented satisfactory to very good value for money. The percentage of respondents who thought the fees were very bad value ranged from 0.0% to 6.4%. At the other end of the scale, the percentage of respondents who thought the fees were very good value ranged from 7.1% to 44.3%. Papuk respondents gave the highest average rating of 4.1 for value for money (based on a scale of 1 to 5).

Table 3.17 Qu 11 – Value for money for entrance fees - Croatians

	National Park				Nature Park		Public Institution	
Value for money	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaždinska County**
(1) Very bad	1.2%	0.6%	6.4%	4.7%	0.0%	0.0%	-	-
(2) Quite bad	3.5%	3.0%	3.7%	22.4%	0.0%	2.3%	-	-
(3) Satisfactory	27.2%	48.2%	37.6%	47.1%	77.8%	30.7%	-	-
(4) Quite good	32.9%	29.5%	22.9%	18.8%	11.1%	22.7%	-	-
(5) Very good	33.5%	13.3%	29.4%	7.1%	11.1%	44.3%	-	-
(6) Don't know	1.7%	5.4%	0.0%	0.0%	0.0%	0.0%	-	-
Average (1-5)	4.0	3.5	3.6	3.0	3.3	4.1	-	-

Based on the following number of respondents: Paklenica 173, Brijuni 166, Risnjak 109, Kornati 170, Lonjsko 9, Papuk 176.
Note, information not obtained from respondents in Sibensko-Kninska and Varaždinska County.

Again, Foreigner responses were generally wide ranging, though most visitors thought the entrance fees represented satisfactory to very good value for money. The percentage of respondents who thought the fees were very bad value ranged from 0.0% to 36.8%. At the other end of the scale, the percentage of respondents who thought the fees were very good value ranged from 5.3% to 25.0%. Papuk and Paklenica respondents gave the highest average rating of 3.8 for value for money (based on a scale of 1 to 5).

Table 3.18 Qu 11 – Value for money for entrance fees – Foreigners

	National Park				Nature Park		Public Institution	
Value for money	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaždinska County**
(1) Very bad	1.1%	1.4%	5.8%	1.6%	36.8%	0.0%	-	-
(2) Quite bad	4.9%	9.1%	9.5%	13.0%	47.4%	0.0%	-	-
(3) Satisfactory	30.3%	40.6%	38.7%	43.5%	10.5%	50.0%	-	-
(4) Quite good	39.7%	37.4%	25.5%	26.6%	0.0%	25.0%	-	-
(5) Very good	22.5%	11.4%	20.4%	15.2%	5.3%	25.0%	-	-
(6) Don't know	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-
Average (1-5)	3.8	3.5	3.4	3.4	1.9	3.8	-	-

Based on the following number of respondents: Paklenica 267, Brijuni 219, Risnjak 137, Kornati 184, Lonjsko 19, Papuk 4.
Note, information not obtained from respondents in Sibensko-Kninska and Varaždinska County.

3.4.2 *Importance of protecting the PA features*

The majority of Croatian respondents considered it quite important to extremely important to them as an individual to protect the features of the protected areas. The average rating on importance to protect the PAs ranged from 3.9 to 4.8 (based on a scale of 1 to 5). Only a very small proportion of visitors thought it not at all important to protect them.

Table 3.19 Qu 12 - Importance of protecting features of PAs - Croatians

	National Park				Nature Park		Public Institution	
Level of importance	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaždinska County**
(1) Not at all	0.6%	0.6%	0.0%	2.4%	0.0%	0.5%	1.6%	1.1%
(2) Not very	3.4%	2.5%	0.0%	11.8%	0.0%	1.6%	10.4%	3.4%
(3) Quite	10.3%	14.7%	11.1%	42.0%	0.0%	12.6%	26.4%	22.4%
(4) Very	22.3%	28.2%	18.5%	28.4%	22.2%	21.9%	23.3%	25.3%
(5) Extremely	62.3%	54.0%	70.4%	14.8%	77.8%	63.4%	38.3%	47.7%
(6) Don't know	1.1%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
Average 1 to 5 score	4.4	4.3	4.6	3.4	4.8	4.5	3.9	4.1

Based on the following number of respondents: Paklenica 175, Brijuni 163, Risnjak 108, Kornati 169, Lonjsko 9, Papuk 183, Sibensko-Kninska 193, Varaždinska 174.

The majority of Foreigner respondents also considered it quite important to extremely important to them as an individual to protect the parks. The average rating on importance to protect the park ranged from 3.6 to 5.0 (based on a scale of 1 to 5). Again, only a very small proportion of visitors thought it not at all important to protect the parks.

Table 3.20 Qu 12 - Importance of protecting features of PAs – Foreigners

	National Park				Nature Park		Public Institution	
Level of importance	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaž-dinska County**
(1) Not at all	0.7%	0.9%	0.7%	0.0%	0.0%	0.0%	1.4%	0.0%
(2) Not very	3.7%	5.2%	0.0%	6.1%	10.5%	0.0%	2.9%	0.5%
(3) Quite	10.0%	15.7%	15.3%	27.0%	26.3%	0.0%	27.1%	10.0%
(4) Very	30.7%	35.4%	38.9%	31.6%	57.9%	0.0%	36.7%	52.0%
(5) Extremely	53.7%	42.8%	45.1%	35.2%	5.3%	100.0%	31.9%	37.5%
(6) Don't know	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Average (1-5)	4.3	4.1	4.3	4.0	3.6	5.0	3.9	4.3

Based on the following number of respondents: Paklenica 270, Brijuni 229, Risnjak 144, Kornati 196, Lonjsko 19, Papuk 5, Sibensko-Kninska 210, Varaždinska 200.

3.4.3 Willingness to pay extra for improvements

Most people would be willing to pay a certain amount extra to support the parks in one way or another. Visitors at each park had slightly different preferences in terms of what they would be willing to pay extra for. Note that 1 represents 'not at all' willing to pay any more, 2 is 'a little more' and 3 is 'much more'.

Table 3.21 ***Qu 13 – Croatian willingness to pay more for different aspects of PA management***

	National Park				Nature Park		Public Institution	
Average 1 to 3 score	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaž-dinska County**
a) To improve facilities highlighted in Q9	2.0	1.6	2.3	2.1	2.3	2.0	2.2	2.0
b) To create a visitor information centre	1.9	1.7	2.1	2.1	2.4	2.1	2.0	2.0
c) Improve wildlife, geological and cultural management	2.3	2.0	2.2	2.4	2.6	2.3	2.3	2.2
d) Improved brochures, leaflet and maps	1.9	1. 6	2.2	1.9	2.5	2.1	1.9	2.0
e) Improved information boards	1.8	1.6	2.2	2.0	2.6	1.9	2.0	2.0
f) Specialist educational programmes for groups	1.8	1.7	2.1	2.2	2.5	2.0	2.1	2.1
g) Other	1.7	1.7	2.0	1.4	3.0	1.7	2.0	1.8

Based on the following number of respondents:
Paklenica a) 136, b) 140, c) 134, d) 138, e) 136, f) 127, g) 39.
Brijuni a) 148, b) 157, c) 159, d) 156, e) 155, f) 155, g) 25.
Risnjak a) 73, b) 71, c) 71, d) 72, e) 71, f) 67, g) 12.
Kornati a) 144, b)151, c) 160, d) 151, e)152, f) 144, g) 13.
Lonjsko a) 8, b)8, c) 8, d) 8, e) 8, f) 8, g) 1
Papuk a) 149, b) 158, c) 157, d) 166, e) 154, f) 135, g) 31
Sibensko-Kninska a) 147, b) 147, c) 154, d) 159, e) 150, f) 145, g) 42
Varaždinska a) 120, b) 125, c) 131, d) 135, e) 125, f) 119, g) 33

As above, most Foreigners asked would be willing to pay a certain amount extra to support the PAs in one way or another. Overall, it seemed that on average, most foreigners would be willing to pay 'a little more', but interestingly slightly less than Croatians, to support the PAs.

Table 3.22 ***Qu 13 – Foreigner willingness to pay more for different aspects of PA management***

	National Park				Nature Park		Public Institution	
Average 1 to 3 score	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaž-dinska County**
a) To improve facilities highlighted in Q9	1.9	1.6	1.8	2.1	3.0	1.8	2.0	2.3
b) To create a visitor information centre	1.9	1.6	1.8	2.2	2.0	2.0	2.0	2.0
c) Improve wildlife, geological and cultural management	2.1	2.0	2.0	2.3	1.8	2.0	2.1	2.0
d) Improved brochures, leaflet and maps	1.8	1.5	1.9	1.9	2.2	2.0	1.9	2.1
e) Improved information boards	1.7	1.5	1.8	1.9	1.5	2.0	1.8	1.9
f) Specialist educational programmes for groups	1.5	1.5	1.7	1.9	2.1	2.0	1.7	1.9
g) Other	1.5	1.3	1.7	1.7	2.1	2.0	1.6	1.6

Based on the following number of respondents:
Paklenica a)188, b)213, c)203 , d)220, e)209, f)179, g)44.
Brijuni a)172, b)183, c)186 , d)184, e)182, f)180, g)52.
Risnjak a)115, b)118, c)119 , d)119, e)117, f)109, g)35.
Kornati a) 153, b)159, c) 167, d) 164, e)170, f) 161, g) 18.
Lonjsko a) 5, b) 16, c) 20, d) 17, e) 17, f) 18, g) 16.
Papuk a) 5, b) 5, c) 4, d) 5, e) 4, f) 4, g) 1.
Sibensko-Kninska a) 138, b) 149, c) 144, d) 143, e) 142, f) 122, g) 41
Varaždinska a) 168, b) 168, c) 166, d) 167, e) 159, f) 159, g) 13

3.4.4 Willingness to pay extra to support Public Institutions

The most common way that Croatian respondents would be willing to pay to help support the Public Institutions was through visitor entrance fees. Donations and mooring fees were also relatively common. The proportion of respondents not willing to pay to help support the management was relatively low.

Table 3.23 Qu 8 – Croatian WTP using different payment methods for Public Institutions

Percentage willing to pay	Public Institution	
	Sibensko-Kninska County	Varaždinska County
Visitor entrance fees	38.9%	89.9%
Accommodation tax	3.0%	10.1%
*Mooring fee/road toll	1.0%	17.4%
Donations	19.7%	10.7%
National tax	7.9%	8.4%
Own county tax	4.9%	3.4%
Don't know	18.2%	3.4%
Not willing to pay	9.9%	1.7%

Based on the following number of respondents: Sibensko-Kninska 203 and Varaždinska 178.
The question was not asked in Paklenica , Brijuni, Risnjak, Kornati, Lonjsko or Papuk.
***Note: a mooring fee was road tax was suggested for Sibensko and a road tax/toll for Varazdisnka.**

The most common way that foreign respondents would be willing to pay to help support the Public Institutions was also through visitor entrance fees. Donations, accommodation tax and mooring fees were also relatively popular. The proportion of foreign respondents not willing to pay to help support the management was low.

Table 3.24 Qu 8 – Foreigner WTP using different payment methods for Public Institutions

Percentage willing to pay	Public Institution	
	Sibensko-Kninska County	Varaždinska County
Visitor entrance fees	70.7%	95.0%
Accommodation tax	6.5%	12.4%
Mooring fee/road tax	6.5%	44.6%
Donations	8.8%	7.4%
National tax	2.3%	1.0%
Own county tax	8.8%	1.5%
Don't know	7.0%	0.5%
Not willing to pay	0.9%	0.0%

Based on the following number of respondents: Sibensko-Kninska 215 and Varaždinska 202.
The question was not asked in Paklenica , Brijuni, Risnjak, Kornati, Lonjsko or Papuk.
***Note: a mooring fee was road tax was suggested for Sibensko and a road tax/toll for Varazdisnka.**

3.5 SOCIO-ECONOMIC ASPECTS

3.5.1 Gender

The split between male and female Croatian respondents was fairly even in all parks, with a slight majority of females at most locations.

Table 3.25 Qu 15 – Gender of Croatian respondents

	National Park				Nature Park		Public Institution	
Sex	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
Male	51.4%	43.6%	45.4%	49.7%	44.4%	47.3%	42.1%	47.5%
Female	48.6%	56.4%	54.6%	50.3%	55.6%	52.7%	57.9%	52.5%

Based on the following number of respondents: Paklenica 173, Brijuni 165, Risnjak 108, Kornati 171, Lonjsko 9, Papuk 188, Sibensko-Kninska 190, Varaždinska 177.

The split between male and female Foreigner respondents was fairly even in all PAs, with the exception of Lonjsko (although the results there were skewed due to the small number of respondents).

Table 3.26 Qu 15 – Gender of Foreigner respondents

	National Park				Nature Park		Public Institution	
Sex	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko -Kninska County**	**Varaž- dinska County**
Male	56.7%	56.5%	55.2%	56.9%	100.0%	60.0%	54.5%	45.5%
Female	43.3%	43.5%	44.8%	43.1%	0.0%	40.0%	45.5%	54.5%

Based on the following number of respondents: Paklenica 173, Brijuni 232 , Risnjak 143, Kornati 197, Lonjsko 2, Papuk 5, Sibensko-Kninska 213, Varaždinska 200.

3.5.2 Age

There was a wide range in ages of Croatian respondents, with most aged between 18 to 54 years. A few under 18 year olds had completed a questionnaire, typically on behalf of a family.

Table 3.27 Qu 16 – Age of Croatian respondents

	National Park				Nature Park		Public Institution	
Age	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaždinska County**
Under 18	2.9%	1.2%	0.0%	1.2%	0.0%	2.1%	7.9%	0.6%
18 to 24	17.8%	4.8%	8.2%	14.7%	37.5%	14.7%	19.4%	9.7%
25 to 34	37.4%	31.9%	21.8%	18.8%	12.5%	35.3%	25.1%	34.3%
35 to 44	24.1%	21.1%	26.4%	27.6%	12.5%	18.9%	32.5%	25.7%
45 to 54	13.8%	13.3%	23.6%	19.4%	25.0%	14.2%	12.0%	18.9%
55 to 64	3.4%	14.5%	11.8%	10.6%	0.0%	4.7%	2.1%	6.3%
65+	0.6%	13.3%	8.2%	7.6%	12.5%	10.0%	1.0%	4.6%

Based on the following number of respondents: Paklenica 174, Brijuni 166, Risnjak 110, Kornati 170, Lonjsko 8, Papuk 190, Sibensko-Kninska 191, Varaždinska 175.

There was a wide range in ages of Foreigner respondents, with again most aged between 18 to 54 years. With the exception of Lonjsko Nature Park, there were relatively few under 18 year olds (note, this is potentially skewed by the small number of respondents from Lonjsko). There were a reasonable number of respondents aged over 55 years in most parks.

Table 3.28 Qu 16 – Age of foreigner respondents

	National Park				Nature Park		Public Institution	
Age	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaždinska County**
Under 18	1.5%	1.3%	1.4%	0.0%	60.0%	0.0%	1.4%	0.0%
18 to 24	15.9%	6.0%	7.6%	4.6%	40.0%	0.0%	10.7%	4.5%
25 to 34	26.7%	26.2%	26.2%	20.8%	0.0%	60.0%	28.0%	22.8%
35 to 44	28.5%	26.6%	24.8%	32.0%	0.0%	0.0%	19.6%	26.7%
45 to 54	18.5%	21.0%	19.3%	29.4%	0.0%	40.0%	25.7%	21.3%
55 to 64	6.3%	9.4%	16.6%	8.6%	0.0%	0.0%	7.9%	16.3%
65+	2.6%	9.4%	4.1%	4.6%	0.0%	0.0%	6.5%	8.4%

Based on the following number of respondents: Paklenica 270, Brijuni 233, Risnjak 145, Kornati 197, Lonjsko 20, Papuk 5, Sibensko-Kninska 214, Varaždinska 202.

3.5.3 Level of education

Most Croatian respondents were educated to college/university level, with nearly all educated to at least 18 years of age. This was consistent across all locations.

Table 3.29 Qu 17 – Level of education for Croatian respondents

	National Park				Nature Park		Public Institution	
Education	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaždinska County**
School to 14 or less	0	8.5%	1.8%	2.4%	0.0%	1.6%	1.1%	1.1%
School to 16	3.6%	4.2%	1.8%	7.2%	0.0%	1.6%	2.7%	3.4%
School to 18	28.4%	27.3%	18.9%	37.3%	22.2%	35.4%	61.0%	31.6%
Further study (college/university)	68.0%	60.0%	77.5%	53.0%	77.8%	61.4%	35.3%	63.8%

Based on the following number of respondents: Paklenica 169, Brijuni 165, Risnjak 111, Kornati 166, Lonjsko 9, Papuk 189, Sibensko-Kninska 187, Varaždinska 177.

Most Foreigner respondents were also educated to college/university level, with nearly all educated to at least 18 years of age. Again, this was consistent across all locations. Observations from the survey interviewers suggest a possible self-selection bias towards the better educated visitors, as the less educated visitors seemed to decline to answer the questionnaire a little more.

Table 3.30 Qu 17 – Level of education for Foreign respondents

	National Park				Nature Park		Public Institution	
Education	**Paklenica**	**Brijuni**	**Risnjak**	**Kornati**	**Lonjsko**	**Papuk**	**Sibensko-Kninska County**	**Varaž-dinska County**
School to 14 or less	1.5%	1.7%	2.8%	1.1%	0.0%	0.0%	1.9%	0.0%
School to 16	2.2%	5.6%	3.5%	0.5%	10.5%	0.0%	6.3%	2.6%
School to 18	23.9%	28.6%	19.4%	29.1%	42.1%	20.0%	28.5%	55.1%
Further study (college/university)	72.4%	64.1%	74.3%	69.3%	47.4%	80.0%	63.3%	42.3%

Based on the following number of respondents: Paklenica 268, Brijuni 231, Risnjak 144, Kornati 189, Lonjsko 19, Papuk 5, Sibensko-Kninska 207, Varaždinska 196.

4 VALUATION ANALYSIS

4.1 INTRODUCTION

This section details the results of the contingent valuation method (CVM) and travel cost method (TCM) assessments. As mentioned earlier, following the initial valuation analysis, it seemed worthwhile splitting Foreigners into 'Eastern Europeans' and 'Other Foreigners' for the valuation analysis due to the potential difference in 'willingness' and 'ability' to pay between the two groups.

4.2 CONTINGENT VALUATION ANALYSIS

4.2.1 *Average willingness to pay values*

The tables below reveal the average willingness to pay (WTP) values for the three samples: Croatians, Eastern Europeans and Other Foreigners, together with the 95% confidence intervals showing the lower and upper bounds[1].

The average WTP values reflect the amount of money that individuals are willing to pay to protect the wildlife, geological, cultural and landscape features of the PAs. The WTP values are per visit with the exception of for Croatians in the two Counties, where their WTP is an annual one off payment. This is because it may be more likely that an additional annual tax is paid by Croatians rather than have entry fees everywhere.

Note that there were insufficient respondents at Lonsjko-Pole and Papuk (foreigners) to do any WTP analysis.

Table. 4.1 Croatian Mean Willingness-to-pay and 95 per cent Confidence Interval

Protected Area	WTP/visit Lower bound	WTP/visit Mean	WTP/visit Upper bound
Paklenica	€6.07	€8.53	€10.99
Kornati	€10.59	€13.13	€15.67
Brijuni	€6.74	€9.51	€12.28
Risnjak	€5.82	€7.51	€9.20
Papuk	€4.81	€5.98	€7.15
*Sibensko-Kninska	€13.50	€29.06	€44.62
*Varazdinska	€7.33	€16.27	€25.21

* WTP amount is per year for Croatians.

[1] If the confidence bands of two mean overlap, then the difference is not statistically significant at the 5 per cent level. In addition, if the lower confidence interval is zero or negative, then the estimate is not statistically significant to zero at the 5 per cent level.
(3)

Table. 4.2 Eastern European Mean Willingness-to-pay and 95 per cent Confidence Interval

Protected Area	WTP Lower bound	WTP Mean	WTP Upper bound
Paklenica	€5.46	€11.42	€17.38
Kornati	€31.75	€38.84	€45.93
Brijuni	€11.07	€16.04	€21.01
Risnjak	€4.46	€7.64	€10.82
*Sibensko-Kninska	€6.08	€11.83	€17.58
*Varazdinska	€16.38	€20.83	€25.28

* WTP amount is per year for Croatians.

Table. 4.3 Other Foreigner Mean Willingness-to-pay and 95 per cent Confidence Interval

Park	WTP Lower bound	WTP Mean	WTP Upper bound
Paklenica:	€7.60	€11.07	€14.54
Kornati	€26.07	€31.31	€36.55
Brijuni	€18.75	€24.09	€29.39
Risnjak	€8.54	€11.17	€13.80
*Sibensko-Kninska	€7.23	€10.13	€13.03
*Varazdinska	€18.56	€32.85	€47.14

* WTP amount is per year for Croatians.

4.2.2 F- test analysis on mean WTP

The tables below highlight that in the majority of cases, the mean WTP values between the two Foreigner categories of visitor are not statistically different at the 5% level. On the other hand, the mean WTP values between the Foreigners and Croatian visitors are statistically different at the 5% level (except for Paklenica), with foreigners having a significantly greater WTP.

Table 4.4 Summary of F-tests for Difference in Mean WTP

Protected Area	Eastern Europe	Other Internationals	Combined foreigners	Different at 5 per cent level?
Paklenica:	€11.42	€11.17	€11.18	no
Kornati:	€38.84	€31.31	€33.48	no
Brijuni:	€16.04	€24.09	€22.25	no
Risnjak:	€7.64	€11.17	€10.89	no
Sibensko-Kninska:	€11.83	€10.13	€10.70	no
Varazdinska:	€20.83	€32.85	€23.11	yes

Table4.5 Summary of F-tests for Difference in Mean WTP

Park	Combined Foreigners	Croatian	Combined all	Different at 5 per cent level?
Paklenica:	€11.18	€8.53	€10.14	No
Kornati:	€33.48	€13.13	€24.61	Yes
Brijuni:	€22.25	€9.51	€16.51	Yes
Risnjak:	€10.89	€7.51	€9.44	Yes

4.2.3 Tobit regression estimates of WTP

A 'regression analysis' determines a set of WTP equations to explore which factors are correlated with WTP, and to establish the validity of the WTP responses. Due to the heterogeneity of socio-economic parameters, the small sample sizes and some missing data, the data were pooled across the four national parks, and equations were estimated for Croatian nationals and East European and Other Foreigners separately. An equation was estimated for each national group and park. The estimator used in this study is 'tobit', which takes into consideration that WTP cannot take on values less than zero. This resulted in a large number of equations, with relatively little consistency across them. However, the overall outcome and significant relationship with income gives reasonable confidence that the WTP results are useable.

Similar equations were estimated for the two county parks pooled together but it must be remembered that WTP is measured differently for Croatian nationals and East European and Other Foreigners in these samples.

The variables included as explanatory factors are: *VISITS*: Number of visits to park; *INCOME*: Measured in the number of Euros per year; *EDUC*: Dummy coded "1" if individual is a university graduate; *AGE*: Measured in calendar years; *SEX*: Dummy coded "1" if female; *PROTECT:* Dummy variable coded "1" if individual states that it is "extremely important" to protect wildlife and landscape; and *VALUE*: Dummy variable coded "1" if individual states visit represents very good value for money". Note that the question used to construct VALUE was not collected in the County samples.

Table. 4.6 Tobit Regression Estimates of WTP

Protected Areas:	**Paklenica, Kornati, Brijuni, Risnjak**		**Sibensko-Kninska, Varazdinska**	
Visitor Groups	**Foreigners**	**Croatian**	**Foreigners**	**Croatian**
VISITS	0.904	-0.014	1.838***	0.400
INCOME	0.0012***	0.00019***	-0.00003	0.00293***
EDUC	-2.153	-3.920***	3.270	-15.874
AGE	0.220**	-0.135***	-0.0350	-0.3815
SEX	1.807	-1.314	1.88	7.000
PROTECT	-2.661	2.41	10.48**	-11.79
VALUE	-0.875	0.844	--	--
Constant	10.52	12.33	14.66	24.42

Notes: (*) 10 per cent level confidence interval;
(**) 5 per cent level
(***) 1 per cent level

As can be seen in the table above, income is generally seen to be a significant variable affecting WTP values, except for Foreigners in Sibensko-Kninska County, where the number of visits they make is more significant. Interestingly, age and education level of Croatians are a strong indicator of their WTP.

4.3 TRAVEL COST ANALYSIS

4.3.1 Travel cost analysis background

The Travel Cost Method was first suggested by Harold Hotelling who argued that the value individuals place on a recreational/environmental resource (such as a park) is directly related to the costs they incur "consuming" that resource (e.g. the amount of money and time spent travelling to the park). Implicitly the approach assumes that this amount is related to the price that an individual would be willing-to-pay. The approach is based on the key assumption that "demand" and "price" are inversely related (i.e. the demand curve for the resource slopes downwards). More specifically, it assumes that, holding all other factors that determine demand constant (such as income and preferences), the higher the travel cost, the lower the frequency of visits.

In fact, the approach presupposes that there is a moderate to strong correlation between travel cost and number of visits. If this is not the case, and the correlation is zero or negative, the approach yields zero or negative valuations. From a practical point of view, this implies that the estimates will not assist in any associated pricing exercises (e.g. setting user fees).

In order to illustrate the approach with respect to visiting a park, let "*C*" be travel cost and "*V*" be the number of visits. Based on the above, one would expect:

$V = f(C),\ dV/dC < 0$

It is clear that other factors beyond cost affect the frequency of visits:

$V = f(C, \mathbf{X})$

where "**X**" is vector $(X_1, X_2 \ldots X_k)$ of factors such as income, age, education, attitudinal variables, etc. In terms of a linear regression equation:

$$V = \alpha + \beta C + \gamma_1 X_1 + \gamma_2 X_2 + \ \ldots + \gamma_k X_k + e$$

In this specification $\beta = \partial V/\partial C$ summarises the relationship between the number of visit and travel costs holding constant other factors. However, more importantly, this regression is a demand function so it can be used to calculate "consumer surplus". Consumer surplus (CS) is simply the benefit or value individuals place on consuming that resource measure in monetary terms. It is straight forward from this regression to calculate consumer surplus per visit by calculating it at the mean:

$CS = \partial C/\partial V = -1/\beta.$

Various estimators for travel cost models have been suggested. These estimators such as Poisson, negative binomial or tobit, are aimed at relaxing

some of the specific assumptions of simple linear regression which may be violated given the nature of the data. These violations may occur because of such realities as the severe negative skewness and the presence of real upper and lower bounds in the number of visits. It is common practise to explore the robustness of estimates by employing such estimators in a comparative way.

4.3.2 Average travel costs

In this study, the average total travel costs per individual were determined as follows. The actual overall travel costs per group were split by the number of people travelling, with children being allocated a half share in the costs as opposed to a whole share for adults.

The cost of time travelling to the Parks from their original destination was estimated using a GIS based travel model to calculate the travel time of driving from the nearest city of origin to each Park (or flying if from outside mainland Europe) and an assumed wage rate of Euro 8.90 per hour for 'Other Foreigners' (based on a UK Government set figure), and adjusted by differences in GDP per capita for Eastern Europeans and Croatians (giving Euro 4.87 and 3.89 per hour for them respectively). The cost of time was a relatively small proportion of the overall travel costs.

The travel and time costs were added and then adjusted by a factor depending on how important the PA was in terms of visitors going on their overall trip (ie Qu 6). This provided an overall cost that could be attributed to visiting the specific protected areas.

The table below reveals the resulting average total travel cost per adult for each visitor category and park. The results appear to be reasonable and as might be expected (i.e. increasing amounts for Eastern Europeans and for Other Foreigners), giving some confidence in the reliability of the data.

Table 4.7 Mean Travel Costs, Standard Deviation and 95 per cent Confidence Interval

Visitor Origin	Travel costs Lower bound	Travel costs Mean	Travel costs Upper bound	Standard deviation
Croatian Nationals				
Paklenica	€70.52	€84.29	€98.04	€90.98
Kornati	€82.06	€98.66	€115.26	€107.82
Brijuni	€59.89	€78.18	€96.47	€118.39
Risnjak	€43.78	€70.85	€97.86	€146.00
Papuk	€14.95	€16.85	€18.75	€13.14
East European				
Paklenica	€129.69	€158.60	€187.51	€140.70
Kornati	€141.79	€257.51	€373.23	€417.47
Brijuni	€74.53	€94.28	€114.03	€71.24
Risnjak	€10.83	€59.94	€109.07	€86.81
Other Nationals				
Paklenica	€239.41	€269.34	€299.27	€197.91
Kornati	€309.58	€378.67	€447.74	€409.49
Brijuni	€170.44	€217.31	€264.18	€320.83
Risnjak	€164.11	€197.52	€230.93	€189.04

4.3.3 Travel cost analysis results

A comprehensive attempt was then made to develop an 'Individual Travel Cost Model' (1) whereby the relationship between total adjusted travel costs (as above), frequency of visits and other key explanatory variables (the same as used in the CVM analysis described above) for each individual is established in an equation.

However, the analysis did not reveal consistent revealed point estimates of consumer surplus for each of the four national parks (2). Potential reasons for this are explained below *Table 4.9,* and below *Figure 4.1* which shows a plot of travel costs against frequency of visits. The individual park analyses also show that demand is 'inelastic', in that there is a low correlation between travel cost and number of visits.

Table 4.8 below shows the 'elasticity' in terms of how costs vary with frequency of visits for each visitor type for each Park. The lower the number, the less impact increasing travel costs have on visitor demand. The elasticity is lowest for Other Foreigners, and highest for Croatians.

(1) As opposed to a Zonal Travel Cost Model

(2) There was insufficient data to apply this analysis to the nature parks.

Table 4.8 Travel cost elasticity by origin of visitor

Park	Croatian Nationals	East Europeans	Other Foreigners
Paklenica	-0.15	0.15***	0.04
Kornati	0.35***	-0.06	0.06
Brijuni	-0.24***	0.33*	0.06
Risnjak	-0.23***	-0.40	-0.06
Papuk	-0.12		

Notes:
(*) 10 per cent level;
(**) 5 per cent level
(***) 1 per cent level

Extensive effort was applied to explore how the relationship between travel costs and visits could be better explained. This included merging the datasets into one, and analysing this through use of different estimators. These include 'Ordinary Least Squares' (OLS), Poisson (a tobit model) and a Negative Binomial. A 'truncated' approach was also applied to the Poisson model, whereby the frequency of visits was capped at the highest 5% and 10%.

It is only by combining the data for each park into one dataset that relatively consistent estimates of consumer surplus seem to be calculated. *Table 4.9* shows the average consumer surplus estimates per trip for all visitors to all the parks for the main estimator models. However, the results suggest a rather unbelievable estimate of around Euro 2,000 to 3,000 per trip (based on the OLS and Poisson models). The results for the negative binomial are much higher, and the results of the truncated Poisson are too unreliable to report.

Table 4.9 Estimated Consumer Surplus per Visitor Based on Various Travel Cost Estimators

Estimator	OLS (Euro per trip)	Poisson (Euro per trip)	Negative Binomial (Euro per trip)
Lower Bound*	2,672	1,870	3,850
Point estimate	2,900	2,196	4,368
Upper bound*	3,130	2,552	4,486

*The upper and lower bound estimates represent 95% confidence intervals.

The high valuation figure of Euro 2,000 to 3,000 appears to be being driven by outliers in the sample. However, the truncated regression (which caps the 'high frequency visitor' outliers) results in negative consumer surplus valuations. This suggests a highly unreliable travel cost model.

There are perhaps several reasons for these findings. Firstly, the TCM outputs are driven almost exclusively by the correlation between visits and costs and NOT by the mean value of the TC distribution. So if you do not have a correctly signed and moderate-to-strong correlation (as is the case here) then you will get estimates that are not intuitive. So in this case, the costs for a one off visit from one origin are not that different from the costs of someone visiting more often from the same origin.

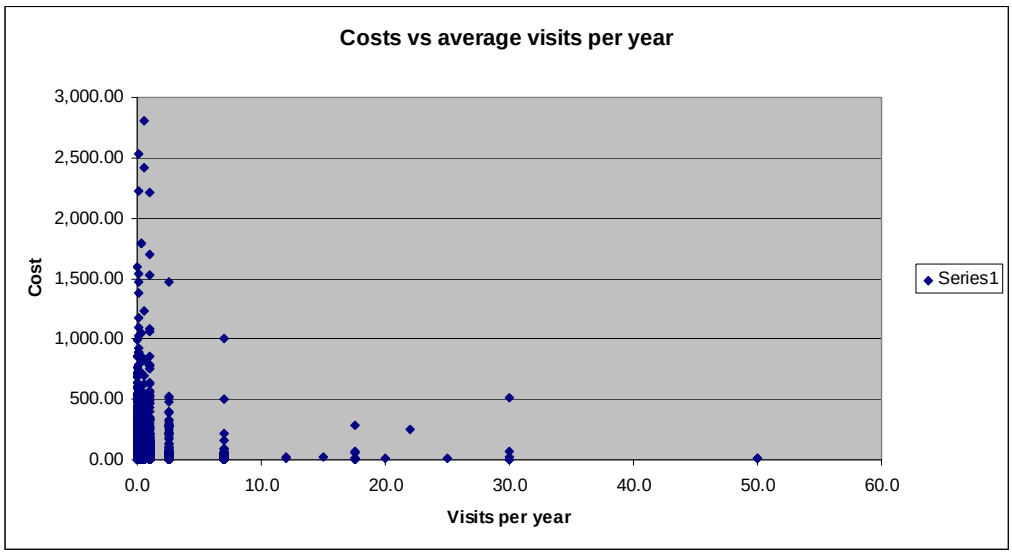
Secondly, essentially the dependent variable is extremely negatively skewed with the bulk of non-Croatians visiting just once. Thirdly, the stated frequency of visits is partly 'expectational' and is measured over a long time frame (per decade), which introduces measurement error. Fourthly, the travel cost estimator is likely affected by measurement error due to the many assumptions that were made to produce it. And finally, there are a multitude of reasons that people go on holiday, and trying to elicit a travel cost/value relationship is at best difficult.

When the whole dataset is combined for all visitors and sites, the elasticity of number of visits with respect to travels costs is: -0.303, which is statistically significant at below the 1 per cent level. The elasticity of number of visits with respect to travels costs controlling for other variables is slightly smaller at: -0.270, which is also statistically significant at below the 1 per cent level. This effectively means that if travel costs doubled, the number of visits would in theory decrease by about a third.

This combined overall sample represents the diverse nature of the type of individuals who visit Croatian parks. It is clear that the consumer surplus estimate is dominated by Foreign Nationals, as most have travelled far and spent a lot of money doing so. The results more generally demonstrate that a high value is placed on using these parks and they are in demand by a diverse group of individuals.

Figure 4.1 below shows the spread of costs and stated frequency of associated visits (from less than once every ten years to 50 times a year). It reveals little clear correlation between the travel costs and frequency that people will visit a park. As shown in *Table 3.16* the majority of Foreigners visit less than once every three to four years, which appears to be virtually regardless of how much it costs them.

Figure 4.1 Scatter plot showing travel costs and visit frequency for all Parks



Essentially, a lot of people spend a significant amount of money and time to visits the parks, and generally speaking, the majority of people will only visit them once or very infrequently. Similarly, there are people that live nearby that don't spend so much to get there (although they have to pay significant entry fee), but who will also only go very infrequently.

An analogy to help explain the lack of relationship of travel costs and visit frequency is that the parks are like relatively expensive theme parks. Even if you live nearby you probably won't visit more often that people living further away (with a few exceptions of course). This is different from say a free or low cost beach or popular angling location where people are likely to visit more often on a regular basis if you live not so far away. This point is exacerbated by the fact that the results suggest that many foreign visitors are on one off holidays – or Croatians will not want to pay a high entrance fee to go to such places. The issue is further compounded by the fact that the questionnaires were undertaken mainly in peak tourist season by people likely to be one off visitors. If questionnaires were conducted throughout the year, other more regular visitors may be picked up, giving a slightly better correlation between cost and visits.

5.1 APPLICATION OF CVM RESULTS TO THE PARKS

The mean WTP values per adult per visit to the parks are shown in the Table below. It is interesting to compare them with the current normal entrance fees of 25 Euro for Brijuni, 5 Euro for Paklenica and Risnjak, and 2.5 Euros for Kornati (albeit with numerous variations in pricing and in the case of Kornati additional costs to get to the site by boat).

However, it is important to note that the average WTP values reflect the average maximum amount of money that individuals ***'would be willing to pay per visit to each Park to ensure that the many plants, animals, geological, cultural and landscape features within it are fully protected for people to enjoy without being damaged or extracted'.***

This is subtly different to an 'entrance fee' which can include a WTP for other activities. For example, a lengthy boat trip and train ride is included in the Brijuni entrance fee for all day-trippers to the island.

Table 5.1 Average WTP to help protect each park (Euro/adult/visit)

Protected Area	Croatians WTP	Eastern Europeans WTP	Other internationals WTP
Paklenica	€ 8.53	€ 11.42	€ 11.07
Brijuni	€ 9.51	€ 16.04	€ 24.09
Risnjak	€ 7.51	€ 7.64	€ 11.17
Kornati	€ 13.13	€ 38.84	€ 31.31
Papuk	€ 5.98	-	-

The annual park visitation rates are estimated in the table below, based on information from the parks in relation to the number of paid and non-paid visitors, the proportion of adult visits, and the proportion of Croatians to Foreigners. The questionnaire responses were used to determine the split between Eastern European and Other Foreign visitors. However, note that the proportion of Eastern European visitors at each Park may be a slight underestimate because it appeared they were more inclined not to answer the questionnaires than the Other Foreigners (1).

(1) No data was recorded as to the nationality or characteristics of non-responses. However, observations from the surveys suggest that it was the less well off, less educated and older visitors that declined more to complete the questionnaires.

Table 5.2 Annual Visitor numbers in the Parks

Protected Area	Paid visits/ year	Non recorded	Total	Adult visits	Croatian adults	Eastern European adults	Other foreign adults
Paklenica	115,943	6,102	122,045	103,738	15,841	29,885	58,012
Brijuni	173,620	1,736	175,356	113,982	37,842	16,751	59,389
Risnjak	18,308	7,846	26,154	11,769	4,708	565	6,497
Kornati	72,000	18,000	90,000	58,500	26,910	8,529	23,061
Lonjsko Polje	9,145	9,705	18,850	2,828	2,149	-	-
Papuk	6,615	140,000	146,615	48,383	47,415	-	-

By multiplying average WTP values and visitor numbers, an estimate of the total WTP to protect key features of the park is derived, as shown below. This covers both recreational and non-use values. It may also capture, to an extent, some of the indirect ecosystem service values, as currently understood by the respondents.

Table 5.3 Annual WTP values per year for the parks

Protected Area	Croatian adults (Euro/yr)	Eastern European adults (Euro/yr)	Other foreign adults (Euro/yr)	Total adults (Euro/yr)
Paklenica	135,123	341,289	642,198	**1,118,609**
Brijuni	359,876	268,682	1,430,679	**2,059,237**
Risnjak	35,355	4,316	72,568	**112,240**
Kornati	353,328	331,278	722,031	**1,406,637**
Papuk	283,543	-	-	**-**

5.2 APPLICATION OF CVM RESULTS TO THE PUBLIC INSTITUTIONS

The mean WTP values derived per adult are shown in the Table below. Note that the Croatian values are 'annual', and the foreigner values are 'per visit'. In addition, it should be noted that the Croatian values include both residents of the Counties and Croatian visitors from other Counties. They have broadly similar average WTP values.

Table 5.4 Average WTP for visitors to the Counties

	Croatians WTP/adult/year	Eastern Europeans WTP/adult/visit	Other foreigners WTP/adult/visit
Šibensko-Kninska	€ 20.00	€ 11.83	€ 10.13
Varaždinska	€ 16.27	€ 20.83	€ 32.85

The relevant populations of adults are shown in the Table below. Note that in terms of Croatian visits and willingness to pay values, we only assess the values associated with the Croatians that live in the two targeted counties. Croatian visitors from other counties are excluded as no data exists on their overall numbers. In reality, the Croatian visitors from other counties also indicated a significant annual willingness to pay to help maintain the protected area sites within the two targeted counties. This suggests both a

high 'use' and 'non-use' value of Croatians to support protected areas in counties outside of the counties they live in.

The questionnaire responses were used to determine the split between Eastern European and other foreign visitors. As before, it is probable that the Eastern European visitors may have decline answering the questionnaires more regularly than Other Foreigners, but no adjustments have been made for this.

Table 5.5 Adult residents and visitors in the two Counties

Public Institution	Total adults in County	Foreign tourist overnight stays	Eastern Europeans visits	Other international visits
Šibensko-Kninska	114,400	3,453,556	1,139,673.48	2,313,882.52
Varaždinska	181,200	33,500	27,135	6,365

The table below reveals significant values and expressed willingness to pay (4 to 40 million Euro per year) by Croatians and visitors associated with protecting wildlife, geology, landscapes and cultural sites within the two Counties. However, it is also important to bear in mind that this table excludes the WTP values expressed by Croatian visitors from outside the Counties. Most Croatian visitors from outside the two counties also stated that they were WTP to protect the features within the County they were visiting.

Table 5.6 Total annual WTP values for the Counties

Public Institution	Croatians living with the counties WTP (Euro/yr)	Eastern European WTP (Euro/yr)	Other foreigner WTP (Euro/yr)	Total WTP (Euro/yr)
Šibensko-Kninska	2,288,000	13,482,337	23,439,630	**39,209,967**
Varaždinska	2,948,124	565,222	209,090	**3,722,436**

Note: This excludes WTP values stated by Croatian visitors that live outside the counties.

5.3 APPLICATION OF WTP RESULTS

The above values WTP do need to be treated with some caution because the study involved a brief analysis of a complex matter over a large number of sites. As a result, there will be various biases and some uncertainty in the above values, for example, based on the limited time of year the questionnaires were undertaken (mid August to October), and the relatively small sample sizes per site.

However, the results and methodology adopted can potentially be used in various ways.

Firstly, the results can be applied directly to cost:benefit analysis studies that compare the costs of guaranteeing the protection described in each questionnaire WTP scenarios. This can be used to help justify such expenditures on protected areas. The WTP values clearly indicate a strong

willingness of Croatians and foreigners to help contribute to managing Croatia's valuable natural resources.

Secondly, the results can provide an indication as to the relative order of magnitude of benefits that could be gained from protecting other similar sites. The values could thus be used in 'benefit transfer' applications, preferably in Croatia, but potentially in other Countries in the region too. However, the context would need to be compared and key variables adjusted accordingly. For example the average WTP values could be applied from one of these sites to another similar site, multiplying up by the number of visitors at the site to be valued. Factors relating to the size, nature and quality of the protected area features would also need to be accounted for.

Thirdly, it is important to understand that the values represent the level of enjoyment visitors gain from visiting the site PLUS the value that they would get if the protected areas continue to be effectively managed to protect the wildlife and geology etc. Where the values are greater than the existing entrance fees, there is thus scope for increasing the entrance fees or providing other goods and services that the visitors may be willing to pay an additional 'premium' for.

Fourthly, the questionnaire and analytical methodology could be applied to other protected areas in Croatia or elsewhere, to elicit values from visitors at other protected areas. This would provide substantially more robust estimates of benefits of similar protected area management initiatives (as compared to simply using 'benefits transfer').

Finally, the WTP results and associated questionnaire responses should be able to inform the sustainable financing of protected areas in several ways. For example, they can be used to help inform the setting of visitor entrance fees, marketing the sites to different nationalities, and informing the provision of alternative or improved services within the protected areas. Of particular interest is how the park financing mechanism can capture the potential 'non-use' values associated with international visitors, international non-visitors and Croatians.

5.4 APPLICATION OF TCM RESULTS

The travel cost method valuation suggests an overall average consumer surplus value of Euro 2,000 to 3,000 per visitor, including both Croatians and Foreigners. This seems an 'unbelievably' high value which should not be trusted. However, it does clearly demonstrate a high value that all types of visitor place on visiting the parks. As such, the analysis has provided an additional insight into the many complexities involved in people's decisions to travel and visit protected areas.

Having said that, the travel cost data that was collected could be used in an 'economic impact assessment' of the protected areas. Such an analysis would

show how much money is spent by visitors on their holidays and to the protected areas and the proportion of that money that is attributable to the protected area. Such studies are commonly undertaken to highlight how important protected areas can be for local, regional and national economies.

For example, a simple analysis of average frequency of visits and average travel cost per visitor associated [(1)] with their visit to the park reveals some interesting information, as shown on the table below. Further data analysis could be undertaken with the existing data along these lines.

Table 5.7 Overall Average Frequency and Attributable Costs of Visits

Origin of visitors	Average frequency of visit to park visited	Average cost attributable to each park visit (Euro/visit)
Croatians	1.8 times per year	68
Eastern Europeans	Once every 2.5 years	162
Other foreigners	Once every 3.2 years	264

Unfortunately, what is not known in this study is 'where' the travel costs were actually spent, in terms of either the 'local economy' surrounding the protected areas, the wider regional or 'county economy', or the wider 'national Croatian economy'. In addition, in the case of the Foreign visitors, it is not known how much was spent outside Croatia (eg booking flights, car hire etc). On the other hand, estimates of this information could be made based on other studies elsewhere and professional judgement. Any future applications of this approach should consider modifying the questionnaire accordingly.

(1) The 'attributed' costs are adjusted based on the relative importance of the park to the overall visit.

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Annex A

Example Tourist Questionnaires

Paklenica National Park – Summer 2009
Foreign Visitor Questionnaire (Non-Croatians only) - English

For Administration: **Date completed:** **Location completed:** **Qu No:**

Please spare 10 minutes to fill in this questionnaire.

It will be used by the Croatian Ministry of Culture and World Bank to assess how important this Park is and to help improve its management.

Please complete this as an individual (over 18s only).

We can only accept 100% completed responses.

IMPORTANT - PLEASE READ: Paklenica National Park contains an exceptional diversity of rock and cave formations, animals, plants and landscapes. It is also a centre for climbing and there are over 150 km of trekking paths and trails. The following questions relate only to Paklenica National Park:

1 Where is your usual place of residence?
Nearest major city: _____ Country: _____

2 What type of 'trip' are you currently undertaking? By trip we mean the period you spend away from your usual residence.

Package vacation (staying overnight)	(1)	Business trip	(4)
Independent vacation (staying overnight)	(2)	Other - please specify below:	(5)
Day trip	(3)		

3 How many nights are you staying away from your usual residence on this trip? _____

4 How many people are you travelling with from your residence (ie couple, family, household members only)?

How many adults (ie over 18)?		How many children (under 18)?	

5 Are you part of a 'tour group' to visit this National Park today?

Yes	(1)	No	(2)	Don't know	(3)

6 On a scale of 1 to 5, how important was the decision to visit this Park in your decision to undertake your OVERALL trip?

Not at all important	Minor reason	Quite important	Major reason	Main reason	Don't know
1	2	3	4	5	? (6)
GO TO QUESTION 8	**GO TO QUESTION 7**				**GO TO QUESTION 8**

7 **ONLY** IF YOU ANSWERED 2, 3, 4 OR 5 IN QU 6 ABOVE, THEN:
What is the approximate cost of your OVERALL trip away from your residence? Insert itemised costs (or TOTAL) and currency for ALL people stated in Qu 4. If using your own car, boat or holiday house, include an allowance for wear and tear.

THIS IS AN IMPORTANT QUESTION; PLEASE ANSWER EVEN IF YOUR RESPONSES ARE VERY APPROXIMATE!

Try to estimate the costs for your **whole trip** as specified below:	**Amount:**	**Currency (eg Euro, Kuna)**
a) Air transport (flights)		
b) Land transport (car + petrol, bus, train)		
c) Sea transport (ferry, boat + petrol)		
d) Accommodation		
e) Food and drink costs		
f) Entrance and activity fees plus souvenirs FOR THIS SITE ONLY		
g) Other - please specify:		
h) TOTAL (we can do the adding up)		

8 **ONLY** IF YOU ANSWERED '1' or 'DON'T KNOW' IN QU 6 ABOVE, THEN:

a	**What is the total cost of your visit to the Park today?** (include travel, food, fees etc):		**Currency used (eg Euro or Kuna)**	
b	**What is the approximate distance** of the Park from where you are staying (in km)			

9 What are the main activities you are undertaking today during your trip to this Park? Tick the main activity (or a maximum of three).

a) Just passing through		f) Appreciating culture		k) Snorkelling/swimming	
b) Driving		g) Picnicking/eating		l) Sailing	
c) Walking or Hiking		h) Cycling		m) Boat trip	
d) Climbing		i) Horse-riding		n) Staying overnight in Park (hotel, camping)	
e) Bird/wildlife watching		j) Diving		o) Relaxation	
p) Group tour - specify:			q) Other - specify:		

10 Approximately how often do you (or might you) visit this Park?

Never again	(1)	Once every 3 to 4 years	(4)	Two or three times a year	(7)
Less than once in ten years	(2)	Every other year	(5)	Four to ten times a year	(8)
Once every 5 to 10 years	(3)	Once a year	(6)	If more, how often per year?	(9)

11 On a scale of 1 to 5, how do you rate the 'value for money' for the entrance fee for visiting this Park today?

Very bad	Quite bad	Satisfactory	Quite good	Very good	Don't Know
1	2	3	4	5	? (6)

12 On a scale of 1 to 5, how important is it to you as an INDIVIDUAL that the animals, plants, geological, cultural and landscape features of this Park are fully protected for current and future generations to benefit from?

Not at all important	Not very important	Quite important	Very important	Extremely important	Don't know
1	2	3	4	5	? (6)

13 To what extent would you be willing to pay to help extra to support the following for this Park?

	Not at all	A little more	Much more	Don't know
a) Improving facilities for activities you highlighted in Qu 9	1	2	3	? (4)
b) Creating a visitor information centre	1	2	3	? (4)
c) Improved wildlife, geological and cultural management	1	2	3	? (4)
d) Improved brochures, leaflets and map	1	2	3	? (4)
e) Improved information boards	1	2	3	? (4)
f) Specialist educational programs for groups	1	2	3	? (4)
g) Other: (specify):	1	2	3	? (4)

14a Ignoring any entrance fees you have paid already, what would the **maximum amount (in EUROs) YOU as AN INDIVIDUAL** would be **willing to pay per visit** to this Park to ensure that the many plants, animals, geological, cultural and landscape features within it **are fully protected for people to enjoy without being damaged or extracted.**
Before answering, please take into account all other things you'd like to spend your money on and the fact that other similar protected areas exist.

Don't know	0	CIRCLE ANSWERS – **IN EUROS** – OR STATE OTHER AMOUNT OR CURRENCY USED										
0.25	0.5	0.75	1	2	3	4	5	7.5	10	15	20	25
30	40	50	75	100	125	150	200	**Other amount:**			**Currency**	

14b **ONLY** IF YOU ANSWERED 'DON''T KNOW' OR 'ZERO', PLEASE EXPLAIN WHY?

I will not benefit much	(1)	The government/local beneficiaries should pay	(3)
I don't think the money would be spent properly	(2)	Other - specify:	(4)

15 What sex are you?

male	(1)	female	(2)

16 How old are you?

Under 18	(1)	18-24	(2)	25-34	(3)	35-44	(4)	45-54	(5)	55-64	(6)	65+	(7)

17 What is your highest level of completed education?

School to 14 or less	(1)	School to 16	(2)	School to 18	(3)	Further study (College/University)	(4)

18 What is your INDIVIDUAL **pre-tax** income (or allowance) **IN EUROs** per year?
THIS IS VERY IMPORTANT FOR THE ANALYSIS!

Less than 10,000	(1)	20,000 to 29,,999	(3)	40,000 to 59,999	(5)	80,000 to 99,999	(7)	125,000 to 149,999	(9)
10,000 to 19,999	(2)	30,000 to 39,999	(4)	60,000 to 79,999	(6)	100,000 to 124,999	(8)	150,000 or above	(10)
OR Approximate amount in other currency						**State Currency**			

Any other comments you would like to make about your visit?

THANK YOU FOR YOUR TIME!

Paklenica National Park – Summer 2009
Croatian Visitor Questionnaire

For Administration: **Date completed:** **Location completed:** **Qu No:**

Please spare 10 minutes to fill in this questionnaire.

It will be used by the Croatian Ministry of Culture and World Bank to assess how important this Park is and to help improve its management.

Please complete this as an individual (over 18s only).

We can only accept 100% completed responses.

IMPORTANT - PLEASE READ: Paklenica National Park contains an exceptional diversity of rock and cave formations, animals, plants and landscapes. It is also a centre for climbing and there are over 150 km of trekking paths and trails. The following questions relate only to Paklenica National Park:

1 Where is your usual place of residence?
Town/Village: _____ Nearest major city: _____

2 What type of 'trip' are you currently undertaking? By trip we mean the period you spend away from your usual residence.

Package vacation (staying overnight)	(1)	Business trip	(4)
Independent vacation (staying overnight)	(2)	Other - please specify below:	(5)
Day trip	(3)		

3 How many nights are you staying away from your usual residence on this trip? _____

4 How many people are you travelling with from your residence (ie couple, family, household members only)?

How many adults (ie over 18)?		How many children (under 18)?	

5 Are you part of a 'tour group' to visit this National Park today?

Yes	(1)	No	(2)	Don't know	(3)

6 On a scale of 1 to 5, how important was the decision to visit this Park in your decision to undertake your OVERALL trip?

Not at all important	Minor reason	Quite important	Major reason	Main reason	Don't know
1	2	3	4	5	? (6)
GO TO QUESTION 8	**GO TO QUESTION 7**				**GO TO QUESTION 8**

7 **ONLY** IF YOU ANSWERED 2, 3, 4 OR 5 IN QU 6 ABOVE, THEN:
What is the approximate cost of your OVERALL trip away from your residence? Insert itemised costs (or TOTAL) and currency for ALL people stated in Qu 4. If using your own car, boat or holiday house, include an allowance for wear and tear.

THIS IS AN IMPORTANT QUESTION; PLEASE ANSWER EVEN IF YOUR RESPONSES ARE VERY APPROXIMATE!

Try to estimate the costs for your **whole trip** as specified below:	**Amount:**	**Currency (eg Euro, Kuna)**
a) Air transport (flights)		
b) Land transport (car + petrol, bus, train)		
c) Sea transport (ferry, boat + petrol)		
d) Accommodation		
e) Food and drink costs		
f) Entrance and activity fees plus souvenirs FOR THIS SITE ONLY		
g) Other - please specify:		
h) TOTAL (we can do the adding up)		

8 **ONLY** IF YOU ANSWERED '1' or 'DON'T KNOW' IN QU 6 ABOVE, THEN:

a	**What is the total cost of your visit to the Park today?** (include travel, food, fees etc):		**Currency used (eg Euro or Kuna)**	
b	**What is the approximate distance** of the Park from where you are staying (in km)			

9 What are the main activities you are undertaking today during your trip to this Park? Circle the main activity (or a maximum of three).

a) Just passing through		f) Appreciating culture		k) Snorkelling/swimming	
b) Driving		g) Picnicking/eating		l) Sailing	
c) Walking or Hiking		h) Cycling		m) Boat trip	
d) Climbing		i) Horse-riding		n) Staying overnight in Park (hotel, camping)	
e) Bird/wildlife watching		j) Diving		o) Relaxation	
p) Group tour - specify:			q) Other - specify:		

10 Approximately how often do you (or might you) visit this Park?

Don't know	(1)	Once every 3 to 4 years	(4)	Two or three times a year	(7)
Less than once in ten years	(2)	Every other year	(5)	Four to ten times a year	(8)
Once every 5 to 10 years	(3)	Once a year	(6)	If more, how often per year?	(9)

11 On a scale of 1 to 5, how do you rate the 'value for money' for the entrance fee for visiting this Park today?

Very bad	Quite bad	Satisfactory	Quite good	Very good	Don't Know
1	2	3	4	5	? (6)

12 On a scale of 1 to 5, how important is it to you as an INDIVIDUAL that the animals, plants, geological, cultural and landscape features of this Park are fully protected for current and future generations to benefit from?

Not at all important	Not very important	Quite important	Very important	Extremely important	Don't know
1	2	3	4	5	? (6)

13 To what extent would you be willing to pay to help support the following for this Park?

	Not at all	A little more	Much more	Don't know
a) Improving facilities for activities you highlighted in Qu 9	1	2	3	? (4)
b) Creating a visitor information centre	1	2	3	? (4)
c) Improved wildlife, geological and cultural management	1	2	3	? (4)
d) Improved brochures, leaflets and map	1	2	3	? (4)
e) Improved information boards	1	2	3	? (4)
f) Specialist educational programs for groups	1	2	3	? (4)
g) Other: (specify):	1	2	3	? (4)

14a Ignoring any entrance fees you have paid already, what would the **maximum amount (in Kunas) YOU as AN INDIVIDUAL** would be **willing to pay per visit** to this Park to ensure that the many plants, animals, geological, cultural and landscape features within it **are fully protected for people to enjoy without being damaged or extracted.**
Before answering, please take into account all other things you'd like to spend your money on and the fact that other similar protected areas exist.

Don't know	0	CIRCLE ANSWERS – **in Kunas**										
0.25	0.5	0.75	1	2	3	4	5	7.5	10	15	20	25
30	40	50	75	100	150	200	300	500	1000	Other (specify):		

14b **ONLY** IF YOU ANSWERED 'DON''T KNOW' OR 'ZERO', PLEASE EXPLAIN WHY?

I will not benefit much	(1)	The government/local beneficiaries should pay	(3)
I don't think the money would be spent properly	(2)	Other - specify:	(4)

15 What sex are you?

male	(1)	female	(2)

16 How old are you?

Under 18	(1)	18-24	(2)	25-34	(3)	35-44	(4)	45-54	(5)	55-64	(6)	65+	(7)

17 What is your highest level of completed education?

School to 14 or less	(1)	School to 16	(2)	School to 18	(3)	Further study (College/University)	(4)

18 What is your INDIVIDUAL **net or after-tax** income (or allowance) in **Kunas** per **month**?
THIS IS VERY IMPORTANT FOR THE ANALYSIS!

Less than 1,000	(1)	2,000 to 2,999	(3)	4,000 to 5,999	(5)	8,000 to 9,999	(7)	15,000 to 19,999	(9)
1,000 to 1,999	(2)	3,000 to 3,999	(4)	6,000 to 7,999	(6)	10,000 to 14,999	(8)	20,000 or above	(10)
OR Approximate amount									

Any other comments you would like to make about your visit?

THANK YOU FOR YOUR TIME!

Sibensko-Kninska County – Summer 2009

Foreign Visitor Questionnaire (Non-Croatians only) - English

For Administration: **Date completed:** **Location completed:** **Qu No:**

Please spare 10 minutes to fill in this questionnaire.

It will be used by the Croatian Ministry of Culture and World Bank to assess how important wildlife and landscape areas are in this region and to help improve their management.

Please complete it as an individual (over 18s only).

We can only accept 100% completed responses.

IMPORTANT - PLEASE READ THIS CAREFULLY:

You are currently in Sibensko-Kninska County, one of 21 Counties in Croatia.

The County has two National Parks (Krka and Kornati) and two Nature Parks (Velebit and Vransko Jezero). These are managed using funds from visitor entrance fees and the national Government. THIS QUESTIONNAIRE **EXCLUDES** THESE PARKS!

Sibensko-Kninska County has to manage 61 other Protected Areas (SEE THE MAP) **which it has to fund itself**. They include areas important for wildlife, geology, landscapes and cultural heritage, some of international importance. **However, their management is limited due to the lack of County budget available.**

You are currently inside one of the 61 '**County Level' Protected Areas**. They include the River Krka landscape (the stretch outside of the Krka National Park), Šibenik harbour, and 59 other beautiful river and canyon landscapes, lakes, forests, geological features, castles and islands.

The following questions relate **ONLY** to the 61 **County Level Protected Areas** in Sibensko-Kninska County, and **NOT the PARKS**.

1 Where is your usual place of residence?

Nearest major city: _____ Country: _____

2 What type of 'trip' are you currently undertaking? (By 'trip' we mean the period you spend away from your usual residence).

Package vacation (staying overnight)	(1)	Business trip	(4)
Independent vacation (staying overnight)	(2)	Other - please specify below:	(5)
Day trip	(3)		

3 How many people are you travelling with from your residence (ie couple, family, household members only)?

How many adults (ie over 18)?		How many children (under 18)?	

4 Are you part of a 'tour group' to visit this site today?

Yes	(1)	No	(2)	Don't know	(3)

5 On a scale of 1 to 5, how important was the decision to visit the County Level Protected Areas in Sibensko-Kninska County in your decision to undertake your OVERALL trip?

Not at all important	Minor reason	Quite important	Major reason	Main reason	Don't know
1	2	3	4	5	? (6)

6 What are the main activities you are undertaking today during your trip to this County Level Protected Area? Tick the main activity (or a maximum of three)

a) Just passing through		f) Appreciating culture		k) Snorkelling/swimming	
b) Driving		g) Picnicking/eating		l) Sailing	
c) Walking or Hiking		h) Cycling		m) Boat trip	
d) Climbing		i) Horse-riding		n) Staying overnight in Park (hotel, camping)	
e) Bird/wildlife watching		j) Diving		o) Relaxation	
p) Group tour - specify:				q) Other - specify:	

7 How often do you (or might you) visit the County Level Protected Areas in this County?

Don't know?	(1)	Once every 3 to 4 years	(4)	Two or three times a year	(7)
Less than once in ten years	(2)	Every other year	(5)	Four to ten times a year	(8)
Once every 5 to 10 years	(3)	Once a year	(6)	If more, how often per year?	(9)

8 In which of the following ways might you be willing to pay to help support the management of County Level Protected Areas?

Visitor entrance fees	(1)	Donations	(4)	Don't know	(6)
Accommodation tax	(2)	Airport tax	(5)	Not willing to pay	(7)
Mooring fee	(3)	Other – specify:			(8)

9 To what extent would you be willing to pay to help support the following for County Level Protected Areas in this County?

	Not at all	A little more	Much more	Don't know
a) Improving facilities for activities you highlighted in Qu 6	1	2	3	? (4)
b) Creating visitor information centres	1	2	3	? (4)
c) Improved wildlife, geological and cultural management	1	2	3	? (4)
d) Improved brochures, leaflets and map	1	2	3	? (4)
e) Improved information boards	1	2	3	? (4)
f) Specialist educational programs for groups	1	2	3	? (4)
g) Other: (specify):	1	2	3	? (4)

10 On a scale of 1 to 5, how important is it to **you as an INDIVIDUAL** that the animals, plants, geological, cultural and landscape features of the County Protected Areas are fully protected for current and future generations to benefit from?

Not at all important	Not very important	Quite important	Very important	Extremely important	Don't know
1	2	3	4	5	? (6)

11a What would the maximum amount (in **EUROs**) you, as an individual, would be willing to pay each **DAY** you are in this County to ensure that the many plants, animals, geological, cultural and landscape features in County Level Protected Areas are fully protected for people to enjoy without being damaged or over-extracted. **Before answering**, please taking into account all other things you'd like to spend your money on and the fact that other similar protected features exist elsewhere.

Don't know	0	CIRCLE ANSWERS – **IN EUROS** – OR STATE OTHER AMOUNT OR CURRENCY USED										
0.25	0.5	0.75	1	2	3	4	5	7.5	10	15	20	25
30	40	50	75	100	125	150	200	**Other amount:**			**Currency**	

11b IF YOU ANSWERED 'DON''T KNOW' OR 'ZERO', PLEASE EXPLAIN WHY?

I will not benefit much	(1)	The government/local beneficiaries should pay	(3)
I don't think the money would be spent properly	(2)	Other - specify:	(4)

16 What sex are you?

Male	(1)	Female	(2)

17 How old are you?

Under 18	(1)	18-24	(2)	25-34	(3)	35-44	(4)	45-54	(5)	55-64	(6)	65+	(7)

What is your highest level of completed education?

School to 14 or less	(1)	School to 16	(2)	School to 18	(3)	Further study (College/University)	(4)

15 What is your INDIVIDUAL pre-tax income (or allowance) **IN EUROs** per year? (or state in other currency)
THIS IS VERY IMPORTANT FOR THE ANALYSIS!

Less than 10,000		20,000 to 29,,999		40,000 to 59,999		80,000 to 99,999		125,000 to 149,999	
10,000 to 19,999		30,000 to 39,999		60,000 to 79,999		100,000 to 124,999		150,000 or above	
OR Approximate amount in other currency					**State Currency**				

Any other comments you would like to make? THANK YOU FOR YOUR TIME!

Sibensko-Kninska County – Summer 2009

Croatian Visitor Questionnaire

For Administration: **Date completed:** **Location completed:** **Qu No:**

Please spare 10 minutes to fill in this questionnaire.

It will be used by the Croatian Ministry of Culture and World Bank to assess how important wildlife and landscape areas are in this region and to help improve their management.

Please complete it as an individual (over 18s only).

We can only accept 100% completed responses.

IMPORTANT - PLEASE READ THIS CAREFULLY:

You are currently in Sibensko-Kninska County, one of 21 Counties in Croatia.

The County has two National Parks (Krka and Kornati) and two Nature Parks (Velebit and Vransko Jezero). These are managed using funds from visitor entrance fees and the national Government. THIS QUESTIONNAIRE **EXCLUDES** THESE PARKS!

Sibensko-Kninska County has to manage 61 other Protected Areas (SEE THE MAP) **which it has to fund itself**. They include areas important for wildlife, geology, landscapes and cultural heritage, some of international importance. **However, their management is limited due to the lack of County budget available.**

You are currently inside one of the 61 '**County Level' Protected Areas**. They include the River Krka landscape (the stretch outside of the Krka National Park), Šibenik harbour, and 59 other beautiful river and canyon landscapes, lakes, forests, geological features, castles and islands.

The following questions relate **ONLY** to the 61 **County Level Protected Areas** in Sibensko-Kninska County, and **NOT the PARKS**.

1 Where is your usual place of residence?

Town/Village: _____ Nearest city : _____

2 What type of 'trip' are you currently undertaking? (By 'trip' we mean the period you spend away from your usual residence).

Package vacation (staying overnight)	(1)	Business trip	(4)
Independent vacation (staying overnight)	(2)	Other - please specify below:	(5)
Day trip	(3)		

3 How many people are you travelling with from your residence (ie couple, family, household members only)?

How many adults (ie over 18)?		How many children (under 18)?	

4 Are you part of a 'tour group' to visit this site today?

Yes	(1)	No	(2)	Don't know	(3)

5 On a scale of 1 to 5, how important was the decision to visit the County Level Protected Areas in Sibensko-Kninska County in your decision to undertake your OVERALL trip?

Not at all important	Minor reason	Quite important	Major reason	Main reason	Don't know
1	2	3	4	5	? (6)

6 What are the main activities you are undertaking today during your trip to this County Level Protected Area? Tick the main activity (or a maximum of three)

a) Just passing through		f) Appreciating culture		k) Snorkelling/swimming	
b) Driving		g) Picnicking/eating		l) Sailing	
c) Walking or Hiking		h) Cycling		m) Boat trip	
d) Climbing		i) Horse-riding		n) Staying overnight in Park (hotel, camping)	
e) Bird/wildlife watching		j) Diving		o) Relaxation	
p) Group tour - specify:				q) Other - specify:	

7 How often do you (or might you) visit the County Level Protected Areas in this County?

Don't know?	(1)	Once every 3 to 4 years	(4)	Two or three times a year	(7)
Less than once in ten years	(2)	Every other year	(5)	Four to ten times a year	(8)
Once every 5 to 10 years	(3)	Once a year	(6)	If more, how often per year?	(9)

8 In which of the following ways might you be willing to pay to help support the management of County Level Protected Areas?

Visitor entrance fees	(1)	Donations	(4)	Don't know	(6)
Accommodation tax	(2)	National tax	(5)	Not willing to pay	(7)
Mooring fee	(3)	Own County Tax	(8)	Other – specify:	(9)

9 To what extent would you be willing to pay to help support the following for County Level Protected Areas in this County?

	Not at all	A little more	Much more	Don't know
a) Improving facilities for activities you highlighted in Qu 6	1	2	3	? (4)
b) Creating visitor information centres	1	2	3	? (4)
c) Improved wildlife, geological and cultural management	1	2	3	? (4)
d) Improved brochures, leaflets and map	1	2	3	? (4)
e) Improved information boards	1	2	3	? (4)
f) Specialist educational programs for groups	1	2	3	? (4)
g) Other: (specify):	1	2	3	? (4)

10 On a scale of 1 to 5, how important is it to **you as an INDIVIDUAL** that the animals, plants, geological, cultural and landscape features of the County Protected Areas are fully protected for current and future generations to benefit from?

Not at all important	Not very important	Quite important	Very important	Extremely important	Don't know
1	2	3	4	5	? (6)

11a What would the maximum amount (in **Kunas**) you, as an individual, would be willing to pay each **YEAR** to ensure that the many plants, animals, geological, cultural and landscape features in **Sibensko-Kninska** County Level Protected Areas are fully protected for people to enjoy without being damaged or over-extracted. **Before answering**, please taking into account all other things you'd like to spend your money on and the fact that other similar protected features exist elsewhere.

Don't know	0	CIRCLE ANSWERS - **in Kunas**										
0.25	0.5	0.75	1	2	3	4	5	7.5	10	15	20	25
30	40	50	75	100	150	200	300	500	1000	Other (specify):		

11b IF YOU ANSWERED 'DON''T KNOW' OR 'ZERO', PLEASE EXPLAIN WHY?

I will not benefit much	(1)	The government/local beneficiaries should pay	(3)
I don't think the money would be spent properly	(2)	Other - specify:	(4)

16 What sex are you?

Male	(1)	Female	(2)

17 How old are you?

Under 18	(1)	18-24	(2)	25-34	(3)	35-44	(4)	45-54	(5)	55-64	(6)	65+	(7)

What is your highest level of completed education?

School to 14 or less	(1)	School to 16	(2)	School to 18	(3)	Further study (College/University)	(4)

15 What is your INDIVIDUAL **net or after-tax income** (or allowance) **in Kunas** per **month**?
THIS IS VERY IMPORTANT FOR THE ANALYSIS!

Less than 1,000		2,000 to 2,999		4,000 to 5,999		8,000 to 9,999		15,000 to 19,999	
1,000 to 1,999		3,000 to 3,999		6,000 to 7,999		10,000 to 14,999		20,000 or above	
OR Approximate amount									

Any other comments you would like to make?

THANK YOU FOR YOUR TIME!