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**IMPACT OF PROTECTED AREAS ON
THE DEVELOPMENT OF SUBURBAN AREAS:
THE CASE OF KRAKÓW METROPOLITAN AREA**

1. INTRODUCTION

Suburbanization is growing in Poland and is resulting in an increasing investment pressure on suburbs. In the market economy system, which has been in place in Poland for a relatively short time, land ownership is changing on a large scale and many hitherto agricultural areas are being converted into residential areas. Open areas, with naturally attractive locations, are most often targeted (Drzazga and Ratajczyk, 2005). Similar trends have been observed and described for the United States and western Europe (Watson, Plattus and Shibley, 2003; Diez de Pablo and Camina del Amo, 2009). For local communities, sale of land for non-agricultural use brings profits, both in terms of sale revenue and growing fiscal revenue for the communes. Sadly, however, the unrestrained urban sprawl usually leads to spatial chaos, as pointed out by authors including Lisowski and Grochowski (2008), Hołuj and Hołuj (2010) and Forman (2008).

The chaotic urban sprawl results in increasing pressure on areas of high natural value, causing landscape degradation, biodiversity decline and pollution. In highly developed regions, designating a protected area helps to preserve the natural environment and landscape in a relatively good condition, but at the same time severely limits settlement and business activities. Restrictions resulting from nature conservation priorities are often perceived by local communities as an obstacle to local development, leading to conflicts (Fortin and Gagnon, 1999; Getzner, 2003).

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From the local development perspective, the presence of areas of natural value in a commune should be an asset and bring benefits to the local community. These benefits should be intangible, including a perceived higher quality of life, pride of living in an area of natural value and health benefits, as well as tangible, favouring the economic development of the commune (Zawilińska, 2012). The population's support for the existence of a protected area tends to grow with the profits it brings (Zawilińska, 2010). A local population that is indifferent or hostile to the designation of an area as protected will not accept restrictions it entails; they might attempt to eliminate those restrictions, to reduce the protected area or even to eliminate its designation as such. Efforts should therefore be made to recognise the role that protected areas play in local social and economic systems and to develop mechanisms to enhance the beneficial effects of protected areas to the local communities.

2. OBJECTIVE, SCOPE AND METHOD OF RESEARCH

This paper presents part of the results of a broader research that was conducted in June 2012 in Kraków Metropolitan Area (KMA) and looked into the economic effects of spatial development (Brańka, Hołuj and Zawilińska, 2012). Kraków Metropolitan Area includes the city of Kraków and 50 surrounding communes (gmina). The total area of KMA is 406,511 hectares, i.e. 26.8% of Małopolskie Voivodeship. The research covered all KMA communes excluding the city of Kraków (number of communes $n = 50$) and included questionnaire surveys in the commune offices and among local residents. The questions asked to commune officials and those asked to the residents covered two thematic categories: (1) strategic and spatial planning in the commune development and (2) the impact of protected areas on the local economy. This paper concentrates on the latter thematic category.

The objective of the study has been to gain insight into the opinions of municipal offices and inhabitants of KMA on the impact of protected natural areas on the local development, as well as into the nature of interactions between the local authorities on the one side and the authorities of Ojców National Park and of Małopolskie Voivodeship Landscape Park Complex on the other.

The research was limited to analysing the impact of large-area natural protection sites (national parks, landscape parks, protected landscape areas and Natura 2000 sites) on the development of their host communes. Other types of protected sites (nature reserves, documentation sites, ecological areas, natural and scenic complexes) have not been included in the research, as their creation does not tend to have a significant economic impact on their host communes due to their small unit areas.

35 commune offices (70% of the total number) provided responses to the questions on protected areas. The respondents were staff of municipal offices within KMA, mostly employees responsible for spatial management and planning, real property management, communal services management and nature conservation. Several responses came from heads, deputy heads or secretaries of communes.

Questionnaire surveys included 15 to 20 inhabitants of each commune. After incomplete, incorrect or illegible responses were rejected, responses of 679 individuals were used for analysis in the part concerning the impact of protected areas on the local economy.

3. IMPACT OF PROTECTED AREAS ON LOCAL DEVELOPMENT

Designation of protected areas usually has the aim of nature conservation, but it also has a significant impact on economic development as well as strategic and spatial planning on the local and regional level. Legal protection of a given area always restricts the scope of activities possible in that area to a degree that is proportional to the protection regime. On the other hand, protected areas, especially national parks and landscape parks, contribute to promoting their regions, developing tourism and taking actions to protect the environment.

Comprehensive studies on the impact of protected areas on social and economic development are lacking in Polish literature. On the other hand, numerous studies explore detailed issues related to conducting activities in protected areas (e.g. Bołtromiuk, 2003; Bołtromiuk ed., 2011; Osiniak, Poskrobko and Sadowski, 1993), focussing mainly on development of tourism (e.g. Partyka ed., 2002; Kasprzak and Raszka, 1996) and existing conflicts of functions (e.g. Domański and, Partyka, 1992; Hibszer and Partyka ed., 2005; Hołuj, 2012; Królikowska, 2007). The few existing studies on the economic context of a protected area's functioning include the results of a research by Bołtromiuk (2010), presenting Białowieża National Park as an employer, business counterpart, investor, consumer of services, and real property owner.

According to authors including Konopka (2001), Owskiak *et al.* (2001), Raszka, Szczepański and Motycki (2009), most benefits and opportunities of territories located within, or adjacent to, protected areas come from tourism, bio-agriculture and craft. Local authorities and inhabitants usually perceive the key role of national parks and landscape parks in promotion, education, tourism development and nature conservation (Osiniak, Poskrobko and Sadowski, 1993; Zawilińska, 2010; Zimniewicz, 2005). Downsides of the existence of protected areas mainly include restrictions on land development and business. In areas involving high protection regime even more restrictions are present, e.g. limited right to move freely in for-

ests. These issues have been described in detail in studies concerning Białowieża Forest (Poskrobko ed., 1996) and Wigry National Park (Osiniak, Poskrobko and Sadowski, 1993). Limitations and obstacles to business, as well as unemployment in protected areas, have also been pointed out by Popławski (2005) and Szczepanowski (2007), while Gotkiewicz (2001) and Stachowiak (2007) signalled lower profitability of agriculture in protected areas.

More references to the impact of protected areas on social and economic development within their borders or in their neighbourhood are to be found in English language sources. They focus on national parks and include analyzes of the economic impact of tourists' visits in those parks (e.g. Stynes *et al.*, 2000; Huhtala, 2007; Saayman and Saayman, 2006; Eagles, 2002; Driml, 2010). The effect of national parks on adjacent areas has been studied in Austria, where local governments' representatives found national parks very important and generally beneficial for the economy of local communes. Those benefits stem mostly from the development of tourism and agriculture, as well as the emergence of new investment projects and businesses (Getzner, 2003). The author also points out that the economic success of national parks largely depends on planning and decision-making processes and the involvement of local and regional stakeholders, as well as cooperation between local governments and national park authorities.

Another issue that has been explored in scientific literature is the planning and management of social and economic development of territories hosting protected areas. A co-management model for protected areas, based on systematic cooperation between park authorities, local governments, residents, businesses and non-governmental organizations, is being increasingly recommended (e.g. Borrini-Feyerabend, Kothari and Oviedo, 2004; Plummer, Fennell, 2009). The need for adopting a participatory approach to managing all categories of protected areas has also been pointed out in many IUCN publications (e.g. Davey, 1998; Dudley ed., 2008; Phillips, 2002). In Poland, the concept of social participation in the management of protected areas is not yet popular, but is emphasised in the spatial planning and change management processes in administrative units (Brańka and Hołuj, 2012; Hołuj, 2012; Zachariasz ed., 2012).

The Nature Conservation Act of April 16, 2004 (published in *Dziennik Ustaw* no. 92, item 880, as amended) requires nature conservation plans to be drawn up for each national park, nature reserve and landscape park for the period of 20 years. For Natura 2000 sites, conservation measure plans are drawn up for the period of 10 years. They include guidelines for addressing internal or external risks in comprehensive spatial development plans (*studium uwarunkowań i kierunków zagospodarowania przestrzennego*) of the communes as well as land use plans of communes and voivodeships. Nature conservation plans are consulted with the relevant commune councils prior to their adoption. Regrettably, as Ptaszycka-Jackowska (2011) pointed out, established methods and principles of incorporating

nature conservation issues in spatial planning are lacking in Poland. The choice of methods depends on the environmental awareness of planners, officials, consulting and consulted bodies and local residents. Often the negotiating skills and proactive attitude of protected areas' managers towards the local authorities are the key.

Landscape parks should be the areas where actions aiming at development programming and fostering initiatives to reconcile nature conservation with social and economic objectives are particularly relevant. According to Mizgajski (2008), they should become training grounds for developing patterns of such approaches since, unlike national parks and nature reserves, landscape parks are areas largely open to human activity. In practice, however, harmonious development in landscape parks is often hampered, as their multiple functions entail conflicts of interests and also because no sufficient legal, administrative and financial means are in place for the implementation of legal obligations (Zawilińska, 2010). Nature conservation and landscape protection in those parks is often reduced to a list of prohibitions, an approach ill-suited to face the 21st-century challenges of sustainable development, formulated decades ago by precursors of landscape parks (Schubert, 2008).

4. NATURE CONSERVATION AREAS IN KRAKÓW METROPOLITAN AREA

Due to its location at the meeting point of several geographic units, Kraków Metropolitan Area is naturally diverse. Its northern part is divided between Silesia–Kraków Upland (Kraków–Częstochowa Upland macroregion) and Małopolska Upland (Nida Basin macroregion), while the southern part is in Outer Western Carpathians (West-Beskidian Foothills and Western Beskids macroregions). These two major parts are divided latitudinally by Subcarpathian depressions: Kraków Gate and Sandomierz Basin.

The areas with best preserved natural environment have been designated as protected areas of different categories, covering a total of 23.6% of KMA. This share is far lower than for the entire Małopolska Voivodeship (52.1%) and also lower than for Poland as a whole (32.5%). However, it is still significant given that KMA consists of densely populated, intensively developed urban and suburban areas. The areas of high protection regime (i.e. located within Ojców National Park and nature reserves) make up only 0.9% of KMA and 3.6% of the total protected area within KMA. Landscape parks are the dominant nature conservation form in KMA, accounting for nearly 14% of KMA and 58.7% of protected areas within KMA (table 1, figure 1);¹ these percentages are much higher than the shares

¹ KMA includes the following landscape parks or their parts: Little Beskids LP, Bielany–Tyniec LP, Dłubnia LP, Kraków Valleys LP, Eagle Nests LP, Rudno LP, Tenczynek LP, Wiśnicz–Lipnica LP.

of landscape park areas both in Małopolskie Voivodeship and in Poland (table 1). Another significant protection category in KMA are protected landscape areas, covering 8.8% of KMA and 37.4% of its total protected area (table 1, figure 1).²

Table 1. Share of protected areas in the total areas of Kraków Metropolitan Area, Małopolskie Voivodeship and Poland

Protected areas	% share of total area			% share of area of protected areas	
	KMA	Małopolskie	Poland	KMA	Małopolskie
National parks	0.53	2.51	1.01	2.23	4.81
Landscape parks*	13.87	11.58	8.09	58.68	22.25
Protected landscape areas*	8.83	37.66	22.36	37.37	72.34
Other protected areas	0.41	0.31	1.00	1.72	0.60
Total protected areas	23.64	52.06	32.46	100.00	100.00

* Excluding the areas of nature reserves, documentation sites, ecological areas, natural and scenic complexes within the borders of landscape parks.

Source: own calculation based on Local Data Bank (BDL) of the Central Statistical Office of Poland (GUS). Situation as of 2011.

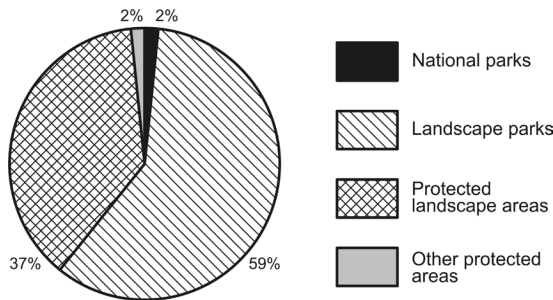


Fig. 1. Structure of protected areas in Kraków Metropolitan Area

Source: own calculation based on Local Data Bank (BDL) of the Central Statistical Office of Poland (GUS). Situation as of 2011

Beside the protected areas listed above, KMA hosts Natura 2000 sites, covering 4.3% of its area. Most of them are located within the national park, landscape

² KMA includes the following protected landscape areas or their parts: Bratucice PLA, Koszyce PLA, Miechów Upland PLA, South Małopolska PLA, West Wiśnicz Foothills PLA and East Wiśnicz Foothills PLA.

parks and protected landscape areas. Special bird protection areas dominate, accounting for around two-thirds of the total area, while special habitat protection areas account for one-third.

The areas of highest natural value within KMA are protected as part of Ojców National Park and nature reserves. Their history dates back to the 1920s, when the project of a nature reserve in the Prądnik River valley was first developed by a team led by Prof. W. Szafer. It served as a basis for Ojców National Park, created in 1956 (Gradziński, Gradziński and Michalik, 1994). It is the smallest national park in Poland, covering just 2,145.7 ha, of which 11.7% is under strict protection. The majority of the Park (65.4%) is under partial protection and 22.9% under landscape protection. The buffer protection zone surrounding the Park has an area of 6,777 ha. The Park's suburban location puts it under a severe pressure of tourist visits and investment projects. The Park is visited by approx. 400,000 tourists per year. In relation to its small area, this means a tourist pressure of 186.4 visitors per hectare, which is one of the highest in Poland, after Karkonosze National Park and Pieniny National Park (*Ochrona środowiska*, 2011). This is further exacerbated by two roads crossing the Park: regional road no. 773 from Skała to Sułoszowa and a road from Skała to Jerzmanowice. Another factor which hampers protection is high (around one-third) share of private land ownership within the Park.

The vast majority of protected areas within KMA have medium or low protection regime, which allows them to be used economically to a high extent. It is worth recalling that the idea of introducing protected area designations other than national parks and nature reserves in Poland was born in late 1940s in the community of architects and spatial planners from Kraków. It was first formulated by Z. Novák and his team from Kraków Technical University. As part of their plans concerning the Kraków-Częstochowa Upland, they proposed to create Jura Landscape Park (Novák, Bogdanowski and Łuczyńska-Bruzda, 1967), a vast recreational area for the residents of Kraków and Upper Silesia, designed primarily to protect the landscape and its aesthetic value (Bogdanowski, 1978). Novák (1963) defined the landscape park as an 'area of attractive landscape, with significant scenic and cultural value, designed for various forms of leisure, both active and passive, collective and individual'. The proposal was put into practice by creating the Jura Landscape Park Complex in 1981.

The idea of creating a landscape park on the Kraków-Częstochowa Upland was a result of an accurate identification of trends in settlement development and future tourism and leisure needs of the inhabitants of quickly growing urban areas. The park was to prevent an excessive and inappropriate economic use of the area and allow its natural, cultural and scenic value to be preserved for their sustainable use by the residents of Kraków and Upper Silesia (Katowice) urban area. As the concept of landscape park evolved, more emphasis was being put on nature conservation; however, as Schubert (2008) pointed out, this was always in the context of human activity, which was the key difference between this form of protection and the pre-existing national parks and nature reserves.

5. LOCAL AUTHORITIES' AND RESIDENTS' PERCEPTION OF THE IMPACT OF PROTECTED AREAS ON THE COMMUNES' DEVELOPMENT

According to Polish Central Statistical Office's (GUS) data, 70% of KMA communes host protected natural areas of different categories. In 30% of the communes, protected areas cover more than half of their territory. Nine communes lie entirely within legally protected areas. Replies given by commune officials during the research imply that the relative size of protected areas within a commune is not as important for the commune's development as the protection regime.

Ojców National Park covers parts of four communes. Despite the Park's relatively small area both in absolute terms and relative to the commune's areas (it covers between 2% and 16% of each commune), according to the commune officials it has a large impact on local development. Landscape parks, according to commune officials, have a much smaller influence on the communes' development, as the restrictions they impose are far less strict. Of 14 communes hosting landscape parks, their importance was described as significant for their development in eight communes, and as high – in four (table 2, figure 2). The mean response, on a scale of 1–5 (5 for 'very high importance' and 1 for 'marginal importance'), was 3.3.

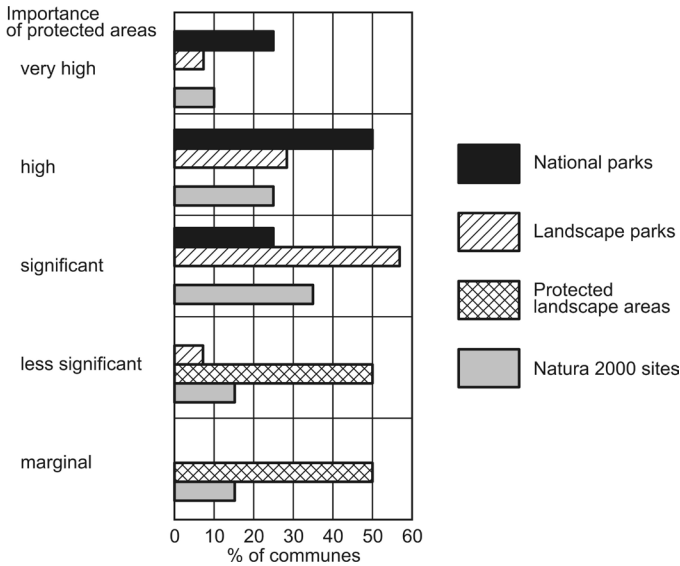


Fig. 2. Importance of protected areas in the development of communes

Source: own work based on questionnaire survey in commune offices

Table 2. Importance of protected areas in the development of communes

Protected areas	Importance of protected areas									
	very high		high		significant		less significant		marginal	
	no. of communes	% of communes	no. of communes	% of communes	no. of communes	% of communes	no. of communes	% of communes	no. of communes	% of communes
National park	1	25.0	2	50.0	1	25.0	0	0.0	0	0.0
Landscape parks	1	7.1	4	28.6	8	57.1	1	7.1	0	0
Protected landscape areas	0	0.0	0	0.0	0	0.0	2	50.0	2	2
Natura 2000 sites	2	10.0	5	25.0	7	35.0	3	15.0	3	3

Source: own work based on questionnaire survey in commune offices.

Table 3. Impact of protected areas on the social and economic situation in communes

Protected areas	Impact of protected areas on the social and economic situation									
	very positive		mostly positive		neutral		mostly negative		very negative	
	no. of communes	% of communes	no. of communes	% of communes	no. of communes	% of communes	no. of communes	% of communes	no. of communes	% of communes
National Park	1	25.0	0	0.0	0	0.0	3	75.0	0	0
Landscape parks	1	7.1	6	42.9	2	14.3	5	35.7	0	0
Natura 2000 sites	1	5.0	7	35.0	6	30.0	6	30.0	0	0

Note: questions on the impact of the national park, landscape parks and Natura 2000 sites on local development were only asked in communes hosting the respective protected areas (n = 25). Responses were given in 24 communes.

Sources: own work based on questionnaire surveys in commune offices.

The questionnaire also included a question on the importance of protected landscape areas. However, that form of legal protection turned out to be largely unknown. While there are eight communes in KMA hosting such areas, in four of them the commune officials were unaware of their existence. Of the remaining four, the importance of the protected landscape areas was assessed as marginal in two and less significant in the other two (table 2, figure 2). On the other hand, in five communes which do not host protected landscape areas, their importance was assessed as significant or high, which may suggest that they were confused with other protection forms. Given these two factors, i.e. minor influence of landscape protection areas on local development and little awareness of their existence among commune officials, the officials' statements concerning that form of protection were disregarded in further analysis.

Natura 2000 sites, on the other hand, despite being the most recent nature protection form in Poland, have turned out to be far more known to commune officials, compared to protected landscape areas. This is certainly a result of a broad campaign that has been carried out in Poland. Natura 2000 sites have been designated in 24 communes of KMA. 20 of those were included in this study. The mean response on the importance of Natura 2000 sites was somewhat lower than for landscape parks (3.0 on a scale of 1–5), but the diversity of responses was higher (table 2, figure 2). This is attributable to the fact that protection scope and permitted land use forms on those areas are diverse and dependent on the types of habitats and wildlife species that each site is designed to protect. Thus, the impact of Natura 2000 sites on human economy is more diverse than that of landscape parks.

Commune officials' statements on the impact of protected areas on their communes' social and economic situation varied widely. In Ojców National Park, as many as three out of four communes declared that the impact is mostly negative. Only in one commune the impact was described as very positive (mean response, on a scale of –2 to +2, was –0.25). In communes hosting landscape parks, the opinions of the parks' impact on social and economic development were slightly more positive (mean response, on a scale of –2 to +2, was 0.21), likewise for Natura 2000 sites (mean response: 0.15). It has to be stressed, however, that opinions in communes were very diverse (table 3, figure 3).

Benefits from the existence of protected areas are perceived mostly in tourism (figure 4). In all communes whose areas are included in Ojców National Park, the Park was declared to have a very positive impact on the development of tourism. For landscape parks, the opinions were more divided. In one commune the impact of the park was thought to be neutral; in three it was mostly positive; half the communes declared that a very positive impact was observed (on a scale of –2 to +2, the mean response was 1.43). The estimated impact of landscape parks on tourism was noticeably more positive in communes located in the vicinity of Kraków than

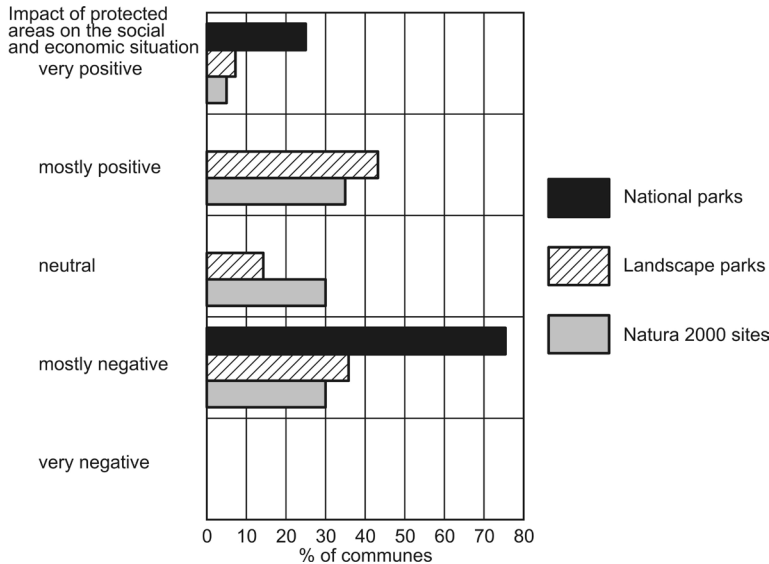


Fig. 3. Impact of protected areas on the social and economic situation in communes

Sources: own work based on questionnaire surveys in commune offices

in more remote communes. A possible explanation is that, in densely populated suburban communes experiencing high pressure from construction development activity, landscape parks have a more significant role to play in safeguarding the natural and scenic value and are perceived as a ‘guarantor’ of maintaining the attractive areas for tourism and leisure for the residents of the metropolitan area. Commune officials also notice a beneficial influence of Natura 2000 sites on tourism: in half of the communes hosting such areas, they were found to have a very positive impact on tourism development; a further quarter of the communes described the impact as mostly positive and the remaining quarter, as neutral (mean response: 1.21).

Protected areas are also seen as beneficial for the natural environment, as well as local residents’ environmental awareness and quality of life (figure 4). Surprisingly, the protected areas’ impact on spatial order does not seem to be perceived as positive. In one of the communes within Ojców NP the Park was found to have a mostly negative impact on spatial order; in further two communes it was found to be neutral. Similar results were obtained in a research in all of Poland’s national parks (Zawilińska, 2012). Such a low result is attributable to a discrepancy of the public’s views on what a national park is and what it should be. During their research in Ojców NP, Domański and Partyka (1992) realized that for most residents, a national park should ideally be orderly and clean, rather like an urban park, and have a well developed tourist infrastructure, including accommodation. ‘Mess’ in forests, demolitions of buildings and restrictions in land development are perceived as poor management.

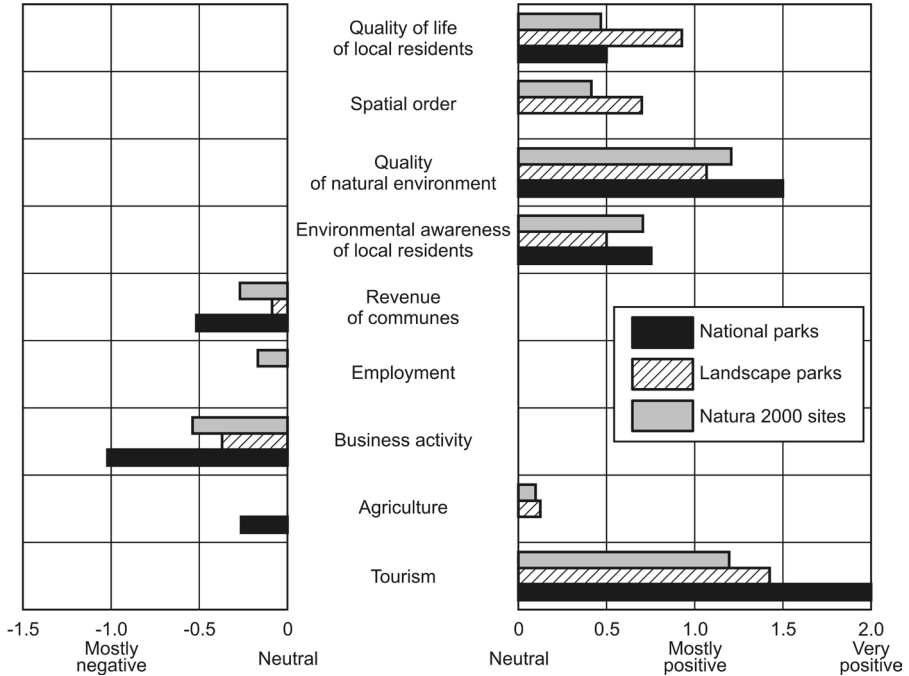


Fig. 4. Direct and indirect impact of protected areas on selected aspects of communes’ development (-2 – very negative; -1 – mostly negative; 0 – neutral; 1 – mostly positive; 2 – very positive)

Sources: own work based on surveys in commune offices

On the other hand, the impact of landscape parks on spatial order is perceived by most respondents as mostly positive; in none of the communes, however, was it viewed as very positive. The opinions on Natura 2000 sites in this respect were very divergent, from mostly negative to very positive.

According to views expressed in commune offices, the impact of protected areas on economic development is mostly negative, except on tourism. Respondents found the national park, landscape parks and Natura 2000 sites to contribute (directly and indirectly) to a decline in business activity and decrease of communes’ revenues. The national park also has a slightly negative impact on agriculture (figure 4).

Judging from the results of interviews in commune offices, the communes are aware of the positive effects of their areas being legally protected, resulting in preservation of natural and scenic values, higher environmental awareness of local residents, health benefits from lower pollution. Other benefits which were mentioned included a reduction of construction activity and more rational man-

agement of communes' land, as well as improved image and promotion of the communes, with a resulting increase in prices of real property. Improved capacity to raise funding, including the European Union funds, was also mentioned. However, it is in terms of tourism development that the communes saw their most significant benefits, with as many as 67% of the communes pointing to this aspect. Only in two communes the respondents were unable to mention any benefits from protected areas, and in one commune they expressly stated that there were no benefits.

Almost all of the communes also perceive negative aspects of having protected areas on their territories. Protected areas are an obstacle to investment, as declared in half of the communes. They hamper business activity, as projects must be consulted, which extends the decision-making process; they drive up the costs of preparing planning documents, reduce the communes' revenue and limit private landlords' freedom in disposing of their property.

Communes hosting national parks, landscape parks or Natura 2000 sites broadly share the view that designation of protected areas should be followed by according special privileges to the communes hosting them. This view was expressed by all the communes which had any opinion in this respect (22 communes), but different specific solutions were proposed. Half of those communes expected financial compensation for lost revenue and the limited possibilities of social and economic development. That compensation, in their view, should take the form of subsidies for environmental protection, increased use of green technologies, development of tourist infrastructure and roads, promotion of the commune and ecology education. Other proposed measures, besides financial compensation, included preferential treatment when applying for funding, tax credits for local residents, guidance for communes and a bigger say for local governments on protection plans for areas within their respective territories.

Besides commune officials, also residents of KMA communes were asked on how they perceive the protected areas' impact on local development. However, the survey revealed their limited awareness concerning those areas. Ojców National Park is the best known, with 64% of the respondents (residents of communes hosting the Park, $n = 66$) aware of the Park's existence within their communes. Those residents' opinions on the Park's impact on the communes' economy were usually positive (the mean response was 0.77 on a scale of -2 to 2 ; figure 5).³

³ The survey was conducted in localities hosting the commune offices. These localities are located outside Ojców National Park, therefore a vast majority of the respondents were presumably people living outside the Park.

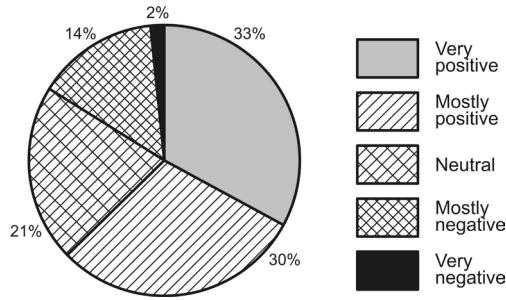


Fig. 5. General impact of Ojców National Park on the communes' economic situation, as perceived by local residents

Sources: own work based on questionnaire surveys in commune offices

In communes hosting landscape parks, most of the respondents ($n = 214$) knew that there were nature protection areas within their communes, but only 39% of them correctly identified them as landscape parks. Protected landscape areas as a protection form are completely unknown to the residents: in the communes hosting them, no respondent (out of $n = 80$) mentioned them. Also Natura 2000 sites remain unrecognised for most part: in the communes hosting them, only 16% of respondents ($n = 255$) identified them as a protection form. The impact of landscape parks and Natura 2000 sites on their respective communes' economy was viewed as mostly positive. However, with such a low awareness of their existence, these views, presumably, have limited reliability and it could be inferred that, save for the National Park, protected areas do not have significant impact on the lives of local communities.

The benefits and downsides of protected areas' existence, as mentioned by the residents, did not differ much from those declared by commune officials. The positive impacts were linked mostly with nature conservation and the region's natural and scenic attractiveness, as well as economic aspects of tourism development. The negative impacts mainly included restrictions on land use, especially on development of investment projects (residential construction, industrial facilities, transport infrastructure). The residents also mentioned the nuisance caused by high numbers of tourists visiting the protected areas.

One of the main reasons why, in the communes' view, the existence of protected areas does not bring significant benefits seems to be a relatively low degree of cooperation between the authorities of communes and those of the protected areas. The approach to protected areas' management involving partnership and cooperation between local governments and parks' authorities, as broadly recommended in foreign literature, is not in place in any of KMA communes. Only one commune within Ojców NP declares systematic contacts and regular cooperation with the Park. Most interactions between commune offices and protected areas' managements are limited to consultations required by law (half the communes

of Ojców NP and 64% communes hosting parks of the Małopolskie Voivodeship Landscape Park Complex) or occasional consultations relating to specific actions, as well as joint initiatives which are very rare (28% of communes hosting parts of landscape parks) – see figure 6.

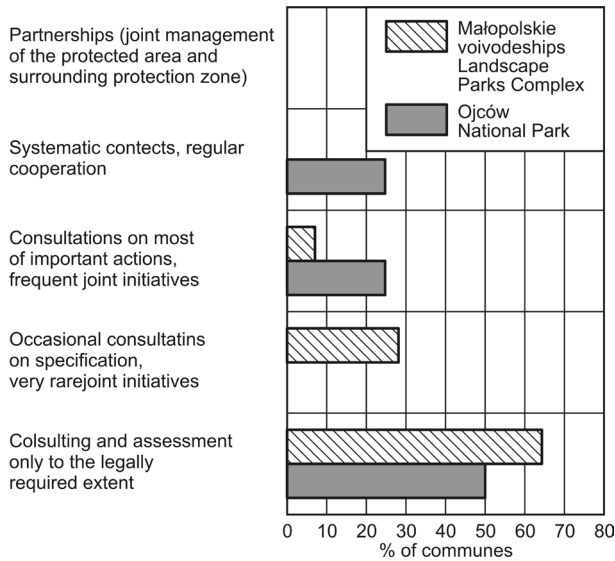


Fig. 6. Cooperation of communes with the management of Ojców National Park and the Małopolskie Voivodeship Landscape Park Complex

Sources: own work based on surveys in commune offices

Regrettably, the same pattern of low cooperation between communes and authorities of protected areas as in KMA is observed elsewhere in Poland, as shown by surveys conducted by Bołtromiuk (2011) in Białowieża National Park and by Zawilińska (2010, 2012) in landscape parks in the Carpathian region and in national parks in Poland.

6. CONCLUSIONS

Natural protected areas exist in most communes of KMA and affect significantly the development of their respective territories. Their impact depends mostly on the protection regime of each area. The impact of the national park on local development is the most far-reaching but, as declared by commune officials, it is mostly negative in social and economic terms. Landscape parks and Natura 2000 sites

have been perceived as having a more positive influence. Protected landscape areas have turned out to be largely unknown as a protection form and their impact could be considered as minor.

The authorities and local residents of communes perceive the positive aspects of protected areas' existence mostly in terms of preservation of natural and scenic values as well as development of tourism. On the other hand, the areas' influence on business and on the communes' revenues is viewed as negative. The respondents view protected areas as an important obstacle to investment and business development as well as a factor limiting the private landlords' freedom in disposing of their property, driving up the costs of preparing planning documents and protracting administrative procedures. There is a widespread view that designation of protected areas should be followed by according special privileges to the communes hosting them, to compensate them for their losses.

At present, the interactions of local authorities with the protected areas' authorities are in most cases limited to consultations required by law. In the future it would be advisable to develop a closer cooperation between the two sides and to promote a partnership approach to managing the development of the relevant territories, which would contribute to maximising benefits for local communities while at the same time ensuring the preservation of natural values.

REFERENCES

- BOGDANOWSKI, J. (1978), 'Kształtowanie i ochrona krajobrazu w aspekcie rekreacji', [in:] *Społeczne potrzeby i uwarunkowania rozwoju turystyki i rekreacji w Polsce*, Zeszyt Naukowy AWF, 16, Kraków.
- BOŁTROMIUK, A. (2003), *Ekonomiczne aspekty funkcjonowania obszarów chronionych*, Białystok: Wydawnictwo Uniwersytetu w Białymstoku.
- BOŁTROMIUK, A. (2011), *Gospodarcze i społeczne aspekty funkcjonowania sieci Natura 2000 w parkach narodowych. Zrównoważony rozwój obszarów przyrodniczo cennych*, t. 2, Białystok: Wyższa Szkoła Ekonomiczna.
- BOŁTROMIUK, A. (ed.), (2011), *Uwarunkowania zrównoważonego rozwoju gmin objętych siecią Natura 2000 w świetle badań empirycznych*, Warszawa: Instytut Rozwoju Wsi i Rolnictwa Polskiej Akademii Nauk.
- BORRINI-FEYERABEND, G., KOTHARI, A. and OVIEDO, G. (2004), *Indigenous and Local Communities and Protected Areas. Towards Equity and Enhanced Conservation. Guidance on Policy and Practice for Co-managed Protected Areas and Community Conserved Areas*, Gland-Cambridge: IUCN.
- BRAŃKA, P. and HOŁUJ, A. (2012), *Zagospodarowanie przestrzenne jako czynnik rozwoju społeczno-gospodarczego na przykładzie miasta Krakowa*, *Badania Młodych Naukowców*, Kraków: Uniwersytet Ekonomiczny (192/KGR/2, 3/2011/MN/021).

- BRAŃKA, P., HOŁUJ, A. and ZAWILIŃSKA, B. (2012), 'Ekonomiczne skutki planowania przestrzennego w Krakowskim Obszarze Metropolitalnym w świetle badań ankietowych', [in:] KUDŁACZ, T. et al., *Ekonomiczne aspekty gospodarowania przestrzenią miasta i regionu*, Kraków: Uniwersytet Ekonomiczny, manuscript, pp. 89–158.
- DAVEY, A. G. (1998), *National System Planning for Protected Areas*, Gland–Cambridge: IUCN.
- DIEZ DE PABLO, A. and CAMINA DEL AMO, M. (2009), 'Regional Planning in Europe. Landscape as a Tool for Spatial Planning', *Franco-German-Swiss Conference of the Upper Rhine*, www.cityfutures2009.com/PDF/39_Diez_Ahinoa.pdf (March 2, 2012).
- DOMAŃSKI, B. and PARTYKA, J. (1992), *Ojcowski Park Narodowy w świadomości mieszkańców. Analiza konfliktu*, [in:] JAŁOWIECKI B. and LIBURA H. (eds.), *Percepcja i waloryzacja środowiska naturalnego i antropogenicznego, Studia z Gospodarki Przestrzennej*, Warszawa: Wydawnictwo Uniwersytetu Warszawskiego.
- DRIML, S. (2010), *The Economic Values of Tourism to National Parks and Protected Areas in Australia*, CRC for Sustainable Tourism, www.crctourism.com.au/bookshop (February 22, 2013).
- DRZAZGA, D. and RATAJCZYK, N. (2005), 'Rozprzestrzenianie się zabudowy aglomeracji łódzkiej na terenach otwartych na przykładzie Parku Krajobrazowego Wzniesień Łódzkich', *Przegląd Przyrodniczy*, 16 (1–2), pp. 183–199.
- DUDLEY, N. (ed.), (2008), *Guidelines for Applying Protected Area Management Categories*, Gland: IUCN.
- EAGLES, P. (2002), 'Trends in Park Tourism: Economics, Finance and Management', *Journal of Sustainable Tourism*, 10 (2), pp. 132–153.
- FORMAN, R. (2008), *Urban Regions. Ecology and Planning Beyond the City*, New York: Cambridge University Press.
- FORTIN, M. J. and GAGNON, C. (1999), 'An Assessment of Social Impacts of National Parks on Communities in Quebec', *Environmental Conservation*, 26 (3), pp. 200–211.
- GETZNER, M. (2003), 'The Economic Impact of National Parks: the Perception of Key Actors in Austrian National Parks', *International Journal of Sustainable Development*, 6 (2), pp. 183–202.
- GOTKIEWICZ, W. (2001), 'Gospodarstwa rolne w parkach narodowych – szanse i bariery rozwoju', *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu*, 3, III (6), pp. 90–94.
- GRADZIŃSKI, R., GRADZIŃSKI, M. and MICHALIK, S. (1994), *Natura i kultura w krajobrazie Jury. Przyroda*, Kraków: Zarząd Zespołu Jurajskich Parków Krajobrazowych.
- HIBSZER, A. and PARTYKA, J. (eds.), (2005), *Między ochroną przyrody a gospodarką – bliżej ochrony. Konflikty człowiek – przyroda na obszarach prawnie chronionych w Polsce*, Sosnowiec–Ojców: Polskie Towarzystwo Geograficzne Oddz. Katowicki, Ojcowski Park Narodowy.
- HOŁUJ, A. (2012), 'Problemy i dylematy planowania przestrzennego w różnych typach jednostek terytorialnych', [in:] HARAŃCZYK, A. (ed.), *Perspektywy rozwoju regionalnego Polski w okresie programowania po 2013 r. część II*, Studia, t. CXL, Warszawa: Polska Akademia Nauk Komitet Zagospodarowania Przestrzennego Kraju, pp. 385–394.
- HOŁUJ, A. and HOŁUJ, D. (2010), 'Dylematy zarządzania obszarami metropolitalnymi w Polsce jako element polityki regionalnej', [in:] KUDŁACZ, T. (ed.), *Rozwój regionalny w Polsce w świetle wyzwań XXI w.*, Studia t. CXXXI, Warszawa: Polska Akademia Nauk, Komitet Przestrzennego Zagospodarowania Kraju, pp. 277–291.
- HUHTALA, M. (2007), 'Assesment of the Local Economic Impacts of National Park Tourism: The Case of Pallas-Ounastunturi National Park', *Forest Snow and Landscape Research*, 81 (1/2), pp. 223–238.
- KASPRZAK, K. and RASZKA, B. (1996), 'Turystyka w lokalnych i ponadlokalnych problemach samorządów terytorialnych na terenach parków narodowych', [in:] BOSIACKI, S., GRELL, J. and SIKORA, J., *Samorządowa koncepcja rozwoju turystycznego gminy*, Poznań: Akademia Wychowania Fizycznego.

- KONOPKA, M. (2001), 'Warunki i możliwości rozwoju ludności zamieszkującej na obrzeżach obszarów chronionych (Gmina Podgórzyn)', *Prace Naukowe Akademii Ekonomicznej we Wrocławiu*, 905, pp. 293–297.
- KRÓLIKOWSKA, K. (2007), *Konflikty społeczne w polskich parkach narodowych*, Kraków: Oficyna Wydawnicza Impuls.
- LISOWSKI, A. and GROCHOWSKI, M. (2008), *Procesy suburbanizacji. Uwarunkowania, formy i konsekwencje*, Warszawa: Instytut Geografii Społeczno-Ekonomicznej i Gospodarki Przestrzennej, Uniwersytet Warszawski, Ekspertyzy do Koncepcji Przestrzennego Zagospodarowania Kraju 2008–2033, www.mrr.gov.pl (February 25, 2013).
- MIZGAJSKI, A. (2008), 'Krajobraz jako przedmiot ochrony i zarządzania. Wybrane problemy', [in:] ZIMNIEWICZ, K. (ed.), *Bariery w zarządzaniu parkami krajobrazowymi w Polsce*, Warszawa: Polskie Wydawnictwo Ekonomiczne.
- NOVÁK, Z. (1963), 'Ideowe i realizacyjne założenia Jurajskiego Parku Krajobrazowego', *Architektura*, 8, pp. 301–302.
- NOVÁK, Z., BOGDANOWSKI, J. and ŁUCZYŃSKA-BRUZDA, M. (1967), 'Jurajski Park Krajobrazowy', *Architektura*, 5/6, pp. 212–215.
- OCHRONA ŚRODOWISKA 2011 (2011), Warszawa: Główny Urząd Statystyczny.
- OSINIAK, T., POSKROBKO, B. and SADOWSKI, A. (1993), *Wigierski Park Narodowy a jego mieszkańcy*, Białystok–Kraków, Wydawnictwo Ekonomia i Środowisko.
- OWSIAK, J., SEWERNIAK, J., ANDRZEJEWSKA, G. and SZWEDOWSKA, G. (2001), *Turystyka na obszarach chronionych jako czynnik rozwoju społeczno-ekonomicznego społeczności lokalnych. Stan i uwarunkowania rozwoju*, Toruń: Instytut Turystyki, Zakład Naukowo-Badawczy w Toruniu, manuscript.
- PARTYKA, J. (ed.), (2002), *Użytkowanie turystyczne parków narodowych. Ruch turystyczny – zagospodarowanie – konflikty – zagrożenia*, Ojców: Instytut Ochrony Przyrody PAN, Ojcowski Park Narodowy.
- PLUMMER, R. and FENNEL, D. A. (2009), 'Managing Protected Areas Form Sustainable Tourism: Prospects for Adaptive Co-management', *Journal of Sustainable Tourism*, 17 (2), pp. 149–168.
- POPLAWSKI, Ł. (2005), 'Bezrobocie na obszarach chronionych w województwie świętokrzyskim', *Zeszyty Naukowe Małopolskiej Wyższej Szkoły Ekonomicznej w Tarnowie*, 8, pp. 109–122.
- POSKROBKO, B. (ed.), (1996), *Rejon Puszczy Białowieskiej. Mieszkańcy – Środowisko – Gospodarka, Studia i Materiały*, 1, Białystok: Politechnika Białostocka, Katedra Ekonomiki i Zarządzania Ochroną Środowiska.
- PTASZYCKA-JACKOWSKA, D. (2011), 'Rezerваты Biosfery i obszary Natura 2000 w planowaniu przestrzennym', [in:] *Międzynarodowe sieci obszarów chronionych w Polsce: światowa sieć rezerwatów biosfery UNESCO-MAB i europejska sieć Natura 2000*, Warszawa: Komitet Naukowy UNESCO-MAB przy prezydium Polskiej Akademii Nauk, Instytut Geografii i Przestrzennego Zagospodarowania PAN.
- RASZKA, B., SZCZEPAŃSKI, J. and MOTYCKI, K. (2009), 'Miasto w parku narodowym – problem koegzystencji i zagospodarowania turystycznego', *Problemy Ekologii Krajobrazu*, 25, pp. 73–83.
- SAAYMAN, M. and SAAYMAN, A. (2006), 'Creating Framework to Assess the Economic Contribution of National Parks in South Africa. The Case of the Addo Elephant National Park', *Tourism Economics*, 12 (4), pp. 619–633.
- SCHUBERT, T. (2008), 'Park krajobrazowy-zaniedbana idea ochrony przyrody i krajobrazu', [in:] ZIMNIEWICZ, K. (ed.), *Bariery w zarządzaniu parkami krajobrazowymi w Polsce*, Warszawa: Polskie Wydawnictwo Ekonomiczne, pp. 25–26.

- STACHOWIAK, M. (2007), 'Economical Effectiveness of Fishing Production on Protected Areas', *Journal of Research and Applications in Agricultural Engineering*, 52 (4), pp. 71–74.
- STRZAŁKOWSKA, J. and HURBA, M. (2008), 'Skuteczność ochrony środowiska przyrodniczego przestrzeni podmiejskiej na przykładzie aglomeracji Lublina', *Problemy Ekologii Krajobrazu*, 22, pp. 323–333.
- STYNES, D. J., PROPST, D., CHANG, W. and SUN, Y. (2000), *Estimating National Park Visitor Spending and Economic Impacts; The MGM2 Model*, Michigan: Department of Park, Recreation and Tourism Resources, Michigan State University.
- SZCZEPANOWSKI, A. (2007), 'Problemy prowadzenia gospodarki turystycznej na obszarach przyrodniczo cennych', [in:] WYRZYKOWSKI J. (ed.), *Rola turystyki w gospodarce regionu*, Wrocław: Wyższa Szkoła Handlowa.
- WATSON, D., PLATTUS, A. and SHIBLEY, R. (2003), *Time-Saver Standards for Urban Design*, New York: McGraw-Hill Professional Publishing.
- ZACHARIASZ, I. (ed.), (2012), *Kierunki reformy prawa planowania i zagospodarowania przestrzennego*, Warszawa: LEX, Wolters Kluwer business.
- ZAWILIŃSKA, B. (2010), *Możliwości rozwoju turystyki w parkach krajobrazowych Karpat Polskich w świetle idei zrównoważonego rozwoju, Monografie: Prace Doktorskie*, 8, Kraków: Uniwersytet Ekonomiczny.
- ZAWILIŃSKA, B. (2012), 'Obszary chronione – bariery czy stymulanty rozwoju lokalnego? (Protected Areas – Barriers or Stimulants for Local Development?)', [in:] HARAŃCZYK, A. (ed.), *Perspektywy rozwoju regionalnego Polski w okresie programowania po 2013 r. część II, Studia*, 140, Warszawa: Polska Akademia Nauk Komitet Zagospodarowania Przestrzennego Kraju, pp. 259–269.
- ZIMNIEWICZ, K. (2005), *Zarządzanie polskimi parkami krajobrazowymi. Próba diagnozy*, Poznań: Akademia Ekonomiczna.