ECONOMIC EFFECTS FROM IMPLEMENTATION OF DECISION FOR FEES AT THE SHARRI NATIONAL PARK

Anthesis report 2024:5

Anthesis

Abstract

In this project we have analysed the effects from implementation of a decision on entrance and usage fees for the Sharri National Park. This report contains a quantitative analysis of direct costs and incomes related to the implementation of the fees system, as well as a qualitative analysis on externalities due to the implemented fees system. Our results indicate that the incomes from the implemented fees scheme are greater than the costs needed to implement the scheme, both for the first year as well as over a ten-year period.

Preamble

This report constitutes the final delivery of the project “Economic effects from implementation of decision for fees at the Sharri National Park” NV-07633-23, financed by the Swedish Environmental Agency (Swedish EPA). Contact persons from the Swedish EPA have been Katrin Zimmer and Visar Berisha. Contact person from the Sharri National Park has been Director Bajram Kafexholli. The project has been managed by Krister Mars from Anthesis AB, and project members have been Meivis Struga from the Environmental and Territorial Management Institute in Tirana and Stefan Åström from Anthesis AB. Valuable input to the project has been given by the CEO of the Kosovo Environmental Protection Agency (KEPA), Mr Afrim Berisha, as well as from Mr Bajram Kafexhollis team. The report has been proofread by Stefan Åström. Swedish EPAs has financed this report, but all conclusions and possible errors within the report belongs to the authors.

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Introduction

A new decision on fees for visiting and extracting natural resources within the Sharri National Park in Southern Kosovo has been made by the Minister of the Ministry of Environment, Spatial planning and Infrastructure.

To charge fees on areas with high recreational value and beautiful sceneries is a common way to collect funds for protection and monitoring of national parks, and many countries in the region have already implemented such fees. However, access to common land such as natural parks should not be restricted in a way so that people living nearby loose an important possibility for recreation. Due to the decision by the minister, and to this potential conflict of interest, the Kosovo Environmental Protection Agency (KEPA) needs an inventory of which items and services within the park that should be charged and how big income these charges could bring.

The Swedish Environmental Protection Agency (Swedish EPA) has therefore contracted Anthesis AB to answer the question – "What consequences will implementation of the Ministry's decision have on the Sharri National Park and its surroundings?". During discussions with the Swedish EPA and the Director of the National Park it was decided that the focus for Anthesis work should be to estimate potential incomes from the decision, mainly by creating an inventory of existing houses and buildings within the park including description of their purposes. In addition, Anthesis shall briefly analyse future potential incomes from the fee charges.

This project, that was initiated by KEPA together with the Swedish EPA and is being financed by The Swedish International Development Cooperation Agency (SIDA) is important since it provides a detailed inventory that combines possible benefits from the decision with its potential drawbacks. By doing so it helps identify whether the fees will be socioeconomically sound and whether they will imply significant conflicts of interest.

Background

The Sharri Mountains National Park was first declared a National Park 1986 and is since it was re-established by the Kosovan Government 2012 subject to the Law of the Sharri National Park. The park, which is a part of the Sharr Mountains, borders to Albania and North Macedonia. With its location in the southern part of Kosovo it belongs to the municipalities of Kacanik, Shterpce, Suhareka, Prizren and Dragash.

According to the spatial plan in article 3 of the Law of the Sharri National Park the park is divided into three different zones with different levels of protection. In the 'First Protection Zone', which consists of territories with exceptional natural values, no economic activity (not even hiking) is allowed. The 'Second Protection Zone' consists of territories characterised by their natural values such as rare ecosystems or scenic landscapes. In this zone, agriculture, eco-tourism, and other activities may be developed if they don't violate protective regulations. In the 'Third Protection Zone', constructions, tourism, and recreational facilities are allowed if they are aligned with the Law on Protection of Nature as well as with the spatial plan. To prevent adverse impact on the park, a 50 m broad buffer zone surrounds the outer boarder of the park. In this buffer zone, the rules of the 'Second protection Zone' applies.

The park has a size of 53 000 hectares (ha), and it has a large ecological value. The park is home to many different plant species, more than 30 mammals, 200 species of birds and several types of reptiles, fishes, and amphibians. There is also a big variety of insects in the park, including more than 100 species of butterflies. Apart from its ecological value, the park also has a great recreational value and there is a large variety of hotels and outdoor activities for both winter and

summer activities within the park. An example of this is the beautiful scenery seen in Picture 1 from Prevalla.

There are more than 1000 private buildings in the park. These are mainly holiday houses for private use, but some are also available to rent for tourists. Many of the holiday houses as well as some of the other buildings within the National Park have been built under unclear permissions, with a direct consequence that there is a lack of information over numbers, types, or sizes of the buildings within the park. The combination of houses built under unclear permissions, together with the fact that even though the park is declared a National Park, 10 -20 % of the forests are privately owned, creates a conflict of interest regarding how the forest resources should be used.

Picture 1 Prevalla, Sharri National Park, Photo: K. Mars

The Minister of Environmental, Spatial Planning and Infrastructure signed a decision in 2022 regulating that fees for visits and use of natural resources in nature-protected zones should be implemented. The decision came together with an extensive list of fees to be charged for specified items, which is enclosed in the Attachments.

The Sharri national park with its beautiful scenery is a very popular destination for recreation and holidays. Access to the park is today unrestricted and free. The park can thus be characterized as a 'Common Good'(Hardin 1968). Common goods, such as land owned by state or municipality without monitoring or entrance restrictions, might suffer from uncontrolled exploitation. This problem is particularly present if the common, such as is the case with the Sharri National Park, has high recreationally value and is rich in desirable resources. Correspondingly, the Sharri national park with its beautiful scenery is a very popular destination for recreation and holidays, but suffers from excessive littering, as well as illegal logging and poaching. Therefore, the use of the park needs to be restricted in some way. On the other hand, common areas are there for all citizens to enjoy at affordable costs, so heavy restrictions should be avoided. The solution to this dilemma is often a combination of societal responsibility combined with some level of monitoring. To finance the monitoring some level of fees may be charged. To raise fees without excluding those in rights to use the common land, the suggested entrance fees as well as fees for picking fruits and berries should only apply to visitors not

resident nearby the park. This approach combined with relatively low charges for entrance and charges for parking and staying overnight at hotels or camp sites, ensures that the implemented fees have minimal excluding effects both on local visitors, as well as on tourists. The incomes from the implemented fees may partly finance increased measures to monitor and protect the park from over-exploiting, excessive littering, logging and poaching. Typical costs for these measures are salaries and vehicles for park rangers.

Waste management in the park is not working sufficiently well, there is a lot of trash on popular sites and big piles of unattended garbage at collection sites. As mentioned earlier, the park is divided into three zones. The first zone is a no-access area, and the presence of unauthorized individuals is not allowed. Correspondingly, the amount of waste produced in this zone is almost zero and waste management services are not provided. The waste management in the second zone of the park (Prevalla, Prizren) is managed from the subcontracted company Ecoregiioni and the tariffs are collected individually to businesses and villas. In the third zone, the human activity is more intense, so the amount of waste produced is higher. Moreover, the waste collection in zones 2 and 3 is financially supported from Kosovo Agency for Environmental Protection, with a monthly tariff of 1950 euros. In the tourist areas, in Brezovica, where the concentration of the buildings, villas and hotels is denser, the tariffs are individually paid from the owners of the villas and buildings. The main objective of the service is to provide a clean environment by waste management in the whole area. The National Park provides many visible examples of excessive littering, such as shown in Picture 2 and in Picture 3, where many tourists and locals comes to gather fresh drinking water without bringing their trash with them back. To overcome this problem, the park administration will implement fees for littering.

Picture 2 Fresh water spring in Sharri National Park, photo: K. Mars

Picture 3 Fresh water spring in Sharri National Park, photo: K. Mars

Method

Data collection

The project followed a mixed method for data collection. The method consisted of desk work, information exchange meetings with the park administration, and on-site visits including interviews and visual observations within the National Park. The questionnaire used for the on-site interviews can be found in the Attachments.

Desk work: At the beginning of the project, we had several exchanges with representatives from KEPA. The purpose of the meetings was to establish a clear understanding of work to be done for both parties. We prepared a list of documents (government decisions), strategies and action plans for the National Park of Sharri Mountain that was needed for overviewing context. Over the project duration, we collected all necessary documents provided from KEPA and Sharri National Park. The required information was organized in shared folders among all project participators. Afterwards, we identified and reviewed in depth the information contained in the plans. The outcome of the desk work helped to better plan the work for the following site visit with representatives of the KEPA and Sharri National Park.

Exchange meetings: On the 10th and 11th of April 2024, we conducted a two-day exchange meeting with representatives from KEPA, the Swedish EPA, and from the Sharri National Park. During the meetings, we had in-depth discussions with representatives and members of Sharri National Park. The members from the park were asked about the availability of data regarding the use and size of the buildings within the park, potential number of visitors during summer and winter season, extraction of fruits & berries and fees charged for such service, and the number of hotels and restaurants. An outdated database with number of hotels, restaurants and holiday villas were provided from Sharri National Park. The database was later completed with newer information gathered by administrations from the five municipalities. The status of the database can serve as basis for the creation of a consistently updated data set usable for charging fees, given that resources are dedicated to updates and harmonization with other statistical registries used in Kosovo. But at its current stage, it serves mainly as base for estimations made within this project. We address the topic of continued database development in the discussions. After completing the database, we further analysed it and extracted only hotels, restaurants and

holiday villas along the areas. During this data analysis we exchanged discussions with members from Sharri national park for completeness and further understanding.

Interviews: Based on the database produced in the previous task, we prepared a questionary, to collect the necessary information from the businesses. Following that, we made onsite visits to collect answers from identified hotels and restaurants. The interviews initially took place along Prevalle and Brezovica valley, which belongs to the Prizren and Shterpce municipalities. During the interviews, we were accompanied by staff working in the park. The businesses were interviewed mainly about the size of the buildings, the number of beds in the hotels, and the number of seats in the restaurants. The remaining interviews in other municipalities were done via phone interviews due to the limited number of hotels and restaurants in these areas.

Data validation: All gathered information produced was shared with members from KEPA and Sharri National Park, with the purpose to review and validate the information produced before final submission. The received feedback is reflected in this final report.

Gap filling

The pricelist included in the decision is not based on present collected data, therefore data from the inventory doesn't always match the price list, and therefore some conversions and gap fillings were made. One example of data mismatch is differentiated entrance fees based on age and home address, while the park only has data on number of visitors. Another example is the fees that are based on house size, while the dataset only contains information on the number of houses. Theses gap filling estimations add to the uncertainty of the later conducted benefit-cost analysis (BCA), therefore all estimations made are reported separately in the result chapter. We also estimated some of the major costs that comes upon the administration of the national park, which are also reported in the result chapter.

As mentioned above, we lack data on the size in square metres for buildings within the park. Here a size estimation of private houses was made based on estimations from the park administration. For restaurants we estimated the size in square metres based on information of the number of seats. The size of shop areas, parking places, terraces and outdoor activity areas, were visually estimated during our visits to the park. Further, the park administration provided information on the total amount of visitors as well as the share of the visitors who were children. Here we also made an estimation of how many of the visitors that belongs to the local municipalities and thereby are excluded from entrance fees. Based on this information we also estimated the number of cars subject to entrance fees entering the park. These numbers where then compared to the registered incomes from entrance fees during the winter. For other incomes proposed in the pricelist, we gathered information from the park administration on cattle and sold firewood.

Regarding estimations for expected costs, these are based on the Sharri National Park Management Plan from 2015 as well as on information from the director of the National Park. We estimated costs for park rangers based on the number of needed rangers according to the management plan and expected annual costs for one ranger. Based on needed rangers we also estimated an annual cost for cars for the rangers. Another cost we included in the BCA was the cost of waste removal within the part of the park located in Prevalla. This is a cost that we mean should be removed from the National Park and instead should be carried by the municipality of Prevalla. However, since this part of the waste management is currently being paid by the

National Park, we, after discussion with the administration of the park, decided to include it in our calculations.

Benefit-cost analysis

The analysis was made with a Benefit-Cost approach where costs to implement the decision were compared with expected incomes for fees decided upon. Different scenarios regarding both costs as well as incomes were considered. Further an analysis of a Net Present Value (NPV) over activities for the coming ten years was conducted. This sort of analysis is useful if some initial costs in the beginning of the period is needed to gain future incomes. For the NPV we made the calculations with separate growth rates for expected incomes and for expected costs. This analysis of different growth rates was chosen since the incomes can be expected to increase faster than the costs if the park is being managed well, while the reverse is true if the park is mismanaged. Costs related to the administration is expected to increase at the average growth level for Kosovo. Further, we analyse the robustness of the results depending on different discount rates (rates at which future events are discounted down).

Result

Data collection

In Table 1 we present the overall results of our conducted inventory. As seen, the five different municipalities have been growing at different rate between 2020 and 2024, were the number of houses in Dragash only increased by 9 percent, while houses in Suharek more than doubled. Since the municipality with the largest number of houses, Shterpce, only grew by 9 percent, and the big municipality Prizren grew by 29 percent, the total increase in building for all municipalities was 23 percent.

Table 1 Results from inventory

Municipality	Counted 2020	counted 2024	increase
Dragash	88	96	9%
Kacanik	61	89	46%
Prizren	312	401	29%
Shterpce	660	721	9%
Suhareke	94	190	102%
Total	1215	1497	23%

According to our inventory these 1497 buildings are used for different purposes as is described in Table 2. We see that Prizren followed by Shterpce are the two municipalities with most tourist related buildings, while the three other municipalities mostly contain private houses. In total we have found 16 hotels, 29 restaurants and 11 separate shops within the Sharri National Park. During a presentation held in Prizren on the 4th of October to the administration of the Sharri National Park a discussion regarding the building type stables came up. Apparently, this type of building can both be a house to keep animals, but it may also be a mountain house for overnight stay. The discussion concluded that the fees for stables therefore should be raised to the same level as that for private houses.

Table 2 different uses of existing buildings

Region	Buildings	Private houses	Hotels	Restaurants	Shops	Terrace	Stables
Prizren	401	287	8	10	3	17	25
Shterpce	721	543	4	14	8	1	21
Kacanik	89	17	0	0			39
Dragash	96	6	4	5			42
Suhareke	190	181	0			1	8
	1497	1034	16	29	11	19	135

Estimations

As described in the method, several estimations were made during the Benefit-Cost analysis. In Table 3 we display expected incomes that are being included in the analysis. For Firewood and Cattle, we have no numbers matching the pricelist, however, we do have information from the park administration of previous years income from these sources and can thereby estimate incomes from these two sources. Since the numbers provided are not very complete, we calculate low, and high values based on a difference in +/- 20 percent. Since the park yet don't charge entrance fees other than during the winter peak season the estimated incomes from entrance fees are based on an estimation of annual visitors and cars made by the administration. We estimate that 40 percent of the visitors are from outside the local community and thereby are obliged to pay entrance fees. Since there is a high uncertainty in these numbers, we add low and high value based on a difference in +/- 20 percent. For vehicles we make no further estimations of buses or mini vans, which probably makes our income estimations for vehicles a bit too low. For Hotels, restaurants, shops, parking places, terraces, stables and outdoor areas, we conduct our estimations based on our desktop research as well as on our physical inventory in the park. Outdoor areas, mainly ski areas, where estimated visually and by interview with the park administration. For incomes from private houses estimations on size was made with the help of the administration, and here a span between 106 and 210 with an average house size of 158 m^2 was used for the calculations. The number of hotel beds, as well as the size of restaurants and shops are based on our physical inventory. In those cases where restaurants were closed for the season values were extrapolated from accessible values. As seen in Table 3 the main incomes for the Sharri National Park, with the pricelist implemented, will be from entrance fees, and from the €1.50 per square metre fee for private houses. Also stables and firewood may contribute to park income with a small share.

Table 3 Estimated incomes,

Income source	#	€/#	low #	med #	high #	low €	med €	high €
Firewood						80000	100000	120000
Cattle						3000	4000	4000
Entrance fee adults	person	1	143000	179000	214000	143000	179000	214000
Entrance fee kids	person	0.5	45000	57000	68000	23000	28000	34000
Entrance fee cars	car	1	45000	56000	67000	45000	56000	67000
Outdoor activity areas	Ha	100	80	100	120	8000	10000	12000
Private houses	m^2	1.5	110000	160000	217000	164000	240000	326000
Restaurants	m^2	2	5000	6000	7000	9000	12000	14000
Hotels	# beds	10	1000	1300	1600	10000	13000	16000
Shops	m^2	2	3000	3500	4000	5000	7000	8000
Parking areas	m^2	0.5	10000	12000	14000	5000	6000	7000
Terraces	m^2	0.5	5000	6000	7000	2000	3000	4000
Stables	m^2	0.5	32000	41000	49000	16000	20000	24000

For the Benefit-Cost analysis we also estimated some major costs that the expected incomes depend upon. As can be seen in Table 4, The major estimated costs are for park rangers. This estimation is based on 52 needed rangers that has been defined by the development plan for the Sharri National Park. The annual cost for one ranger has by the administration of the Sharri National Park been identified as € 4800. Since these values are easier to estimate, we only calculate with a 10 % uncertainty interval. The number of needed cars has by the park administration been identified to 15 cars and the annual cost for one car was defined as € 5000. The estimated costs for vehicles for the rangers was calculated with a 20% uncertainty interval. Since the waste management for the part of the national park that resides within the municipality of Prevalla is currently being paid for direct by the National Park we include these costs in the Benefit-Cost analyses. Here the input for the annual waste management costs from the park administration was 24 000 €, however, since waste management will be a big issue for the future management of the park, we here created a confidence interval containing the estimated value as the lowest cost and calculated the median value to € 36000 and the higher value to € 48000.

Table 4 Estimated costs,

Source	#	annual cost (€/#)	€ low	€ median	€ high
Staff needed	52	4800	225000	250000	275000
estimated cost for cars	15	5000	60000	75000	90000
Waste removal Prevalla			24000	36000	48000

Benefit-Cost analysis

In the BCA, we assumed costs for rangers, cars and waste management will increase in line with the GDP growth of Kosovo, which according to Kosovo Agency Statistics is forecasted to be 3.8 percent in 2024, and with an average growth of 3.7 percent during the period 2006 – 2024. For our base calculation we assumed a discount rate at 3%. For the base analysis that is presented in Table 5, we also assumed that expected incomes from the park will grow with the same

growth rate as the costs. For clarity, costs will appear as minus posts in the analysis and are marked red.

The base model indicates that the expected incomes are greater than the expected costs, with a surplus of 100 – 540 000 € for the first year. When performing a Net Present Value (NPV) calculation over the coming ten years, with the default discount rate at 3 percent and an expected growth in both income and costs of 3.8 percent, the surplus is estimated to be within the range of 1.0 M€ – 5.6 M€.

Table 5 Benefit Cost Analyses

Source	€ low	€ med	€ high	disc	growth	NPV_low	NPV_med	NPV_high
Firewood	80000	100000	120000	3.0%	3.8%	835000.00	1044000	1252000
Cattle	3000	4000	4000	3.0%	3.8%	31000	42000	42000
Entrance adults	143000	179000	214000	3.0%	3.8%	1493000	1868000	2234000
Entrance kids	23000	28000	34000	3.0%	3.8%	240000	292000	355000
Entrance vehicles	45000	56000	67000	3.0%	3.8%	470000	584000	699000
Outdoor areas	8000	10000	12000	3.0%	3.8%	83000	104000	125000
Private houses	164000	240000	326000	3.0%	3.8%	1712000	2505000	3403000
Restaurants	9000	12000	14000	3.0%	3.8%	94000	125000	146000
Hotels	10000	13000	16000	3.0%	3.8%	104000	136000	167000
Shops	5000	7000	8000	3.0%	3.8%	52000	73000	83000
Parking areas	5000	6000	7000	3.0%	3.8%	52000	63000	73000
Terraces	2000	3000	4000	3.0%	3.8%	21000	31000	42000
Stables	16000	20000	24000	3.0%	3.8%	167000	209000	250000
Park rangers	-275000	-250000	-225000	3.0%	3.8%	-2870000	-2609000	-2348000
Cars	-90000	-75000	-60000	3.0%	3.8%	-939000	-783000	-626000
Waste	-48000	-36000	-24000	3.0%	3.8%	-501000	-376000	-250000
	€ 100,000	€ 320,000	€ 540,000			€ 1,000,000	€ 3,300,000	€ 5,600,000

In Table 6, we evaluate the robustness of our Net Present Value depending on different values on the discount rate, which does not make much of a difference since we are only estimating over ten years. We also examine how a difference in growth rates between estimated incomes and estimated expenses affect the results. Since the GDP-growth for Kosovo has been stable just below four percent, we only assess how different growth rates for expected incomes in the park affect the results. Here we compare the results: if costs and expenses grow at the same rate; if the income growth is 2 percent-units below the growth rate for expenses; and finally, if there is zero growth in incomes. The analysis of robustness indicates that without any growth in income during the next ten years combined with a growth rate in expenses of 3.8 %, there will still be a positive Net Present Value for our calculations.

When stress testing our results we observe that the breakeven point when the med value for NPV is no longer positive is in a scenario were we have a difference in growth rate between incomes and expenses at 12 percent-units, which basically means that if the costs are growing with 4 percent per year and the incomes from the park are sinking with 8 percent per year the expected balance over ten years is zero.

Table 6 Different scenarios

discount rate		low	med	high	low	med	high	low	med	high
			3.8%			1.8%			0.0%	
			Growth rate incomes							
3.0%		5 350 000	7 080 000	8 870 000	4 810 000	6 360 000	7 970 000	4 380 000	5 780 000	7 250 000
		-4 310 000	-3 770 000	-3 230 000	-4 310 000	-3 770 000	-3 230 000	-4 310 000	-3 770 000	-3 230 000
		1 040 000	3 310 000	5 640 000	500 000	2 590 000	4 740 000	70 000	2 010 000	4 020 000
2.0%		5 660 000	7 470 000	9 370 000	5 080 000	6 710 000	8 410 000	4 610 000	6 090 000	7 640 000
		-4 550 000	-3 980 000	-3 410 000	-4 550 000	-3 980 000	-3 410 000	-4 550 000	-3 980 000	-3 410 000
		1 110 000	3 490 000	5 960 000	530 000	2 730 000	5 000 000	60 000	2 110 000	4 230 000
1.0%		5 980 000	7 900 000	9 910 000	5 360 000	7 080 000	8 880 000	4 860 000	6 420 000	8 050 000
		-4 820 000	-4 210 000	-3 600 000	-4 820 000	-4 210 000	-3 600 000	-4 820 000	-4 210 000	-3 600 000
		1 160 000	3 690 000	6 310 000	540 000	2 870 000	5 280 000	40 000	2 210 000	4 450 000

Discussion

The purpose of this work has been to analyse how the decision, and its pricelist, implemented by the Minister of Environmental, Spatial Planning and Infrastructure might benefit, or impose adverse effects on the Sharri National Park, its visitors and people living within or nearby the park. The collection of fees doesn't directly benefit the park, but if this collection increases the fundings for the park many positive effects will be seen. The present under-manning of the National Park can be addressed, and this will increase possibilities to prevent poaching, illegal logging and other unwanted activities within the park. Increased funding also gives the park better possibilities to maintain and develop the park. Further, a good knowledge on number of visitors and the distribution over the year is an important input to the Sharri management plan. Another positive aspect, if the pricelist is fully implemented and this means increased fundings for the park, is that the park will be able to employ 20 – 30 extra rangers which will benefit the economy for the nearby municipalities in shape of job opportunities.

We haven't identified any significant adverse effects from the implemented pricelist. This is partially because the fees are relatively low compared to other costs included with a visit, such as travel cost and costs for food and accommodation. Another factor reducing eventual adverse effects is the fact that local citizens are excluded from fees.

Our results indicate that if the implementation of the pricelist is conditioned on an increase in park rangers there will, even though accounting for many uncertainties, be a positive balance between expected costs and expected incomes, both direct, but also for the next ten-year period. This indication is robust and valid even though this benefit-cost analysis excludes the positive societal effects from 20 -30 more rangers employed, as well as excluding the positive nature benefits from reduced logging, poaching and littering.

Waste management

To fully be able to attract tourists from more distant regions, the Sharri National Parks' waste management should improve. This is perhaps best seen as an improvement over two dimensions. First the direct problem with trash and garbage must be solved. Second, park

visitors need education in how to behave in a national park. For this, school campaigns and other educational activities in the surrounding municipalities might be of help.

The administration for the park agrees with us that one urgent short-term objective to address is to improve the existing waste management service. One solution is to update the waste management plans of municipalities to include a clear vision for how the service will be delivered within the whole park by increased efficiency of collection. Moreover, KEPA and National Park of Sharri should intensify the discussions with the business owners and villa/house owners to pay the monthly/annual tariff for the waste service The process of collecting tariffs from businesses and individual houses in the areas where the waste management service is provided should also be updated to make sure that all houses within the National Park are included in such a payment scheme.

As mentioned, one important component to reduce excessive littering is to increase the awareness of residents and tourists. One potential direct action here is to install information signs for how to treat waste so it doesn't cause any environmental damage. The Ekoregjioni company in collaboration with municipalities could develop a clear waste management plan for the National Park of Sharri. Important aspects of such a plan could include clarification of how monitoring will be established, how to decide the number of containers in the park, and how to impose fines for those who throw waste in the open environment.

Challenges in charging and collecting fees

The fees decided upon for the National Park can be divided into two categories, one that is collected on site for visitors, and one being charged based on building size and category. For the latter category of fees an official and trustworthy register on buildings within the National Park is necessary. According to the administration of the National Park, no such register exists. However, since houseowners in Kosovo pay real estate tax some kind of register must be present at the ministry of Finance, or a similar governmental body. We suggest further investigations in if, and where such a register exists. If no such register exists, we suggest a coordinated plan for how to create and maintain such a register by the Ministry of Environment, Spatial planning and Infrastructure together with the Ministry of Finance.

Entrance fees

To impose fees on visitors to the National Park is not an easy task, since the Park has several entrance roads. One possible, but labour demanding, way to collect fees is to install staffed entrance gates on all possible entrances. This is already partially done, since entrance fees are being imposed for some areas during the winter season. This is to our knowledge also the only possible approach if the decided pricelist is to be fully implemented, since this allows for staff to count the number of persons, and their ages, in the vehicles passing the gate. This is a feasible approach, but since the park is restricted to the number of employees mentioned in the Sharri National Park Management Plan, this sort of labour-intensive collection of fees will restrict the parks possibilities to monitor activities within the park.

If a change in the decided pricelist is feasible, some more cost-effective approaches to fee collections focusing on vehicle only are available. The vehicle fees would then have to be adjusted to cover all expected incomes from entrance fees. One, less labour-intensive way that takes some initial investments, is to install automated gates at all entrance roads. These gates can be of the type used on many parking places, where one receives a ticket at entrance which later must be paid for before exiting the park. There are also more sophisticated solutions where number plates are being scanned and only those plates connected with a pre-payment are granted access. These latter types of gates are often found at highways.

Another option, that also would take some adjustments to the existing pricelist, would be to charge parking fees within the park instead of entrance fees. This would imply instalment of parking zones with parking fees and non-parking zones where parking is prohibited and were fines for parked cars will be issued.

Fees for private houses, hotels and restaurants

The pricelist for private houses is straightforward with a cost per square meter and our only comment here is that it is important to gain knowledge of house sizes. This information must also be updated annually to properly catch expansions to existing houses, as well as to include new houses. For hotels and businesses, we suggest a slight change in the pricelist so that the price per bed in every hotel is changed to a tourist fee for every person who spends a night at a hotel within the park. This change might seem to be of minor importance, but it will move the burden of payment away from the hotels, and on to the tourists. This is a well proven method used in many European countries, and it allows for an increase in visitors to the park to also increase incomes for the park. This type of fee or tourist tax is typically accounted for separately on bills to tourists and thereby creates an understanding from tourists against hotel owners that this part of the cost is not a part of the hotel fee.

Collection of fees

When it comes to the collection of fees for buildings, beds, restaurants and outdoor areas, one important first step is, as mentioned previously, to have an official register covering the basis for the fees. This register shall than be directly connected to the imposed fee. As for the collection of the fees this must be done in a controlled and monitored way that minimise the risk of corruption. One way to collect fees may be by annual invoices sent out by the park administration. However, this approach imposes costs for the administration and might cause problems if house and business owners don't pay voluntarily. Another way of doing this is to impose fees simultaneously as other fees and taxes by municipality or state. A common fear for this approach of collecting for instance tourism taxes is that the imposed fees 'disappear' in the bigger scheme of redistribution system for taxes, and it is unsure if the National Park receives all necessary fundings.

What data is still missing

One outcome from this project is identification of specific gaps in available data to fully implement the ministry's decision. Data on buildings within the National Park is available with their location and main purpose. However, there is to our knowledge no available data on the size of each house, stable, parking place, terrace or outdoor activity area. One possible solution to this gap in available data could be for the National Park themselves to invest in creating, and annually updating, a solid register for properties within the park: Perhaps there are economies of scale if such a register is instead managed by the ministry of finance or another ministry handling real estate taxes within Kosovo. If such a register is to be managed by the administration of the National Park, there is room for 1-2 fulltime staff within the surplus brought by an implementation of the decision on entrance and usage fees.

There is also a gap in the data over how many visitors the park has per year, and how many of them that would be subject to entrance fees. Further, there are gaps in data on harvested fruits, berries and mushrooms from the park. This might not have a big impact on the incomes for the park, since it is feasible to assume that most of the visitors who harvest resources within the park are living nearby and thereby would be excluded from fees. There might however be some interesting potential incomes from professional businesses for picking fruit and berries.

Potential future activities

A big part of the tourism industry within the Sharr National Park is focusing on the winter season with skiing as a main attraction. With the picture of global warming and diminishing time with snow all over Europe in focus, this constitutes a threat against future incomes for the park. To circumvent this threat, one idea is that the park could focus on activities also for other seasons.

The tourism industry in the Austrian and Italian alps have already implemented non-snow related attracting activities such as downhill biking, mountain hiking, paragliding, canoeing, and SUP-boards in their offers for tourists. On many places ski lifts are even being adjusted to carry up bicycles on the mountains instead of only skis.

Recommendations

Our analysis indicates a positive net present value from the implementation of the decision on prices for entrance to, and activities within the National Park of Sharri. We estimate a surplus also when costs for increased number of employees such as park rangers are included. Our recommendation is that a part of this surplus is invested in improved control over the entrances into the parks. Such an improvement enables an efficient gathering of entrance fees. Further we suggest that one part of the surplus may be spent on increased waste management costs. These two investments, in combination, will not only increase the protection of the ecology of the Sharri National Park, but it may also increase the acceptance for the fees paid by the visitors to the park.

To enable collections of fees for buildings within the park we suggest official statistics covering buildings should include their sizes and their purposes. Our estimation of house sizes is probably not enough to gather fees for size of private house but was merely made to estimate potential incomes.

Further analysis should be made regarding possibilities to adjust the decision to put the whole entrance fee onto vehicles, which then could open for different ways to collect fees. For instance, with automatic gates or with parking fees, rather than by staffed entrance gates. Another interesting variation could be to adjust the hotel from the fee per bed in a hotel, to a night fee for every hotel guest.

To tackle future risks of income losses due to a shorter winter season it could be interesting to analyse the market for summer activities such as downhill biking, paragliding, and hiking.

The Sharri National Park is a beautiful and ecologically valuable resource covering a big part of Kosovo and directly affecting five municipalities. With the help of the implemented fees upon visitors the Park can be kept clean and pristine also for future generations.

Attachments

Pricelist included in the Decision of Council of Ministers

PRICES FOR TIMBER FOREST PRODUCTS

No.	Designation of timber produce (product)		Measurement unit	Price in €
1.	Firewood			
	a	Hard deciduous class I	m3	20.00
	b	Hard deciduous class II	m3	15.00
	c	Soft deciduous class I	m3	15.00
	d	Soft deciduous class II	m3	10.00
	e	Coniferous class I	m3	10.00
	f	Coniferous class II	m3	7.00
	g	Dry deciduous tree (above 10 cm)	m3	15.00
	h	Dry coniferous tree (above 10cm)	m3	8.00
	i	Forest deciduous litter (under 10 cm)	m3	11.00
	j	Forest coniferous litter (under 10cm)	m3	3.00
	k	Confiscated deciduous timber	m3	35.00
	l	Confiscated coniferous timber	m3	20.00
2.	Rounded timber: for mines, dowel rods and squares, scaffolding support, perch for wells			
	a	Deciduous	m3	30.00
	b	Coniferous	m3	40.00
3.	Pulpwood			
	a	Deciduous	m3	30.00
	b	Coniferous	m3	25.00
4.	Birches and wood shavings			
	a	Birch	m3 *(30* shards)	20.00
	b	Wood shavings	m3	5.00
5.	Confiscated timber		m3	30% higher than values from points 2,3, 4, 5, 6, 7

PRICES FOR NON-TIMBER FOREST PRODUCTS (SECONDARY)

No.	Type of product	Measurement unit	Price in €
1.	Conifer cones		

	a	Bark, Pine tree, Pinus peuce, ivy, pine	kg	1.00
	b	Other conifers (fir, spruce)	kg	0.50
2.		Forest seeds		
	a	Elm	kg	0.50
	b	Fir	kg	20.00
	c	Spruce	kg	40.00
	d	Pine tree	kg	20.00
	e	Pinus peuce	kg	35.00
3.		Forest fruits		
	a	Hazelnut	kg	0.30
	b	Rose hips	kg	0.30
	c	Strawberries	kg	0.30
	d	Raspberry	kg	0.30
	e	Mulberry	kg	0.30
	f	Blueberry	kg	0.30
	g	Plantain head	kg	0.30
	h	Cornel cherry	kg	0.30
	i	Gooseberry	kg	0.30
4.		Mushrooms		
	a	White truffles (Tuber sp.)	kg	40.00
	b	Other varieties of truffles	kg	10.00
	c	Morel	kg	2.00
	d	Pumpkin mushroom	kg	1.00
	e	Nutritional mushrooms§	kg	1.00
5.		Medicinal herbs		
	a	St. Jonh's wort (Hypericum perforatum herba)	kg	0.30
	b	Elderflower (Sambucas flos & folia)	kg	0.30
	c	Thyme (Thymus herbae)	kg	0.30
	d	Yarrow (Achilea herbae)	kg	0.30
	e	Other permitted medicinal herbs		0.30
	f	Fern	kg	0.30
	g	Lovage	kg	0.30
	h	Moss and lichen	kg	1.00
6.	Snails		kg	1.50

PRICES FOR USE OF PASTURES

No.	Type of livestock	Measurement unit	Calculation period	Price in €

1.	Cattle over one year old	head	May-September	2.00
2.	Calves	head	May-September	1.00
3.	Sheep	head	May-September	0.50
4.	Lambs	head	May-September	0.20
5.	Horse, donkey	head	May-September	2.00

PRICES FOR TOURISM, CATERING AND TRADE

No.	Type of building and business	Measuring unit	Calculation period	Price in €
1.	Hotel facilities (hotel, motel, guesthouses, boarding house etc.)	per bed	years	10.00
2.	Mountain house	per bed	years	5.00
3.	Mountain houses and resorts in ownership of DANP	per bed	days	3.00
4.	Houses and buildings for leisure (summerhouses)	m3 (includes basements, garages and attics)	years	1.50
5.	Buildings for catering (restaurants, buffets, pizzeria.)	m3	years	2.00
6.	Buildings or commercial, trade or other shops	m3	years	2.00
7.	Building or shop terraces for use	m3	years	0.50
8.	Buildings or venues for entertainment (amusement parks and toys)	m3 of area	years (season)	3.00

PRICES FOR USE OF GROUND (LAND) FOR CERTAIN INTENDED USES

No.	Compensation designation	Measurement unit	Calculation period	Price in €
1.	Trails (slopes) for skiing	per hectare surface	years	100.00
2.	Sports grounds, open-air swimming pools and similar	per m² area	years	0.20
3.	Trailers	per object	days	3.00
4.	Tents	per tent	days	2.00
6.	Parking	per m² area	years	0.50
7.	Stables for livestock	per m²	years	0.50

8.	Sheds for livestock	per m² area	years	0.10
9.	Bee hives	per hive	years	1.00

PRICES FOR FILMING AND ADVERTISING

No.	**Designation of user-compensation**	**Measurement unit**	**Calculation period**	**Price in €**
1.	Legal and physical persons recording film	per person	days	Contract or 35.00
2.	Owners of signs (signposts, advertisements, billboards etc.)	m² of sign	year	300.00
3.	Legal person or businessmen using the name or trademark of the national park	per person	year	As per agreement

PRICES FOR ENTRANCE AND VISITS TO NATIONAL PARK

No·,	**Compensation designation**	**Measurement unit**	**Calculation period**	**Price in €**
1.	Entrance for vehicles and motorcycles	per vehicle and motorcycle	days	1.00
2.	Entrance for minibus	per minibus	days	2.00
3.	Entrance for bus and truck	per bus-truck	days	3.00
4.	Eco tax for transit of vehicles	per vehicle	days	0.50
5.	Eco tax for transit of minibuses	per minibus	days	1.00
6.	Eco tax for transit of buses and trucks	per bus-truck	days	2.00
7.	Entrance for adults	per person	days	1.00
8.	Entrance for children (pupils) 10-18 years of age	per person	days	0.50
9.	Local community, physical persons who carry out activities in the national park, war invalids, persons with disabilities, close family members of war martyrs (parents, spouses and children) and pensioners.			Exempted from payment

PRICES FOR DAMAGE TO FOREST NON-TIMBER PRODUCTS (SECONDARY)

No.	**Type of product**	**Measurement unit**	**Price in €**
1.	Conifer cones		

	a	Pine tree, Pinus peuce and ivy	kg	20.00
	b	Other conifers (fir, spruce, pine)	kg	15.00
2.		Forest seeds		
	a	Beech	kg	30.00
	b	Fir	kg	150.00
	c	Spruce	kg	200.00
	d	Pine tree, Pinus peuce and ivy	kg	250.00
3.		Forest fruits		
	a	Hazelnut	kg	15.00
	b	Rose hip	kg	15.00
	c	Strawberry	kg	20.00
	d	Raspberry	kg	20.00
	e	Mulberry	kg	20.00
	f	Blueberry	kg	20.00
	g	Plantain head	kg	10.00
	h	Cornel cherry	kg	10.00
	i	Gooseberry	kg	10.00
	j	Other types of forest fruits	kg	10.00
4.		Mushrooms		
	a	Vergan, morels	kg	50.00
	b	Forest floor mushroom	kg	30.00
	c	Nutritional mushrooms	kg	30.00
5.		Plant products		
	a	Steno endemic plants according to DANP register	kg	3,000.00
	b	Rare and endangered endemic plants: sage, soapwort, immortelle (helichrysum), arnica, ordinary saffron, helichrysum italicum, angelica, salep orchid etc.	kg	500.00
	c	Other types of herbs	kg	100.00
	d	Moss and lichen	kg	30.00
	e	Fern	kg	20.00
	f	Leaves for goats	kg	30.00
	g	Moss and tree bark	liter	100.00
	h	Tree canopy	kg	50.00

	i	Meadow grass	kg	3.00
6	Types of otters and aquatics (snails, frogs, turtles etc.)		kg	200.00

PRICES FOR DETERMINING GEOGRAPHIC LOCATION

No:	Type of compensation	Price in €
1.	Determination of geographic location	10.00

Questionary for businesses along National Park "Sharri''

Identification of the object

Name of the business _____

Hotel, Restaurant, ..._____

Location _____

Map coordinates: **X - m** **Y- m**

- Year of construction:
- Area m^2 _____
- Number of beds _____
- Number of seats _____
- Number of rooms_____
- Number of nights _____
- Space for parking m2 _____
- Outdoor signs m^2 _____
- Size of veranda m^2 _____

Comments: _____

References

1) Hardin, Garrett. 1968 'The Tragedy of the Commons'. *Science, New Series* 162 (3859): 1243–48.