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THE ROLE AND IMPORTANCE OF SMALL AND MEDIUM-SIZED CITIES IN THE REVITALISATION OF THE POLISH CARPATHIAN REGION

ROLA I ZNACZENIE MAŁYCH I ŚREDNIEJ WIELKOŚCI MIAST W ODNOWIE REGIONU POLSKICH KARPAT

Abstract

Network of settlements in the Carpathians was formed during the Middle Ages for most of the area. In the process of its creation, the most important factor was the presence of transit routes connecting northern and southern routes as well as the piedmont extending from east to west. Cities were invested in along all of these routes. In most planning documents, prepared at the national and provincial level, tradition was based on the development of tourism, leisure and spa treatment, in the southern Polish. Today, this development directs the main focus primarily on the towns and areas with high natural resources and cultural values. Therefore, this tendency becomes the source of conflict. Finally, the potential of the social resources, intellectual and business people of the region has not yet been fully utilised.

Keywords: Regional planning, Carpathian region, economic development, environmental protection

Streszczenie

Sieć osadnictwa na większości obszaru Karpat była formowana w okresie średniowiecza. W procesie jej tworzenia najważniejszym czynnikiem była obecność szlaków tranzytowych łączących północne i południowe strony gór oraz trasy podgórskie biegnące ze wschodu na zachód. Miasta zostały lokalizowane wzdłuż wszystkich tych traktów. W większości obecnie przygotowanych dokumentów planistycznych na poziomie krajowym i wojewódzkim, w terenach południowej części Polski rozwój tradycyjnie oparto na turystyce, rekreacji i lecznictwie uzdrowiskowym. W rzeczywistości dzisiaj ten rozwój kieruje główny nacisk na miasta i na obszary o wysokich zasobach naturalnych i kulturowych wartości. Ta tendencja staje się źródłem konfliktu, bowiem potencjał zasobów społecznych, intelektualnych i biznesu w regionie nie został jeszcze w pełni wykorzystany.

Słowa kluczowe: planowanie regionalne, region karpacki, rozwój gospodarczy, ochrona środowiska

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1. Introduction

The mountain areas of Poland occupy a small area, around 3%, of the country. In the south is a fragment of the Carpathian mountain range and a small section of the Sudetenland in the west.

The whole country is low-lying.

Today, the area of the Carpathian mountains in Poland covers three provinces – Podkarpackie, Malopolska and Silesia.

In the Carpathian region still have high values of preserved natural environment that are protected. In Malopolska alone there are six national parks, eighty-four nature reserves, eleven landscape parks, ten protected landscape areas, three nature and landscape parks, and seventeen ecological special protection areas named Natura 2000.

Carpathian areas have been inhabited since prehistoric times; however, the existing network of settlements was predominantly determined in the Middle Ages when it was the location of many cities under Magdeburg law. Today, many of these cities have retained their original layout, historical buildings have been renovated in recent years and there are a number of medieval buildings as places of worship, fortified castles, town halls etc. In rural areas, cultural heritage refers to the remaining elements of folklore, residential buildings, farmyards, and above all, wooden and brick sacred objects such as palaces, small wooden Catholic churches and Orthodox churches retained mainly in rural centres. Some of the sites were placed on the UNESCO World Heritage List.

Also found in the area of the Carpathian Mountains are a number of important historical and traditional spas created during the nineteenth-century.

The demographic situation in the South of Poland is better than anywhere else in the country. Especially in smaller towns and rural areas in the southern region, this increase is still higher than in large cities in central and northern regions.

Importantly, a notable factor is the steady increase in the proportion of the population having received higher education – the proportion in the Carpathian small towns was 6% in 1995 rising to 10% in 2003 and is at present approaching 15%.

Taking into account the aspirations of people in improving their education it is important in higher education network. In the Carpathian region, there are 55 colleges operating of which 25 are located in the medium-sized cities and small towns. As regards the economic activity in the small southern Polish cities, a greater number of private companies can be observed other than in centers of similar size in Poland. Spontaneous economic development realised in this area can sometimes be in conflict against established, legal protection of natural and cultural values of the region.

Regarding the economic activity in the small southern Polish cities, a greater number of private companies exist than in other centres of a similar size in Poland. The spontaneous omni-economic development achieved in this area can sometimes be in conflict with the established legislation for the protection of the natural and cultural values of the region. This conflict occurs between the requirements of legislation for the protection of the environment and the needs of local residents together with local authorities to reduce unemployment. They also stem from the fact that the establishment of rules to protect the environment on the basis of scientific findings is not always mindful of the needs and aspirations of the inhabitants of these areas.



Ill. 1. Traditional view on Tatra's Mountains with a new landscape element of a pair of wind turbines

2. Spatial characteristics of built-up mountainous areas based on the example of the Polish Carpathian region

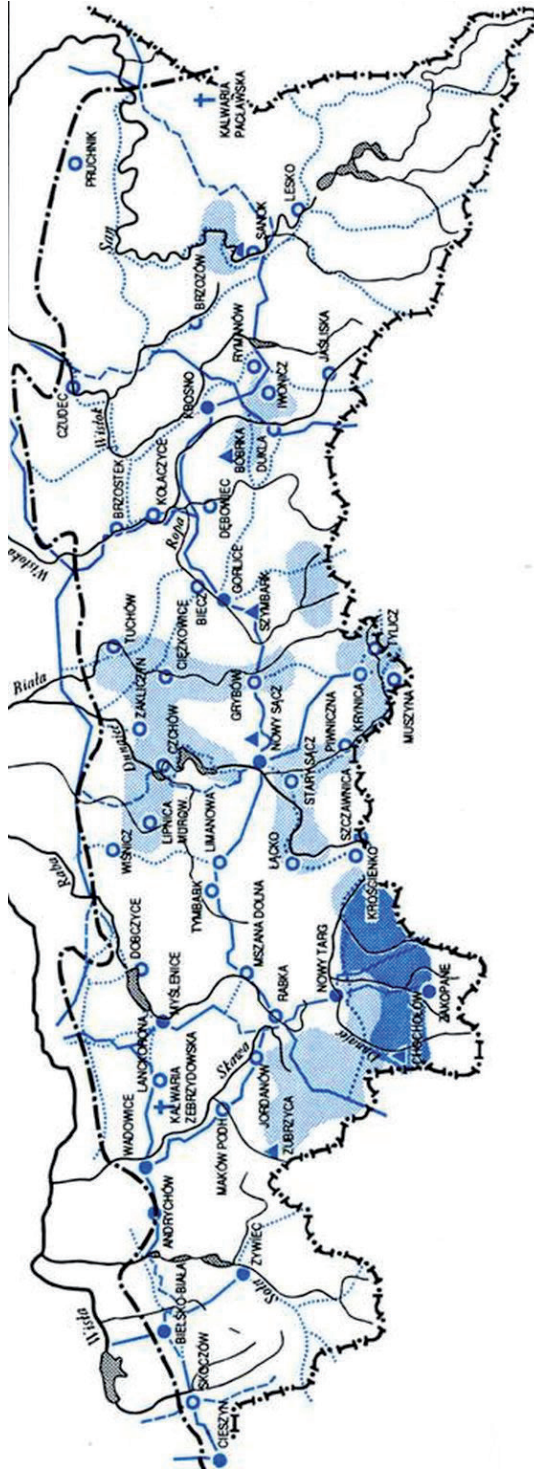
Considering the spatial conditions in the Polish mountain areas focuses on the Carpathian region. This area is in the Polish Carpathian overthrust from the coast to the southern border of the country and is around 330 km long and 100 km wide.

These areas are rich in environmental resources, there are major areas of land rich in drinking water headwaters, dense forest complexes which are legally protected and numerous mineral springs form the basis for the development of the spa region.

Nowadays, the settlement network in the Polish Carpathians consists of over fifty cities and more than 1700 villages with highly diverse population sizes. The largest city of the region is Bielsko Biała, currently with a population of 175 000 people, and the smallest towns, like Świątyniki Górne, Ryglice and Błażowa, have a population of less than 2000 people. The largest villages have a population of almost 10 000 people (Kozy, near Bielsko-Biała) and the smallest are inhabited by less than 100 people (e.g. Smerek, in Bieszczady).

The main settlement network is strictly related to the natural topography. As the mountains rise laterally to the south, they are accompanied by subsequent strips of urbanisation. Further north, on the edge of the Carpathian overthrust, are highly urbanised areas, including the metropolitan area of Kraków and the agglomerations of Tarnów and Rzeszów.

At the foot of the Beskid Mountains, a parallel intra-Carpathian strip of urbanisation can be observed. This strip is arranged in the form of a band and includes small and medium-sized cities, such as: Kęty, Wadowice, Sucha Beskidzka, Myślenice, Mszana Dolna, Tymbark, Limanowa, Nowy Sącz, Gorlice, Jasło, Krosno, Sanok and Przemyśl.



III. 2. Value of cultural environment in Carpathian region. The historic city and town systems, historic palaces and castles, historic single objects, historic urban of religious foundations, traditional building regions, culture's sub-regions – UNESCO List of World Cultural and Nature Heritage. Source: authors' study

Further south are the typical recreational areas with health, and summer resorts. Some of these are centred around small and medium cities. Most of the health resorts are concentrated in the area of Poprad Valley¹.

The historic heritage of the Carpathian region is rich and varied and there are plenty of monuments and beautiful, preserved traditional folk architecture buildings. Numerous historic and traditional small towns and villages with historic buildings; many wooden churches, most from the seventeenth and eighteenth centuries or earlier; a large number of historic ruins of castles; a lot of assumptions of park court. Here are also unique class of sacred assumptions pilgrimage routes such as in Kalwaria Zebrzydowska and in Kalwaria Paławska. At the turn of the century they came here interesting sacred buildings in towns and villages, designed by the Krakow;s and Lviv.s architects. The area also boasts exceptional spas facilities are also – these retain much of the nineteenth century charm.

All these foundations and building structures are strongly linked with the landscape of fields, meadows, river valleys and forests.

Most of the monuments in the Carpathians are considered to be modest and provincial. Their shape is unique; however, as occurs preserved folk buildings in the unique landscape in the context.

It important is that protections systems are in place to protect the natural resources over large areas. In the Carpathians there are six national parks, eight landscape parks, protected landscape areas and more than eighty nature reserves. In addition, all the forests in the mountain areas are protected as water protection forests. The forestation rate in the Carpathians is high, reaching on average 40%² of the territory – this is essential for the protection of the springs of the main rivers in the countryside³.

The land transport system in the Carpathians is highly determined by the natural topography. Both roads and railway lines are routed mainly in river valleys and they cross mountain ranges through their passes⁴. The road transport system is a grid based on two almost parallel running latitudinal communication corridors crossed by eight longitudinal routes of various means of transport and different categories of transit routes.

The Carpathian air transport system is based on one international airport in Kraków. It would be significantly improved by the introduction of air transport and use of the sport and glider airfields in Bielsko-Biała, Nowy Targ, Łososina, Krosno and Sanok, along with a planned airport in the vicinity of Nowy Sącz. Indeed, there are still areas that are poorly accessible in the Carpathian region⁵.

¹ Like Krynica, Muszyna, Piwniczna, Złockie, Żegiestów, next in Beskid Niski (Wysowa, Iwonicz Zdrój, Rymanów), in Bieszczady (Polańczyk) and in Beskid Śląski (Ustroń).

² The total forestation of the Carpathians is 41.4%. In some areas, forestation is very diverse: 18.2% in the Podhale region and 73.5% in Tatra mountains.

³ They especially include right-bank tributaries of the Vistula and tributaries of the San.

⁴ There are no road tunnels in the Carpathians, only two railway tunnels: one in Żegiestów and a closed one in Łupków.

⁵ This applies primarily to Bieszczady and Beskid Niski and partially to Beskid Sądecki situated in the south east corner of Poland, far from most major towns and cities. Similarly, the adverse conditions of the availability resulting from the extensive low category road network occur in the areas of the foothills Ciężkowickie, Wieliczka, Dynowskie and Przemyśl, Beskid Wyspowy and Gorce.

An increasingly urgent matter is the generation of energy from renewable sources.

Mountainous areas have favourable conditions for wind farms. However, their installation should not impair the quality of life of inhabitants and must fulfil the requirements for protected areas⁶.

Recently, in the cities of the region one can observe accelerated demographic changes in the form of a growing number of high schools, small businesses and modern, sometimes technologically advanced, companies.

It seems that these cities can form a local centre of growth in the Carpathian region, irrespective of the big cities located on the edge of the Carpathian overthrust. Many planning documents underestimate the role and intentions meaning of such centres [5]. The region's main industries remain as tourism, recreation and, to a lesser extent, agriculture [6].

3. Social aspirations

3.1. Demographic situation

The Carpathians are inhabited by approximately 2.5 million people, which in 1988 was 6.2% of the Polish population. At the end of the 20th century rural areas were inhabited by 65% of the Carpathian population, the remaining 35% lived in the cities (corresponding values on national scale were 38.8% and 61.2%). Some of the villages (e.g. Ryglice, Ciężkowice, Czchów, Nowy Wiśnicz, Świątniki) have recently been granted city rights. In the whole Carpathian region, either growth or stabilisation of the population level can be observed⁷. The dynamics of population growth from 1988 to 2007, especially in small- and medium-sized cities, reached even up to 20%, e.g. 19% in the case of Dobczyce and 20.4% in Mszana Dolna. The highest population growth was noted in the eastern and western part of the Carpathians. A decrease occurred in some of the resorts, e.g. in Rabka and Krynica, which are the largest centres of this region⁸.

3.2. Conditions of economic activity

The main economic activity growth factors include new industrial investments, foreign capital inflow and local initiatives. The higher education level, which in 1988 in Małopolska

⁶ This applied both to providing proper conditions for the permanent residence areas, as well as aesthetic conditions for the location of engineering devices in the areas which are attractive in term of landscape.

⁷ The biggest population decrease occurred in Bielsko Biała, this was from 184 000 in 1991 to 175 000 in 2007.

The demographic prognosis predicts that the number will continue to drop to 163 000 in 2020 and 145 000 in 2030.

⁸ In Szczawnica, on the other hand, population growth occurred from 6709 in 1988 to 7340 in 2002 and 7380 in 2007 – this can be related to the development of tourism [8].

towns equalled on average 6% and currently is over 10%, has an indirect yet substantial influence⁹.

The larger cities, where the higher education level has been noted. this cities can play the role of the centres of growth. Similarly, the changes related to the transformation of the political system are the most visible in larger cities [8, 41 ff.].

In the Carpathian regions, especially in the southern districts, the unemployment rate has been growing for years. In 2013, the unemployment rate in Podkarpacie equalled 15.1%, 11.4% in Małopolska and 12% in Silesia. In some municipalities, it differed significantly from the average unemployment level in each voivodeship¹⁰.

The development opportunities arising from the change of the economic functions are highly diverse. The differences result from geographic conditions and the state of the technical infrastructure as well as the effectiveness of local governments. The changes in job opportunities related to higher employment in private companies were diverse among Carpathian towns and cities¹¹.

The economic situation of the district and medium-sized cities is much better than that of small towns because the former have more infrastructural and transport investments, stable employment in local administration, public services (health care, transport, education etc.) and the observed growth of employment in the private sector¹².

Investments in Special Economic Zones (SEZ), located in a few Carpathian cities, play a significant role in the economic development of medium-sized cities in the Carpathian region.

The next locations are either under consideration or already exist. The increasing number of industrial complexes in mountain areas can improve the job market situation. However, this also increases the competition between them. On arbitrary decisions made by investors, industrial areas were established in smaller towns of the region [1]. In addition, the random location of large warehouses among low-rise residential buildings reduced the spatial attractiveness of certain towns or their districts.

Positive examples of such activity undertaken in accordance with spatial development plans include Myślenice, with its industrial and technological park, investment zones in Jawornik and Jedlicze and the establishment of a technological incubator in Krosno.

Locating large industrial facilities in Polish mountain areas is difficult because any investment in this area can be simultaneously viewed from many different levels and heights, and because of the extremely low-density housing, this means that to achieve the principal goal of maintaining spatial order, detailed guidelines for such location have to be prepared, and this can be accomplished in a local spatial development plan. In fact, investments not

⁹ The biggest percentage of higher education can be observed in the towns of the metropolitan area of Kraków: Krzeszowice (13.5%), Wieliczka (14.6%), Myślenice (14.1%) but also in Rabka Zdrój (12.4% and Limanowa (12.3%).

¹⁰ For example, in districts: Bieszczady – 20.3%, Lesko – 19.2%, Sanok – 12%, Nowy Sącz – 14%, Limanowa – 17.3%, Gorlice – 13.5%, Żywiec – 17.4 (data gathered in June and July 2013).

¹¹ With regard to changes in the number of business entities in 1994–2002, the highest increase was observed in Dobczyce (16.9%), in Myślenice, Piwniczna and Sucha Beskidzka (all 7.7%), then in Wadowice and Maków Podhalański (both 6.5%) [8, p. 48–49].

¹² The research has proved that people with a university degree are much more likely to start their own business [8].

closely based on the master development plan led to the degradation of space – this was even worse after the closure of companies¹³.

Table 1

**Higher education in the Carpathian band and its development
from 2007 to 2013**

City name	Population	College number in 2007	College number in 2013	Number of secondary schools in 2007
Cieszyn	36 120	2	5	17
Gorlice	28 250	0	4	6
Jasło	36 600	1	3	6
Kęty	19 080	0	1	4
Krosno	46 900	3	3	9
Limanowa	15 130	0	2	4
Myślenice	18 380	0	1	5
Nowy Sącz	84 590	3	5	25
Nowy Targ	33 493	2	3	10
Przemyśl	66 700	5	1	14
Sanok	38 800	1	1	4
Sucha Beskidzka	9500	1	3	5
Wadowice	19 270	0	1	4
Zakopane	27 440	0	4	4
Żywiec	32 400	0	3	13

Source: authors' study

Among new functions developed in recent years mainly in medium cities is higher education, this is implemented by professors from large academic centres in region.

The level of economic activity in small cities is very diverse. It depends on the location with respect to large- and medium-sized cities, the main functions of these cities and the number of investments made in the last two decades. Today, the dominating functions of most of these centres include: agriculture, tourism, recreation, administration and health resorts. In most of these leisure and spa resorts, similar equipment is installed and used – this leads to unnecessary competition instead of cooperation (seen in neighbouring European countries).

In Carpathian villages and small- and medium-sized towns, population levels are stable or sometimes even show growth.

¹³ A worthwhile example is Wałbrzych, where a whole hill was levelled in order to meet the needs of the companies about to settle in a SEZ.

Increase of the SEZ location number in Carpathian cities in 2007–2012

City name			Popula- tion	Name of Special Economic Zone
Year 2007	Year 2012	Year 2015		
Jasło Przemyśl	Jasło Jedlicze Przemyśl Rymanów	Jasło Jedlicze Przemyśl Rymanów	36 600 5800 66 700 3700	SEZ Tarnobrzeg – Europark – Wisła – San
Gorlice Sanok – industrial area	Gorlice Krosno Sanok – industrial area Zagórz	Gorlice Krosno Sanok – industrial area Zagórz	28 250 46 900 38 800 4990	SEZ Mielec Europark
	Krosno Limanowa Nowy Sącz Dobczyce Gdów	Bochnia Czorsztyn Dobczyce Gdów Krosno Limanowa Myślenice Jawornik – investment area Niepołomice Nowy Sącz Nowy Targ Pcim – industrial area Siepraw – klaster Sucha Beskidzka Sułkowice – klaster Szczurowa Tuchów Zakliczn Zator	29 370 360 6250 4500 46 900 15 130 3060 10 500 84 590 33 493 4900 4600 9500 6300 1720 6700 1600 3700	Kraków Technology Park
	Myślenice		18 380	SEZ Katowice

Source: authors' study

In villages with a large number of holiday cottages, guesthouses or agritourism farms available in summer months, long weekends and other holidays, a significant increase in the number of people is observable. They include both summer visitors and year-round tenants who are not registered in the statistics. This kind of settlement occurs mostly in areas which are the most attractive in terms of natural landscape: in Beskid Śląski and Beskid Żywiecki; around the Gorce Mountains; in the Podhale region; in the Pieniny Mountains; in Poprad Valley; to the south of Rzeszów.

More than a half of the Carpathian area is used as agricultural land, less than 37% of which are arable lands, 1.5% are used as orchards and 13% as permanent grasslands.

Forests make up 41% of the area of the Carpathians, it is reported, by Cz. Guzik [3, p. 239–252].

Most scientific publications opt for limiting the area of arable lands in favour of permanent grasslands and forests, especially above five-hundred meters above mean sea level. It is important to reduce the amount of forest and agriculture lands in order to stop the ongoing degradation of mountain habitats, to

protect the areas from erosion, improve the micro-climatic conditions and create more favourable conditions for tourism and recreation¹⁴.

4. Basic problems and conflicts in mountains areas; a case study of the Polish Carpathians

In the Carpathian region, there are many problematic issues and areas of conflict. The conflicts are caused by the natural and cultural conditions of the regions, and most significantly, by the current land use and management. A few basic functional and spatial conflicts in this area are listed below.

- Conflict of the priority to protect the existing natural and cultural values versus the development possibilities and the needs of tourism and recreation. This situation is almost inevitable because the most valuable natural and cultural areas are equally the most attractive for tourism, recreation and investments (such as individual housing and recreation centres, e.g. areas surrounding of the Czorsztyńskie Lake – Pieniny National Park – Szczawnica – Grajcarek Valley; reserves: Homole, Black Water and White Water; Zakopane – Tatra National Park; area surroundings of the Solina reservoir, and ‘small and large ring roads’ of Bieszczady National Park).

- Conflict resulting from the need to build new infrastructure for clean generation of energy and water retention with the landscape values and the existing spatial management of the river valleys. Wind farms require well areas which are typically exposed to sufficient levels of wind however, because of the landscape and nature protection requirements, their location should also take into account the parameters characteristic of protected areas. The resignation from several pre-designated areas of artificial reservoirs, when there is a great demand for energy (and for electricity generated from water), means that new localities for hydro investments are chosen to the detriment of other kinds of activities.

- Conflict between the need to designate new terrains for environmental and landscape protection versus the public opposition of the local community afraid of limitations and inconveniences that may have a detrimental effect upon economic activity.

- Conflict between the need for housing and economic space versus the necessity to protect against landslides¹⁵ and floods.

¹⁴ Above 500 m a.s.l. arable lands make up about 20% of the total area, while permanent grasslands make up over 12% between 600 and 800 m a.s.l. [3].

¹⁵ More than 90% of Polish landslide areas occur in the Carpathians.

- Conflict between the need to create artificial water reservoirs, along with all necessary industrial infrastructure for electricity production purposes versus the need to increase the area's attractiveness for water-orientated recreation and tourism.
- Transit and transport related conflicts, resulting from:
 - the development of recreational resorts through which the transit routes run (e.g. Bukowina Tatrzańska, Białka);
 - the necessity to modernise the existing road infrastructure and the protests of local residents¹⁶;
 - the organisation of mass motor events in protected areas.

5. Conclusions

Carpathian towns of small and medium-size are interesting places of residence for contemporary, educated people as is the case for the whole of Europe. The area has many features that are important: the preserved cultural heritage; human scale assumptions relationships with the landscape; easy and direct contact with recreation areas such as forests, rivers, walking paths and hiking, ski area etc. There are also better environmental conditions due to the generally limited traffic. The possibility of remote working at a distance is an additional argument for the choice. Like the existence of a large number of people with higher education, high aspirations for economic development in areas unfavorable to conduct farming activities.. However, it is necessary to maintain a focus on the quality of the public spaces of towns and to preserve their most attractive assumptions. The analysis of the conditions of the mountain areas and their present spatial management state carried out from the point of view of the needs and aspirations of the citizens points to the following basic problems. These can be solved, in part, through spatial planning:

- The need and the possibility to create regional parks in order to ensure the protection of environmental values as well as to stimulate the local economy.
- Protected areas require clear and precise regulations determining types of activities allowed and adequate forms of protection.
- More diversity is needed in developing tourist, recreational and health resort areas and better standard differentiation of the areas.
- When taking actions in favour of increasing the area's water retention ratio, it is necessary to include in the development plans the principles regarding the spatial management of the vicinity of the reservoirs.
- Ensuring flood and landslide safety by setting strict limits to building houses in the areas of the so-called 1% and 0.1% water and in the landslide areas.
- The need to intensify local government engagement in the creation of modern economic activities and the necessity of including these programs into more fundamental plans.
- Implementation of local planning solutions should increase the attractiveness of public spaces (not only in historic parts and centres) of cities and towns of the region and

¹⁶ E.g. protests of the business owners in Stróża against poor access to the expressway, protests against modernization and widening of the road in Szaflary.

improve their competitiveness, especially in areas with potential for technology-based economic activities.

- Planning studies for functional, problematic and conflicted areas on a local and regional scale should be mutually agreed upon by the communes.

Mountain areas, owing to their specifications, require planning that is prepared not only on a local scale but primarily, on a regional level. These works are preceded by detailed studies and can provide vital information for the improvement of the economic development of these areas while maintaining their natural and cultural environment values. Furthermore, they raise the possibilities of the spatial transformation of the whole region.

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