



THE NEEDS AND ASPIRATIONS OF RESIDENTS OF MOUNTAIN AREAS AS IMPLEMENTED IN SPATIAL PLANNING

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Summary

System planning based on specific research and analyses allows one to make a diagnosis of spatial phenomena occurring in a particular area. The main goal of spatial planning is to mitigate conflicts and create spatial framework for satisfying social needs. Spatial planning can therefore be regarded as the best tool of providing the conditions in which the needs and aspirations of the people are met and fulfilled. Together with spatial order and sustainable development spatial planning ensure attractive space, which in the competitive development of cities and regions becomes the most important matter. Many specialists considered this condition to be essential for the economic prosperity of the city and the region. Moreover, the spatial design and arrangement clearly define the level of a society and civilization.

After outlining the spatial planning system in Poland and presenting the conditions for land use planning in mountainous areas the article refers to the social aspirations, conditions of the demographic situation and requirements of the economic activity. Then an attempt was made to articulate the fundamental problems and conflicts that occur in mountain areas. Finally, tasks and options to mitigate these conflicts and ways to meet the needs of people in the planning were presented.

Mountainous areas with their characteristics make it necessary to carry out the spatial planning work not only locally but also at the regional level. This work is usually preceded by detailed studies that can provide the necessary information to improve the economic development of the area, while maintaining the existing natural and cultural environment. This will more than likely increase the chance of spatial transformations in the region.

Keywords

mountain areas • spatial planning • residents' problems

1. Introduction

According to popular belief – especially when it concerns local planning – spatial planning, with its time-consuming procedures, hardly disputable resolutions and in the context of present-day economy, the rush of everyday life, is an undesirable obstacle

to achieving various aspirations. In Poland many people are convinced that other European countries seem nice and attractive because there is no spatial planning there. Unfortunately, this opinion has nothing to do with reality. In many countries throughout the world, not only in Europe, the spatial planning system is highly integrated with all administration levels in government. The decisions contained in various plans are consequently and precisely executed and as a result, many regions, cities and streets appear as attractive, well organized and properly managed.

Spatial planning system based on specialized research and analyses allows one to make a diagnosis of the spatial phenomena occurring in a given area. The spatial planning mechanisms are targeted at meeting the needs of society and therefore spatial planning may be regarded as the best tool of meeting the needs and aspirations of the people living in the area covered by the plan, mitigating spatial conflicts in the area and increasing its attractiveness. The latter, in the period of competitive development of cities and regions, becomes the most important value, decisive of the successful development of cities and regions. Moreover, shaping and managing of the space clearly determines the level of civilizational development of society.

2. Spatial planning system in Poland

Poland has a three stage spatial planning system based on strategic studies and the related spatial management plans.

The kinds of planning documents required by Polish planning practice are developed on three levels: national, voivodeship (regional) and the commune level. In the case of plans for problematic or functional areas, sometimes the documents can cover groups of municipalities.

The National Spatial Development Concept (NSDC – related to the country's development strategy) is the most important document on Poland's spatial order. Its strategic objective is to effectively use the space of the country and its diverse development potentials of competitiveness, increased employment and efficiency of the state, as well as social, economic and spatial cohesion in the long run. In the latest version of NSDC 2030, an outline was adopted to maintain spatial order determining living conditions of the citizens, functioning of the economy and allowing to take development opportunities. Furthermore the document formulates the rules and actions aiming at preventing conflicts in spatial management and ensuring safety, including flood safety [Koncepcja Przestrzennego Zagospodarowania... 2011].

The spatial development plans for the voivodeships take into account the decisions of voivodeship developmental strategies and the public investments resulting from the NSDC.

In addition to it the Polish law [Ustawa o planowaniu... 2003] determines the following questions: basic elements of settlement network in a voivodeship and their communicational and infrastructural connections, the directions of transborder connections, system of environmental areas, nature and cultural landscape protection, protection of health resorts, cultural heritage, monuments and modern cultural goods, locations of

public investments of supralocal meaning, problematic areas along with the principles of their development and metropolitan areas, areas needing support, flood risk areas, areas of documented occurrence of mineral deposits, boundaries of closed areas and protection zones.

On the commune level there are two kinds of planning documents: 1) study of conditions and directions of spatial development and 2) local spatial development plan. The first covers the whole commune or city.

The study of conditions and directions of spatial development, while taking into account all the conditions implied by the previous designated use, development and infrastructure of the terrain, and other factors determined by the law [Ustawa o planowaniu... 2003]¹, enables one to make an accurate assessment of the environment and during the public consultations people can express their aspirations and needs.

The study is a basis on which the directions of spatial development for the whole commune are determined. These take into account not only the development opportunities resulting from the land resources but also from the needs and aspirations of the citizens.

The local spatial development plan of the whole commune or its part, developed in a detailed scale and being the binding local law, decides about the use and management of space. First of all this plan describes the intended use of lands and the principles of their future development, while taking into account the rules of protection and shaping of spatial order, as well as protection of the environment, cultural landscape, cultural heritage, monuments and modern cultural assets. The study also determines the requirements of shaping public spaces, detailed guidelines for architectural development, the indexes of terrain management and other parameters required by the law.

The guidelines regarding spatial order, ecological balance and public space management are the most important factors for meeting social needs and aspirations. All the protective functions are stated in the plan and because of its status of local law, they are in force.

3. Spatial planning conditions in mountains areas: case study of Polish Carpathians

The following analysis of spatial planning in the Polish mountains areas is focused on the Carpathians².

¹ Other topics of this law include: spatial order and the requirements of the protection of the environment, the state of agricultural and forestry production space, the size and quality of water resources and environmental requirements, natural and cultural landscape, the state of cultural, historical monuments and cultural heritage, together with modern cultural assets, conditions and quality of life of residents, such as health protection, safety hazards and property security, needs and opportunities for municipalities, the legal status of land, occurrence of facilities and areas protected under separate regulations, the occurrence of areas of natural geological hazards etc.

² From the edge of the Carpathian overthrust, within Polish borders, it is about 330 km long and 100 km thick.

Nowadays, in the Polish Carpathians, there are over fifty cities and more than 1700 villages of highly diverse number of population³. 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 urbanization. Furthest north, on the edge of Carpathian overthrust, are highly urbanized areas, including the metropolitan area of Kraków and an agglomerations of Tarnów and Rzeszów.

At the foot of the Beskid Mountains a parallel intra-Carpathian strip of urbanization can be observed. It includes medium-sized cities, such as: Kęty, Wadowice, Sucha Beskidzka, Myślenice, Limanowa, Nowy Sącz, Gorlice, Jasło, Krosno, Sanok and Przemyśl. Further south are the typical recreational areas with health⁴ and summer resorts. Some of these are centered around small and medium cities.

Likewise important is that the natural resources are covered by protection system of large areas⁵. Forestation rate in the Carpathians is high, reaching on average 40%⁶ of the territory, which is essential for protection of the springs of main rivers in the country⁷.

The communication system in the Carpathians is highly determined by natural topography. Both roads and railway lines are routed mainly in river valleys and cross mountain ranges through their passes⁸. The road communication system is a grate 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 communication system 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 region⁹.

An increasingly urgent matter is energy harvesting from renewable sources. Mountain areas have favorable conditions for wind farms. Their installation cannot

³ The biggest city of the region is Bielsko Biała, currently with the population of 175 000 people, and the smallest ones have the population of less than 2000 people. The biggest villages have the population of almost 10 000 people (Kozy, near Bielsko-Biała) and the smallest of them are inhabited by less than 100 people (e.g. Smerek in Bieszczady).

⁴ The health resorts are concentrated in the area of Poprad Valley, Ustroń in Beskid Śląski, Wysowa, Iwonicz Zdrój, Rymanów in Beskid Niski, Polańczyk in Bieszczady.

⁵ 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 mountain areas are protected as water protection forests.

⁶ 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.

⁷ They include especially right-bank tributaries of Vistula and tributaries of San.

⁸ There are no road tunnels in the Carpathians, only two railroad tunnels: one in Żegiestów and a closed one in Łupków.

⁹ 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 road network in the low category, occur in the areas of the foothills Ciężkowickie, Wieliczka, Dynowskie and Przemyśl, Beskid Wyspowy and Gorce.

impair the quality of life of the inhabitants and must fulfill the requirements for protected areas¹⁰.

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

It seems that these cities can form a local center 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 meaning of such centers [Koncepcja przestrzennego zagospodarowania... 2008]. The region's main development directions are still tourism, recreation and partially agriculture [Koncepcja przestrzennego zagospodarowania... 2013].

4. Social aspirations

4.1. 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 the nationwide scale were 38.8% and 61.2%). Some of the villages (e.g. Rygllice, Cieżkowice, Czchów, Nowy Wiśnicz, Świątniki) were recently granted city rights.

In the whole Carpathian region a growth or stabilization of the population number can be observed¹¹. The dynamics of population growth from 1988 to 2007, especially in small and medium cities, reached even 20%, e.g. 19% in case of Dobczyce or 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 biggest centers of this region¹².

4.2. Conditions of economic activity

The main economic activity growth factors include: new industrial investments, foreign capital inflow and local initiatives. Higher education level, which in 1988 in Małopolska cities equaled on average 6% and currently is over 10%, has its indirect but substantial influence too¹³. The larger cities, where the higher education level has been noted, can

¹⁰ This applied both to providing proper conditions for the permanent residence areas, as well as aesthetic location conditions for location of engineering devices in the areas which are attractive in terms of landscape.

¹¹ The biggest population decrease occurred in Bielsko Biała from 184 000 in 1991 to 175 000 in 2007. The demographic prognosis predicts that the number will continue to drop: 163 000 in 2020 and 145 000 in 2030.

¹² In Szczawnica, on the other hand, a population growth occurred from 6709 in 1988 to 7340 in 2002 and 7380 in 2007, which can be related to the development of tourism [Kwiątek-Sołtys 2004].

¹³ The biggest percentage of higher education can be observed in the cities of the metropolitan area of Kraków: Krzeszowice (13.5%), Wieliczka (14.6%), Myślenice (14.1%) but also in Rabka Zdrój (12.4%), Limanowa (12.3%).

play the role of the centers of growth. Similarly, the changes related to the transformation of political system are the most visible in larger cities [Kwiaterek-Sołtys 2004, 41 ff.].

In the Carpathian regions, especially in the southern districts, the unemployment rate has been growing for years. In 2013 the unemployment in Podkarpacie equaled 15.1%, 11.4% in Małopolska and 12% in Silesia. In some municipalities it differed significantly from the average unemployment level in voivodeships¹⁴.

The development opportunities arising from the change of the economic functions are highly diverse. The differences result from geographic conditions and the state of 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 cities¹⁵.

The economic situation of district and medium size cities is much better than that of small cities, because the former have more infrastructural and communicational investments, stable employment in local administration, public services (health care, communication, education, etc.) and the observed growth of employment in private sector¹⁶.

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

Table 1. Increase of the SEZ location number in Carpathian cities in 2007–2012

City name		Special Economic Zone name
Year 2007	Year 2012	
Jasło Przemysł	Rymanów Jedlicze Jasło Przemysł	SEZ Tarnobrzeg – Europark – Wisła – San
Gorlice Sanok – industrial area	Gorlice Sanok – industrial area Krosno Zagórz	SEZ Mielec Europark
	Krosno Limanowa Nowy Sącz Dobczyce Gdów	Kraków Technology Park
	Myślenice	SEZ Katowice

¹⁴ 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).

¹⁵ With regard to changes in the number of business entities in 1994–2002 the highest increase was noted in Dobczyce (16.9%), in Myślenice, Piwniczna and Sucha Beskidzka (all 7.7%), then in Wadowice and Maków Podhalański (both 6.5%) [Kwiaterek-Sołtys 2004, 48–49].

¹⁶ The research has proved that people with university degree are much more likely to start their own business [Kwiaterek-Sołtys 2004].

The next locations are either under consideration or during realization. The increasing number of industrial complexes in mountains areas can improve the job market situation. However, it also increases the competition between them. On arbitrary decisions made by investors industrial areas were established in smaller towns of the region [Błachut 2013]. In addition, the random location of large storage halls 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 Jedlcze and establishment of a technological incubator in Krosno.

Table 2. Higher education in the Carpathian band and its development from 2007 to 2013

City	College number in 2007	College number in 2013	Number of secondary schools in 2007
Przemysł	5	5	14
Sanok	1	1	4
Krosno	3	3	9
Jasło	1	3	6
Gorlice	0	4	6
Nowy Sącz	3	5	25
Limanowa	0	2	4
Nowy Targ	2	3	10
Zakopane	0	4	4
Myślenice	0	1	5
Wadowice	0	1	4
Sucha Beskidzka	1	3	5
Kęty	0	1	4
Bielsko Biała	7	6	16
Żywiec	0	3	13
Cieszyn	2	5	17

Source: authors' study

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, which means that to achieve the principal goal of maintaining spatial order detailed guidelines for such location have to be prepared, and this can be done in a local spatial development plan. In fact the investments not closely based on the master development plan led to the degradation of the space, which was even worse after closure of companies¹⁷.

¹⁷ A worthwhile example is Wałbrzych, where a whole hill was leveled in order to meet the needs of the companies about to settle in a SEZ.

Among new functions developed in recent years mainly in medium cities is higher education.

The level of economic activity in small cities is very diverse. It depends on the location with respect to large and medium 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 centers include: agriculture, tourism, recreation, administration and health resorts. In most of these leisure and spa resorts similar equipment is installed and used, which leads to unnecessary competition instead of cooperation (seen in neighbouring European countries).

In Carpathian villages a stabilization or even growth of population number is observable. 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 number of people is seen. They include both summer visitors and full-year tenants which 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 Pieniny Mountains and in Poprad Valley, south of Rzeszów.

More than a half of the Carpathian area is used as agricultural lands, 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 [Guzik... 1995]. Most scientific publications opt for limiting the area of arable lands in favor of permanent grasslands and forests, especially above 500 m a.s.l. It is important to reduce the amount of forest and agriculture lands in order to stop ongoing degradation of mountain habitats, to protect the areas from erosion, improve microclimatic conditions and to create more favorable conditions for tourism and recreation¹⁸.

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

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

- Conflict between the need for housing and economic space and the necessity to protect against landslide¹⁹ and flood safety.
- Conflict between the need to designate new terrains for environmental and landscape protection and the public opposition of the local community afraid of limitations and inconveniences resulting from economic activity.

¹⁸ Above 500 m a.s.l. arable lands make up about 20% of the total area, while permanent grasslands make up over a dozen percent between 600 and 800 m a.s.l. [Guzik 1995].

¹⁹ 90% of Polish landslide areas occur in the Carpathians.

- Conflict of the priority to protect the existing natural and cultural values with the development possibilities and the needs of tourism and recreation. This antagonism 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 centers, e.g. surroundings of the Czorszyńskie Lake – Pieniny NP – Szczawnica – Grajcarek Valley, reserves: Homole, Black Water and White Water, Zakopane – Tatra NP surroundings of the Solina reservoir, and small and large ring roads of Bieszczady NP).
- Conflict resulting from the need to build new infrastructure of clean energy harvesting and water retention with the landscape values and the existing spatial management of river valleys. Wind power plants require well aerated places but 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 create artificial water reservoirs, along with all necessary industrial infrastructure for electricity production purposes, and the need to increase the area's attractiveness for water-oriented recreation and tourism.
- Transit transport related conflicts, resulting from:
 - development of recreational resorts by which the transit routes run through (e.g. Bukowina Tatrzańska, Białka and other),
 - necessity to modernize the existing road infrastructure and the protests of the citizens²⁰,
 - organization of mass motor events in protected areas.

6. Conclusions

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 by spatial planning:

- 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.
- 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.
- 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.

²⁰ E.g. protests of the business owners in Stróža against poor access to the expressway, protests against modernization and widening of the road in Szaflary.

- Implementation of local planning solutions should increase the attractiveness of public spaces (not only in historic parts and centers) of cities and towns of the region and improve their competitiveness, especially in the areas with potential for technology-based economic activities.
- The need and the possibility to create regional parks in order to ensure 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.
- 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 specificity, require a planning that is prepared not only on a local scale but mainly on a regional one. These works are preceded by detailed studies and can provide vital information for improvement of the economic development of these areas while maintaining their natural and cultural environment values. Also, they raise the possibilities of spatial transformations of the whole region.

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