

Spatial and Financial Aspects of National Parks Functioning in Poland Based on the Example of the Parks Situated along the Borderland of Lower Silesia Region and Liberecky and Kralovehradecky kraj

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Abstract. The article presents a national park not only in the category of an area, but also as an actively managed unit. Empirical studies were conducted based on the data originating from the financial records of Stołowe Mountains National Park (SMNP), Karkonoski National Park (KNP) and the data collected by the Central Statistical Office. The level of tourist oriented function, performed by the territorial communes linked to SMNP and KNP, was researched and the analysis of both parks' activities was conducted. The study allowed presenting the cross-border aspects of area specific nature protection forms. The scale of activities performed by the analyzed units indicates that the power of park's influence as an entity is quite significant. It is of vast importance for the development of a tourist function in the municipalities which are connected by territory and qualifies parks for playing the role of a partner in the cross-border EU projects.

Keywords: Protected Area, Tourist Function, Space Management, National Park, Nature, Cross-border Region

1 Introduction

The area specific nature protection forms represent the permanent component of space – crucial not only from the perspective of maintaining processes of both domestic and international importance, but also of major significance for local and regional development. The transport of pollutants and the requirement to ensure continuity of ecological passages emphasize how irrelevant administrative borders are for the processes occurring in natural environment. It results in referring to a particular protected area not as a separate territory, but as a part of the global network. In Polish conditions, legislation in the aspect of spatial planning and environmental law not always ensure effective protection of natural resources [19]. The problem is particularly important at the level of local spatial policy [5]. Simultaneously, the above-mentioned observations mean the need for emphasizing the nonexistence of protected areas separation from the remaining ones – mutual impacts are unavoidable. Additionally – as Becken and Job have observed – protected areas not only render

services for the benefit of natural environment protection, but also constitute the source of income for both, a region and a country [1]. Similar observations are made by Przybyła and Kazak [15]. The above presented track of thought is, however, not the universally applicable one – since along with the permanently intensified cooperation between the cross-border protected areas such as, among others, Polish and Czech Karkonoski National Park in Sudetes[14], there is an ongoing discussion over the negative impacts which the establishment of the area forms of nature protection has on the development of economic life. This, however, does not change the fact that Polish-Czech borderland represents an example of positive transformations, possible to occur in ecosystems as a result of complex anthropopressure reduction in the neighborhood of protected areas. Similar situation is in Polish-Czech borderland (Tatra National Park) [9].

The process of sustainable local management can be effectively improved by the use of decision support systems in decisions making in spatial planning to mitigate the negative impact of development and to choose optimal and acceptable solutions [6]. Managing the ecological disaster from which the discussed area suffered in the past can serve as the model to be replicated by other areas if the need arises. Even more so, since in many cases ecological disasters require the reevaluation of priorities by not only those who manage a particular protected area, but also by public authorities – frequently representing a few neighboring countries. The problem of a vicious circle – “environment degradation – decreasing immunity – increasing susceptibility to disasters resulting in even more extensive environment degradation” is quite universal and refers not only to Europe [11]. Geopolitical, economic and ideological changes resulted in the fact that the problems of natural environment and economic development became the global top problems frequently covered in professional literature [8]. The social attitude to protected areas still remains the subject matter of heated debates. Adopting the standpoint of prohibitions and limitations, listed by the legislator and resulting in the identification of protected space with the category of an isolated area and constituting a separate entity in relation to its environment, is very simple. All it requires are adequate legal regulations – in Polish reality the Nature Conservation Act. It is much more difficult to perform the evaluation of a national park as an entity taking active part in economic life of a region – especially a cross-border region.

The purpose of the article is to present a national park in the category of an area and in the category of an active unit playing the role of an investor and an entity influencing economic growth. The study is based on the example of two national parks situated in Lower Silesia region – Karkonoski National Park (KNP) and Stołowe Mountains National Park (SMNP). The choice of the above-mentioned parks is not a random one – their neighbouring territory, with the Czech areas administratively belonging to Liberecký kraj and Královéhradecký kraj, allows presenting the cross-border aspect of the area specific nature protection forms. Empirical studies were conducted based on the data from financial and accounting records of the above-mentioned national parks. Because of changes in the accounting policy for study was selected the period 2008-2014 (data was comparable). Additionally, data collected by the Central Statistical Office (Local Data Bank) were

used as well as the legal acts, including the local law acts. The adopted period of analyzing the financial aspects related to national parks functioning ensured conducting adequate observations in terms of the three organization and legal forms based on which Polish national parks were functioning in recent years: the State budget unit together with an ancillary entity, as well as the State budget unit and the State legal person.

2 SMNP and KNP – spatial perspective

SMNP is situated in Lower Silesia region in the area of four municipalities covered by Kłodzki district, i.e. the municipalities of Kudowa Zdrój, Lewin Kłodzki, Szczytna and Radków. The protected area of 6.340 ha was established based on the regulation by the Council of Ministers dated 16th September 1993 (Journal of Laws 1993 no. 88 item 407). The above-mentioned legal act also indicates the area of protective buffer zone covering 10.575 ha with the State border as part of its borderline. Four years later the protective buffer zone borderline was modified and its area was reduced by 60 ha [18]. The natural attractiveness of the space covered by two of the above-mentioned municipalities results in placing additional area specific forms of nature conservation within their territory – lower in relation to the national park. The location of SMNP, in terms of transport routes, is quite characteristic and contradicts the stereotype approach to the protected area as an isolated territory. A motorway, so-called The Hundred Curves Motorway, crosses Radków, Karlów and Kudowa Zdrój. The neighbourhood of the international E-67 highway, connecting the capital of Lower Silesia and Prague as well as the short distance to border crossings in Kudowa Słone and Tłumaczowo, make the Park area easily accessible not only for Polish tourists. The attractiveness aspect, regarding its cross-border dimension, is enhanced by the Broumovsko Landscape Park on the Czech side. The following locations are situated in the vicinity of the Park: Polanica Zdrój, Duszniki Zdrój and Kudowa Zdrój. This means the implementation of health and spa oriented tourism in the close vicinity of protected areas.

KNP - the second of the discussed parks is also situated within the administrative borders of Lower Silesia region. KNP is territorially connected with six municipalities: Szklarska Poręba, Piechowice, Jelenia Góra, Podgórzyn, Kowary and Karpacz. It is one of the oldest Polish national parks which was established following the regulation by the Council of Ministers issued on 16th January 1959 (Journal of Laws 1959 no. 17 item 90). The area of KNP covers 5.580 ha and is surrounded by the protected buffer zone the area of which is 11.265 ha. The spatial distribution of KNP is uneven regarding particular municipalities. Its major part is situated in Karpacz municipality since over half of this municipality is covered by the discussed form of area specific nature protection. KNP is not the only national park in Karkonosze, because on the Czech part of the mountains Karkonosky Narodni Park (KRNAP) has been functioning since 1963. Territorial connection and the above described cooperation between KNP and KRNAP indicate complex approach to specific activities aimed at nature protection. Similarly to SMNP, spa tourism is also carried

out in the neighbourhood of KNP – Cieplice Śląskie Zdrój, as a spa resort, constitutes an administrative part of Jelenia Góra city.

3 The space of national parks vs. the development of touristic function

The method of managing space occupied by national parks is imposed by the legislator based on the Nature Conservation Act dated 16th April 2004 (Journal of Laws 2004, No. 92, item 880 with later amendments). The diversity of areas covered by protection and taking the form of national parks forces the application of individual standards, as a supplement to the general principles, which are adequate to the characteristics of a particular territory. This role is played by the decisions made by a given park manager. It has to be emphasized that nature conservation is the statutorily specified priority task of any national park. Sharing the area with visitors and its educational activity is subordinate to its primary task consisting in nature protection. The example of SMNP proves best that the stereotype identification of the protected area with an isolated territory is totally incorrect. In case of KNP one can also hardly speak of the area isolation since it is visited by over 2 million people annually. The space covered by national parks is by no means an autarchic fragment in either natural or administrative terms. The broadly understood nature specific bonds are not, in any way, dependent on administrative (and therefore artificial) borders whereas the area of a national park itself still constitutes an integral - even though separated from typical management principles - part of a municipality.

It has to be emphasized that there is a significant difference between KNP and SMNP in the length of their functioning. KNP is almost 35 years older regarding the role of a major actor at the local economic scene. Moreover, KNP covers the area which, from the historical perspective, is much more attractive in terms of tourism. Therefore many attributes characteristic for both discussed parks are different. It would be a serious mistake to interpret these differences in the categories of KNP and the municipalities situated in The Karkonosze Mountains either as an advantage or as an inefficiency of SMNP or even the indolence of municipalities situated in The Stołowe Mountains.

Since one of the national park functioning purposes is the provision of its area, thus complex characteristics of a national park area, as well as the consecutive evaluation of park's functioning as an entity, require the analysis of territorially connected municipalities from the perspective of their tourism specific function. For this reason Baretje and Defert ratio (1) was calculated [7].

$$\frac{\text{the number of beds in area} \times 100}{\text{the population in given area}} \quad (1)$$

Among the municipalities connected by territory with SMNP the highest values of the above ratio are obtained by Kudowa Zdrój. The reverse is true for Szczytna

municipality, where the tourist function is minimal and the long-term perspective (data for the period 1999-2015) shows a disappearing trend. As a result of short distance between SMNP and the municipalities of Duszniki Zdrój and Polanica Zdrój, as well as including these municipalities to the socio-economic environment of SMNP, the discussed ratio was also calculated for them. Regarding Baretje and Defert ratio the municipalities of Duszniki Zdrój and Polanica Zdrój are the dominating ones comparing to these territorially connected with SMNP. It also indicates a higher level of tourist function development in spa oriented municipalities (see table 1).

Table 1. Baretje and Defert ratio for municipalities connected whit SMNP (years 2008-2015).

Specification	2008	2009	2010	2011	2012	2013	2014	2015
Kudowa Zdrój	12	18	17	17	26	28	29	30
Lewin Kłodzki	9	8	6	8,	9	9	7	7
Szczytna	3	3	2	2	2	2	2	2
Radków	7	8	10	10	12	12	12	11
Duszniki Zdrój	27	25	26	27	32	27	32	33
Polanica Zdrój	19	19	19	17	25	24	24	24

In case of KNP the above-mentioned ratio values indicate the cumulating tourist traffic in two municipalities – Karpacz and Szklarska Poręba. The domination of Karpacz municipality contradicts the thesis following which the establishment of protected areas blocks the development of tourism. 50% of this municipality is covered by protection in the form of a national park (see table 2).

Table 2. Baretje and Defert ratio for municipalities connected whit KNP (years 2008-2015).

Specification	2008	2009	2010	2011	2012	2013	2014	2015
SzklarskaPoręba	68	68	53	54	65	61	64	61
Piechowice	7	9	8	7	8	7	8	8
Jelenia Góra	3	3	2	2	3	3	3	3
Podgórzyn	25	21	18	15	18	17	17	14
Karpacz	150	145	140	173	191	199	213	213
Kowary	4	4	4	3	3	3	2	2

The method of managing space occupied by national parks is imposed by the legislator based on the Nature Conservation Act dated 16th April 2004 (Journal of Laws 2004, No. 92, item 880 with later amendments). The diversity of areas covered by protection and taking the form of national parks forces the application of individual standards, as a supplement to the general principles, which are adequate to the characteristics of a particular territory. This role is played by the decisions made by a given park manager. It has to be emphasized that nature conservation is the statutorily specified priority task of any national park. Sharing the area with visitors

and its educational activity is subordinate to its primary task consisting in nature protection. The example of SMNP proves best that the stereotype identification of the protected area with an isolated territory is totally incorrect. In case of KNP one can also hardly speak of the area isolation since it is visited by over 2 million people annually. The space covered by national parks is by no means an autarchic fragment in either natural or administrative terms. The broadly understood nature specific bonds are not, in any way, dependent on administrative (and therefore artificial) borders whereas the area of a national park itself still constitutes an integral - even though separated from typical management principles - part of a municipality. The comparison of a tourist function implementation in the municipalities territorially connected with KNP as well as those connected in their territory with SMNP clearly indicates a higher level of the discussed function development in the municipalities situated in The Karkonosze Mountains. The value of Baretje and Defert ratio reached by Kudowa Zdrój in the latest analysed period (i.e. 2015) is seven times lower than the value obtained by the municipality of Karpacz in the same period. The number of tourists is also different in the discussed national parks – annually KNP is visited by 2 million people, whereas SMNP estimates its annual number of visitors at the level of 367 000 [13].

4 Financial aspects of SMNP and KNP functioning

The actors of economic scene can be described by means of numerous features. In order to characterize SMNP and KNP as entities it was decided to analyse the structure and value of assets at the disposal of both units, to present their revenues and the costs incurred. The value of remunerations paid was also quoted to illustrate work oriented functions of both Parks. Due to diverse organizational and legal forms, which were present in the period 2008-2014, the underlying empirical research (in all three above-mentioned spheres) was performed in the following way: in the period 2008-2012 – separately for a State budget unit (BU) and an ancillary entity (AE); in 2011 – for a State budget unit (as of 1st January 2011 ancillary entities were liquidated whereas their functions, assets, liabilities, etc. were taken over by parent budget units) and in the period 2012-2014 – for a State legal person (SLP). Correct inference required summing up the values adequate for a State budget unit and an ancillary entity functioning along with such unit (the period 2008-2010). Therefore the below presented tables include the row called: “At the disposal of SMNP” (or KNP) which contains the aggregated data.

The data presented in table 3 illustrate that the value of assets (balance sheet total) at the disposal of SMNP has tripled in the analyzed period and in 2014 reached the level of 20,7 million PLN. This confirms the unit dynamic development. Moreover, the assets structure shows that fixed assets constitute their leading component – the element of tangible fixed assets. High increase in the value of fixed assets occurred in 2011, 2012 and 2014. It has to be emphasized, however, that in 2012 as a result of stock taking the presented fixed assets were valued at the level of 436.662,41 PLN (tourist route, forest path, bridge). The increase in fixed assets value by almost half a

million PLN was not related to SMNP expenditure. Jumping increase in 2014 resulted from the transfer of the land from off-balance sheet to the balance sheet (in 2015 the change of accounting policy was continued. As a result this change data has become incomparable, so the study is finished in 2014). In 2012 the value of current assets went up fivefold - the increase in value amounting to 2,3 million PLN resulted mostly from higher volume of cash in the till and on the bank account..

Table 3. The assets of SMNP and the Ancillary Entity at SMNP in the period 2008-2014 in thousands PLN.

Specification	2008		2009		2010		2011	2012	2013	2014
	BU	AE	BU	AE	BU	AE	BU	SLP	SLP	SLP
Fixed assets	790	3955	1706	3764	1615	4904	8035	9506	9315	14748
TFA including:	614	3955	1059	3764	1011	4904	7509	9004	8438	13869
1. NFA	392	3955	504	3764	777	4904	7161	8315	8106	13662
2.FAUC	221	0	555	0	234	0	348	689	333	207
Current assets	821	1408	867	1442	440	151	539	2873	5080	5996
Balance sheet total	1611	5363	2573	5206	2055	5055	8574	12379	14395	20744
At the disposal SMNP	6974		7779		7110		8574	12379	14395	20744

Legend: BU – budget unit SMNP, AE – Ancillary Entity at SMNP, SLP – State legal person SMNP, TFA – tangible fixed assets, NFA – net fixed assets, FAUC – fixed assets under construction, At the disposal SMNP = balance sheet total BU+ balance sheet total AE

In case of KNP the value of assets in the period 2008-2014 increased by over 214%. Jumping increase in 2013 resulted from the transfer of the land from off-balance sheet to the balance sheet. As in the case of SMNP fixed assets represent the dominating component of assets. The significant values of fixed assets under construction have to be emphasized – in 2011 they amounted to over 2 million PLN. KNP maintains the lower level of current assets comparing to SMNP.

Referring to the information presented in both above tables the issues related to fixed assets under construction and intangible assets have to be explained. Fixed assets under construction illustrate the value of carried out investments – it means that the analyzed units, in the period 2008-2014, performed works aimed at increasing the fixed assets value used for the implementation of statutory goals. The value of fixed assets does not equal the value of tangible fixed assets in cases of intangible assets occurrence among the components of a given unit assets. Zero value of intangible assets does not, however, mean their physical absence, but only indicates that they were not completely written off. In is worth emphasizing that SMNP and KNP obtain revenues not only from the budget grants. The income earned based on financial operations also constitutes their source of revenues (mainly interest), as well as

Table 4. The assets of KNP and the Ancillary Entity at KNP in the period 2008-2014 in thousands PLN.

Specification	2008		2009		2010		2011	2012	2013	2014
	BU	AE	BU	AE	BU	AE	BU	SLP	SLP	SLP
Fixed assets	1042	6197	1966	5809	3704	5730	11111	11089	24894	24607
TFA including:	1042	5905	1936	5593	3239	5612	10850	11089	24740	24522
1. NFA	924	5905	1448	5593	2766	5612	8839	1164	24415	24100
2. FAUC	119	0	488	0	473	0	2011	24	325	421
Current assets	273	943	344	870	357	167	490	912	1991	1987
Balance sheet total	1315	7140	2310	6679	4061	5897	11601	12001	26885	26594
At the disposal KNP	8455		8989		9958		11601	12001	26885	26594

Legend: BU – budget unit KNP, AE – Ancillary Entity at KNP, SLP – State legal person KNP, TFA – tangible fixed assets, NFA – net fixed assets, FAUC – fixed assets under construction, At the disposal KNP = balance sheet total BU+ balance sheet total AE

revenues included in the category of the other operating income (grants from the National Fund for Environmental Protection and Water Management, the Regional Fund for Environmental Protection and Water Management, proceeds from the sale of redundant assets, received contractual penalties, etc.) and also revenues from performed business activities (sales of timber, animals, admission and resources sharing fees, housing rents, lease of land and buildings, etc.). The level of revenues is presented in tables 5 and 6.

Table 5. Revenues of SMNP and the Ancillary Entity at SMNP in the period 2008-2014 in thousands PLN.

Specification	2008		2009		2010		2011	2012	2013	2014
	BU	AE	BU	AE	BU	AE	BU	SLP	SLP	SLP
Total revenues, including:	77	5539	74	3604	773	3652	3423	5163	4754	9403
1. ST	0	3169	0	1403	0	1869	1983	2610	2480	2485
2. A&R	0	1470	0	1537	0	1338	1334	1769	1719	2036
At the disposal SMNP	5616		3678		4425		3423	5163	4754	9403

Legend: ST – The sales of timber, A&R – Admission and resources sharing fees, At the disposal SMNP = total revenues BU + total revenues AE,

Table 6. Revenues of KNP and the Ancillary Entity at KNP in the period 2008-2014 in thousands PLN.

Specification	2008		2009		2010		2011	2012	2013	2014
	BU	AE	BU	AE	BU	AE	BU	SLP	SLP	SLP
Total revenues, including:	130	5889	428	6456	662	4119	4023	11957	10863	14714
1. ST	0	677	0	687	0	945	482	873	1134	1173
2. A&R	0	2484	0	2639	0	2211	2563	2728	2833	3086
At the disposal KNP	6019		6884		4781		4023	11957	10863	14714

Legend: ST – The sales of timbe, A&R – Admission and resources sharing fees, At the disposal KNP = total revenues BU + total revenues AE,

Table 7. Costs of statutory activities incurred by SMNP in the period 2008-2014 in thousands PLN

Specification	2008		2009		2010		2011	2012	2013	2014
	BU	AE	BU	AE	BU	AE	BU	SLP	SLP	SLP
Operating costs	2533	4745	2670	2900	2673	3323	5676	6696	6770	6913
Other operating costs	12	51	0	26	0	48	19	28	106	56
Financial costs	0	19	0	14	0	3	5	0	0	7
Total costs	2545	4815	2670	2940	2673	3374	5699	6724	6876	6976
At the disposal SMNP	7360		5610		6047		5699	6724	6876	6976

Table 8. Costs of statutory activities incurred by KNP in the period 2008-2014 in thousands PLN

Specification	2008		2009		2010		2011	2012	2013	2014
	BU	AE	BU	AE	BU	AE	BU	SLP	SLP	SLP
Operating costs	2381	5445	5501	6063	6440	3767	12494	12900	12779	16158
Other operating costs	0	209	0	251	0	254	4	361	15	130
Financial costs	1	1	0	0	0	0	22	29	40	32
Total costs	2382	5655	5501	6314	6440	4021	12520	13290	12834	16320
At the disposal SMNP	8037		11815		10461		12520	13290	12834	16320

The costs incurred by the discussed national parks (see tables 7 and 8) in their major part refer directly to activities having impact on the development of their tourist function – they derive from actions related to the tourist oriented provision of park

area, environmental education and ensuring the sustainability of park natural and cultural resources. It means that the above-mentioned issues are directly associated with maintaining nature uniqueness as fundamental for the area attractiveness.

While assessing both costs and revenues of national parks, the financial result calculated on their basis is not significant. National parks in Poland represent the organizations for which nature protection, rather than profit, remains the priority. Therefore, the loss incurred cannot be assessed negatively. This, however, does not change the fact that when managing funds, national parks have to follow public spending rules, the most important of which is the compliance with public procurement law. The level of costs and revenues is primarily used to present the scale of activities carried out by the analysed entities. Among the projects implemented by SMNP in the analyzed period the following, among others, should be listed as taking advantage of the European Union funds:

- within the framework of the project: “The revitalization of infrastructure in Szczeliniec Wielki – Views without borders” implemented as part of the European Territorial Cooperation Operational Program: Cross-border cooperation The Czech Republic - The Republic of Poland 2007-2013,
- within the framework of the project: “The development of plans for protective tasks covering Nature 2000 area on the territory of Poland” implemented as part of Infrastructure and Environment Operational Program 2007-2013.

KNP has and still is implementing the EU projects within the framework of Infrastructure and Environment Operational Program, the European Territorial Cooperation Operational Program: Cross-border cooperation The Czech Republic - The Republic of Poland and the European Territorial Cooperation Operational Program for Central Europe. The cooperation between KNP and KRNAP opens opportunities for the development of local communities [10].

Additionally, both units keep renovating tourist routes and extend their educational offer. SMNP and KNP are significantly improving the level of safety in the tourist subregion, not only by maintaining tourist routes, but also through Volunteer Mountain Rescue Service co-financing.

The above presented facts lead to the conclusion that national parks guarantee complex approach to the managed space. The so-called “hard” investments supplemented by “soft” activities in the sphere of ecological education also support the development of qualified tourism. The cross-border nature of KNP is manifested in creating the Polish-Czech tourist product – also as a result of EU funds implementation, e.g. within the framework of the project entitled: “The development of KRNAP and KNP tourist infrastructure” resulting in, among others, the establishment of Information Centre in Karpacz on the Polish side and the revitalization of monastery garden in Vrchlabi on the Czech side. The territorially connected municipalities can take advantage, at no cost, of the effects resulting from both park activities - among others establish an individual tourist product using values within the borders of protected areas.

5 Final remarks

National parks should not be associated with space only – they also represent living economic organisms. For the territorially connected municipalities they not only mean statutory prohibitions imposed on the usage of space, but also opportunities for partnership in accomplishing common interests covering: cultural and natural heritage protection and preservation, local community integration and local patriotism promotion, the development of tourist function with particular emphasis on sustainable tourism and also the establishment of a cross-border tourist product.

The limitations referring to the implementation of national parks' space, provided for in the Nature Conservation Act, are commonly known. Accessing data characterizing national parks as entities is much more difficult since it requires the knowledge of financial and accounting documentation. In the summary of findings referring to the analyzed period (2008-2014) it has to be emphasized that the value of assets at the disposal of both units, the level of revenues, or the volume of statutory costs allow stating that KNP and SMNP represent entities having impact on the development of the territorially connected municipalities not only by means of statutory prohibitions, but also through active, independent actions. Public disclosures of information about the discussed national parks open a chance for cross-border cooperation intensification and also facilitate searching for a cooperating partner in the course of EU projects implementation.

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