

Wioletta Kacprzyk

Higher School of Environmental Management in Tuchola, The Centre for Development and Implementation of the State Forests in Bedon,
e-mail: wiolettakacprzyk@gmail.com

The coherence of tourism facilities with the forest landscape

Abstract: Organizing tourism and recreation in forested areas requires appropriate facilities to handle tourism flows. It is vital that the facilities be comfortable, fit the needs of tourists but also that they be coherent with the area's landscape of their location. The objective of this article is to present the issue of matching of not so much the function but the external looks of the facilities to a given place, including their construction, design, colours as well as the material from which they are made. The author's considerations are based on the analysis of literature and experts' opinions conducted at the State Forest Enterprise – State Forests (Państwowe Gospodarstwo Leśne Lasy Państwowe, PGL LP). These considerations concern the facilities located in Polish forests, especially the town of Zakopane and its area, and the presented examples refer to the touristically attractive (due to its natural values) area. The conclusion drawn out of the conducted analyses is not optimistic. The facilities are generally not consistent with the local landscape.

Keywords: tourism facilities, landscape, making forest accessible, forest tourism, silvatourism

1. Introduction

Tourism in forest areas is known as silvatourism. It is most accurately defined by Głowacki (2006) as “travelling within forest areas for sightseeing or spending time in forests in the form of active recreation (qualified tourism).” In the opinion of the author of this article, however, *silvatourism* stands for making use of forest areas especially for sightseeing, recreation and leisure purposes. Spending free time can be both active and passive and is very often related to the concept of touristic development of forest areas.

According to the Silviculture Principles (Zasady hodowli lasu, 2012) forest management for tourism purposes should aim to improve forests accessibility and limit adverse impact response on forest ecosystems. Various kinds of tourism facilities are indispensable for management of forested areas accessible for tourism. These include sheds/gazebos, benches, tables, benches with tables, garbage bins, fences and security barriers, information and procedural boards. Naturally, there are also auxiliary facilities in forests such as, for instance entry gates, or infrastructure dedicated to a particular form of

tourism, e.g. bicycle stands, hitching posts, saddle stands, which are in fact a fairly rare occurrence in forests. Yet, not only do all of them impact the comfort of rest, but they also affect the quality of landscapes, in which they are located.

The notion of landscape in this tourist landscape has various meanings and lends itself to different interpretations, depending on the research question. Myga-Piątek (2001) and Skowronek et al. (2013) presents its complex nature in her article. As Richling (2015) states, „landscape is also comprehended as the appearance of space which surrounds us, views from a specific place, i.e. the presentation of our country”. According to Nałkowski (1935), „landscapes are a synthesis of all natural and cultural phenomena” while Brzóska et. al. (1996) state that „landscape is a spatial system composed of biotic, abiotic and anthropogenic elements”. Given the aim of this article, the definition developed by Bogdanowski (1981) seems most appropriate. He defines landscape as a feature of the physiognomy of the Earth's surface, combining both natural and man-made elements.

The aesthetics of landscapes and the environment as well as their visual attractiveness is the subject of considerations made by both natural philosophers (e.g. Gołaszewska, 1986; Elzenberg, 1999; Böhme, 2002), landscape architects (Bell, 1999) as well as geographers and landscape ecologists (e.g. Brossard, 1980; Wieber, 1981; Berezowska, 2005; Wojciechowski, 1986; Krzymowska-Kostrowicka, 1999). The term: 'attractiveness of landscape' suggested by Wojciechowski (1993) - understood as "capabilities of the environment to provide its perceiver with the desired experience, impressions and information" - is a universal definition from the perspective of the objectives of this article.

Features of natural landscape and man-made landscape may be coherent or they may "compete" against each other for dominance. It is rather indisputable that regardless the elements that constitute the "furnishing" of the

landscape, they should fit the context of a given site. As yet, according to Wojciechowski (1986), literature is lacking uniformed and commonly recognized theoretical basis and landscape aesthetics assessment techniques and tools. This article attempts to present more important criteria, coherence analysis of tourism facilities, which are located in areas managed by the State Forests National Forest Holding (Państwowe Gospodarstwo Leśne Lasy Państwowe, PGL LP). These criteria are a starting point to conduct a comprehensive assessment of the coherence of the facilities in terms of the environment in which they are or may be located.

The paper is practical. It aims to draw-up an inventory of what is known across various disciplines on the issues under investigation. It presents assessment criteria for forest landscapes in terms of broadly understood land-use, landscaping, construction, ergonomics, etc.

2. Research methods

Analysis and evaluation of the literature in this subject (including specialists' expertise and direct geographical observation) were the primary methods of research applied in the article. On its basis, individual cases relating to the town of Zakopane and its area were analyzed.

To date, a synthetic analysis of the elements to be considered in assessing the coherence of tourism facilities with the local landscape are not to be found in literature. In the paper the author attempts to outline the essence of the phenomenon and identify main problems regarding the use of facilities of non-urbanized areas – forest and forest-like.

The available literature (Berezowska, 2005; Malinowska, 2010; Kulczyk, 2014; Jakiel, 2015; Skowronek et al., 2015) shows that when it

comes to forest management for tourism, the most important issues are social and location contexts. On the other hand, observation and understanding the problem in practice show that the look of facilities is also important, in terms of their design, styling, material, color and the surface used within their area. The elements mentioned above have been characterized further in the paper.

The principles for formation of the facilities presented in the article are universal for the whole area of Polish forests. The town of Zakopane and its border with the Tatra National Park, i.e. the area of very high natural landscape values, intensively managed as a result of high tourist pressure was selected as an example area for the analysis.

3. Results

The assessment criteria for the coherence of tourism facilities with the forest landscape have been developed by the author and collected for the purpose of the implementation of the State Forests NFH own program "Aktywne Udostępnianie Lasu" (www.encyklopedialesna.pl/

haslo/aktywne-udostepnianie-lasu). The program aims to improve the standard of leisure in tourist destinations by providing selected sites and areas with appropriate tourism facilities.

3.1. Social context

Comfort of rest is directly linked with tourists' needs. Those needs change with the social trends, such as for example the growing number of urban residents and people living in peri-urban areas at the expense of non-urbanized areas, or a lifestyle.

Demographically, Polish society is getting older and older, about which writes extensively in his article Okólski (2010). Points out, changes in Poland will be particularly drastic –being one of the youngest EU member states now, in 2060 Poland will become the oldest one– and this process is inevitable and irreversible, within a few decades time. Practically and also in accordance with legislation in force in Poland, it is therefore necessary to manage areas accessible for tourism in such a way as to make it easily accessible (Kacprzyk, 2013). These areas should be user-friendly for people with motor disabilities and, where possible, for those with visual and auditory impairments. The most desirable situation would be such in which all forest areas available for tourists would be easily accessible. However, in the event of forest areas this will very often be impossible. It is therefore vital to adapt at least areas extensively used for tourism purposes and those located at the forest edge, such as, for instance car parks.

Urbanization and suburbanization are also making their impact on the use of forested areas. According to research by Gawryszewski (2011), in Poland, at the beginning of 20th century urban residents accounted for 25.5% of the total population, in the 1960s already 48.3%, while now they constitute over 60%. This means that the primary place of residence for the majority of people in Poland is heavily transformed urban spaces.

It is beyond dispute that there is a great need for contact with nature in people. The forest environment, as explained by Ważyński

(2011), creates specific conditions positively affecting physical and mental health. This has been supported by research by Janusz and Piszczek (2008), which show that over 80% of tourists report that forest has a very positive, and another 20% - positive impact on mental and physical health of human beings. This need is evident in the extensive use of forested areas located particularly within administrative boundaries of cities and in peri-urban zones (Liszewski, 2005; Meyer, 2011). This in turn entails the need for greater than usual tourism development in areas available for tourism. This process should include in particular areas on the forest edge (Janeczko and Woźniacka, 2009). Inadequate selection of tourism facilities may be the first step to transform forest landscapes into landscapes heavily modified by man. Research shows that people visit forest to enjoy the peace and quiet of being in a natural setting (Sławski and Sławska, 2009). This means that unconsciously tourists need natural forest landscapes.

The comfort of leisure experienced by tourists is also associated with changes in lifestyles. People are spending increasingly more time on leisure, including outdoors (Paschalis-Jakubowicz, 2009; Hołowiecka and Grzelak-Kostulska, 2013). This requires that the forest managers pay particular attention to the social functions of those areas. The way people spend time in leisure has also changed. A more attractive holiday is the one that is first of all, shorter, e.g. a single-day, second – more frequent; third – intensified, e.g. Nordic- walking; forth – spent in areas with places of interest; fifth – in places equipped with tourism facilities. It is increasingly the case that the main reason for choosing a holiday destination is not „where” but „why” to go (Walas, 2013).

3.2. Location context

A balanced forest development for tourism purposes results not only from the need to take care of the natural environment, but also its visual aspects. Leisure in forested areas should be organized in such a way so that a broadly understood human presence is hardly visible.

This is all the more important the further the forest is removed from the urban area.

Bell (1997), American forester and landscape architect, highlights in his publications that in forest management planning for tourism, it is necessary to preserve the unique char-

acter and the spirit of the place. In monumental tree stands the tourism facilities shall be slightly more massive and vice-versa.

While equipping forests, it is important to avoid elements that would modify the forest. All the constituent elements of the environment should be as natural as possible, i.e. topography, species of trees, shrubs and ground vegetation, possible surfaces, paths and tracks and the sheer tourism facilities. In installing tourism facilities, it is not recommended, among other things, that

- any serious modifications to the layout of the terrain within their area or vicinity should be made. In choosing the location for installing the facilities, not only the needs of tourists need to be taken into consideration, but also the potential of a given location. In terms of the landscape, it seems more appropriate to find a place that requires little modification of its surface to install those facilities;
- there should be any changes in the number and nature of abiotic elements, naturally occurring in a forest space, e.g. removing

erratic boulders. These elements (if present in the landscape) can be of an additional tourist attraction; although, they may also at times pose a potential danger to careless tourists;

- there should be any changes in the number and species composition of trees, shrubs and ground vegetation. Introducing plants which are not typical for the forest landscape, regardless the motivation, is inadvisable. Similarly, it is not recommended that the local flora be removed – due to
 - a) the safety of tourists resting in place,
 - b) the necessity to expose interesting viewing axes or to cover unsightly areas,
 - c) the size of the facilities.
- any additional elements, be it natural or artificial, should be introduced that are not absolutely indispensable for safe recreation in the forest. Although introducing such facilities needs to be adequate to the tourism flows in a given area, any excessive investment will not only be too intrusive, but also costly to build and maintain in the future.

3.3. Universal principles guiding the development of tourism facilities in forest landscapes

Tourism facilities shall be addressed from the perspective of their design, styling, material and color. The design should be durable, ergonomic, easily accessible, safe, easy to clean and maintain. When designing tourism facilities, it should be recognized that it is maintenance of such installations, not the construction itself that incurs greatest costs. The design of the facilities must account for maintenance and servicing costs, and thus also the envisaged tourist count. It is of great importance that all facilities should be user-friendly. They should fully comply with all relevant ergonomic parameters and be adapted to the needs of people with disabilities, especially those with motor ones. When designing facilities, decisions should also be taken as to who will benefit from them, i.e. children or adults. It is also evident that the facilities need to be designed in line with the applicable legislation, e.g. the building law and the principles of technical knowledge (Ustawa prawo budowlane..., 1994).

Styling. The shape of the facilities should follow a non-geometrical structure, seemingly

chaotic, random and disorderly in nature. The facilities should be as simple as possible and they should evoke associations of bluntness and “roughness”, but, at the same time, be slightly rounded and thus safe (Fig. 1 and 2) – like tree trunks and other elements of natural landscapes, e.g. erratic boulders anthills, etc. The fact that a facility is built of timber only does not automatically make it fit the context of the place. The poor state of timber facilities may evoke unfavorable aesthetic impressions. It is not acceptable for benches and tables with benches to have a modern shape, with same-size boards and spaces between them evoking a sense of structure and geometry. As elegant as such design may be, it will make it stand out against the forest landscape. It is important to bear in mind that the more edgy the design of tourism facilities, the more man-made it will seem – urban, and vice-versa (Fig. 3).

Tourism facilities located in forested areas need to be in harmony with the place. This means that their size must not dominate the forest landscape. Neither too big, visually



Figure 1. A good example of a gate and information board at the entrance of the Tatra National Park (author's own archive)

robust nor too small facilities are acceptable (yet the latter would be more readily acceptable because they would not be visible).

Materials. The materials of which the devices are made should be typical of the forested areas, i.e. mainly timber and alternatively stone. Due to the mechanical and physical characteristics of the material, tourists' comfort of rest and availability of raw material, obviously timber should prevail – processed or turned only to a little extent, and free from knots. The outer edge of, e.g. the boards that are used should have (preferably) natural timber curvature, or they should be possibly uneven. A timber species of which the facilities would be made should have such mechanical and physical characteristics so that they match their functions. Given forest landscapes, it is considered most appropriate to make the facilities from the species found within the area of their location, that is, for instance oak facilities in oak stands, etc.

It is desirable to use stone for tourism facilities as long as the stone naturally occurs in the local landscape. Similarly as for timber, its form is the key element. Heavily processed and geometricized stone will look strange in the forest landscape. The most appropriate solution is to use natural or hewn forms, for instance erratic boulders. Making facilities with the use of granite blocks, polished or cut-flame elements is inappropriate.

Other materials, e.g. metal or steel can be used in forest landscapes provided that they are

part of the design. Plastic, concrete and the like elements should be avoided. It is important to work towards minimizing their use or use them in places not visible to those visiting the forest. The elements mentioned above should by no means dominate the overall appearance of the facility. If it is necessary to use them, it should



Figure 2. A good example of benches with tables and inappropriate surface within the Lapidarium of the Tatra National Park (author's own archive)



Figure 3. A negative example of a bench, surface and fencing within the outdoor gym located near the road to Kuźnice (author's own archive)

be done in such a way so that they are not visually obtrusive, i.e. their color corresponds to that of the entire facility. By way of illustration, a plastic garbage bin cover should match the color of the entire garbage bin.

Color. Timber facilities require protection against adverse weather conditions. It is advisable that the chemical substances should not change the color or the grain of the timber. All facilities should be consistent with the color of the surroundings and they must not contrast with the forest landscape. The color of facilities may correspond to the color of tree trunks or the amount of light under the crowns of trees. In areas of pine monoculture, the facilities will look well in natural tints but also when painted warm brown. In oak, spruce and beech forests, it will be more appropriate to use cold brown. It is crucial that the color of facilities is not too far from the colors found in forests and that bright colors of, e.g. red, yellow and orange are not used.

Forest development in accordance with all the parameters mentioned above ensures sustainable development as stipulated in the currently effective Forest Act. Pursuant to this Act,

3.4. Serial and individual designs of tourism facilities

Tourism facilities can be made to order or in series, i.e. a greater number without specifying their target location. The overall objective of forest management for tourism is to limit

a stable, sustainable forest management means „activities undertaken towards developing forests structure and their use in the manner and at the pace essential to sustain their biological wealth, great productivity, regenerative potential, vitality and capability to fulfill, now and in the future, all major protective, economic and social functions at local, national and global levels without damage to other ecosystems” (Ustawa o lasach..., 1991).

Surface. A surface within tourism facilities is very often one of their constituent parts. The surface should be as natural as possible, ensure tourists safety and be accessible for persons with motor disabilities. The material used should in addition blend with the surroundings. Neither the color of the surface nor the structure or texture should stand out from the forest landscapes. The surface must also comply with the law concerning the use of forestry land (Kacprzyk, 2013). In addition, it must be hard and stable. The most appropriate solution is to use dirt surfaces or improved dirt surfaces (with chemical stabilizers), alternatively surfaces based on stabilized aggregate.

the impact on forest ecosystems and thus on the natural landscape. Nevertheless not every landscape is equally precious. Some places are special, one-of-a-kind while others are

typical although with predominantly forest landscape.

Given the forest landscape, the most advantageous solution is to create for each location individual designs of tourist facilities. The advantage of such an approach is that it helps to integrate them with a given forest space. This method of forest management for tourism has numerous disadvantages. The most important are the costs, and the lack of simple methods of replacing the components during maintenance, or attesting their safety.

Another solution – less costly but consensual – is to use facilities manufactured in series. They are less expensive, their compliance with safety requirements can be attested, but unfortunately they will not be consistent with the landscape and will lack individual character. When using facilities manufactured in series, it is worth bearing in mind that those available at supermarkets and stores are intended for garden not a forest spaces. Therefore the most suitable solution is to prepare a visually consis-

tent design of tourism facilities for a forest area, for instance a particular national park, landscape park or a unit of management, e.g. units of managements at the State Forests NFH. This will make it possible for the facilities, after a certain time, to create the brand of a tourism product and the image of an investor.

When using facilities produced in series, it is worth remembering one important deviation. In areas with already existing buildings and structures of particular architectural value, e.g. regional style, repetitive solutions must not be used. In this case, as indicated by Cieszewska (2015), the solutions should be consistent with regional building. Tourist facilities neighboring such buildings should be selected and designed individually because it is crucial that they match the “spirit of the place” (Kacprzyk, 2017). On the one hand, it is an advantage, because it helps highlight the unique character of a place, but on the other hand – a limitation, resulting from higher costs of facilities designs, their preparation and maintenance.

4. Conclusions

Leisure in a forest is first and foremost about recovering mental and physical strength in a natural space unchanged by human activity, yet developed in line with the present social needs. Polish society is aging faster and faster, living mostly in densely populated areas.

In deciding on the solutions regarding forest management for tourism, it is necessary to consider the target group of tourists in terms of not only their type, age and preferred activities but also in terms of tourism flows. By far, it is of utmost importance to ensure comfort and safety of stay for all tourists and forest ecosystems alike.

The analysis of tourism facilities should be conducted in view of their design, styling, material and color. Tourism facilities shall never visually compete with the forest landscape; on the contrary, they should blend into their surroundings. Potential aesthetic changes should be as small as possible and result only from the performance of certain works or procedures.

The most appropriate solution is to use in every location facilities designed individually “for the specific place”. Yet this is neither realistic nor feasible. Therefore, in typically forested landscapes (where no objects of particular architectural value exist), it is advisable to use facilities which are manufactured in series yet intended for forest spaces (not gardens). They should be easily accessible, safe, and blend in with the forest landscape, made from timber or other materials that can be found within a given area, and in color matching the colors of the forest interior space. In that respect, shades of bronze ranging from warm to cold are most desirable in order to correspond to the tree stand and the amount of light and shade within its area. Surface parameters are equally important. Although it is not a facility as such, yet it directly impacts the comfort and safety of tourists. The surface must not stand out against the background of the forest, and it needs to be hard and stable.

References

- Aktywne Udostępnianie Lasu, 2013. <http://www.encyklopedialesna.pl/haslo/aktywne-udostepnianie-lasu/> (date of access: 20.10.2017)
- Bell S., 1997. Design for Outdoor Recreation. SPON PRESS, London.
- Bell S., 1999. Landscape. Pattern, Perception and Process. E&FN Spon, London.
- Berezowska G., 2005. Znaczenie estetyki krajobrazów w określaniu walorów turystycznych. Turystyka i Hotelarstwo 8, 43-58 [In Polish].
- Böhme G., 2002. Filozofia i estetyka przyrody w dobie kryzysu środowiska naturalnego. Oficyna Wydawnicza, Warszawa [In Polish].
- Bogdanowski J., 1981. Architektura krajobrazu. PWN, Warszawa – Kraków [In Polish].
- Brossard T., Joly D., Wieber J., 1980. Des objets aux images (analyse des flux du systeme "paysage visible"). Seminares et Notes de recherches des Cahiers de Geographie de Besacon, 22.
- Cieszewska A., 2015. Ekspertyza estetyczna wybranych obiektów rekreacyjno-wypoczynkowych realizowanych w ramach programu własnego PGL LP „Aktywne Udostępnianie Lasu” oraz rekomendacje projektowe w zakresie kształtowania urządzeń stanowiących ich wyposażenie (materiał niepublikowany PGL LP) [In Polish].
- Elzenberg H., 1999. Pisma estetyczne, Uniwersytet Marii Curie-Skłodowskiej, Lublin [In Polish].
- Gawryszewski A., 2011. Ludność Polski w XX wieku. Monografie 5. PAN, Instytut Geografii i Przestrzennego Zagospodarowania im. St. Leszczyckiego [In Polish].
- Głowacki S., 2006. Economical and recreational importance of the lower forest layers. Leśne Prace Badawcze 3, 99-114 [In Polish with English abstract].
- Gołaszewska M., 1986. Zarys Estetyki. Problematyka, metody, teorie. PWN, Warszawa [In Polish].
- Hołowiecka B., Grzelak-Kostulska E., 2013. Atrakcyjność turystyczna lasów w kontekście nowych tendencji i trendów w turystyce. Studia i Materiały CEPL w Rogowie 15, 37(4), 111-117 [In Polish].
- Jakiel M., 2015. Ocena atrakcyjności wizualnej krajobrazu dolinek krakowskich – możliwości zastosowania w planowaniu przestrzennym, [In:] Współczesne problemy i kierunki badawcze w geografii 3. IGiPZ, UJ, Kraków [In Polish].
- Janeczko E., Woźniacka M., 2009. Zagospodarowanie rekreacyjne lasów Warszawy w kontekście potrzeb i oczekiwań mieszkańców stolicy. Studia i Materiały CEPL w Rogowie 11, 4(23), 131-139 [In Polish].
- Janusz A., Piszczek M., 2008. Oczekiwania społeczeństwa wobec lasu – na przykładzie odwiedzających Leśny Kompleks Promocyjny Lasy Beskidu Sądeckiego. Studia i Materiały CEPL w Rogowie 3(19), 138-151 [In Polish].
- Kacprzyk W., 2011. Wybrane problemy zagospodarowania turystyczno-rekreacyjnego lasów – uwagi praktyczne. Studia i Materiały CEPL w Rogowie 13, 4(29), 134-142 [In Polish].
- Kacprzyk W., 2013. Las bez barier – obiekty terenowe. Turystyka w Lasach Państwowych I. ORWLP w Bedoniu [In Polish].
- Kacprzyk W., 2017. Uwarunkowania estetyczno-kulturowe w kształtowaniu urządzeń obsługi ruchu turystycznego. [In:] Szlaki piesze w Lasach Państwowych. Turystyka w Lasach Państwowych IV, ORWLP w Bedoniu, 115-118 [In Polish].
- Krzymowska-Kostrowicka A., 1999. Cultural controls of assessment and evaluation of tourist-recreational landscapes. Problemy Ekologii Krajobrazu 5, 11-16 [In Polish].
- Kulczyk A., 2014. Landscape tourist attraction – the examples of system approach. Turystyka Kulturowa, 4, 6-15 [In Polish with English abstract].
- Liszewski S., 2005. Metropolitalny region turystyczno-wypoczynkowy. Przykład miasta Łodzi. Turyzm 15(1-2), 121-138 [In Polish].
- Malinowska E., 2010. The influence of visual quality of landscape on the touristic potential of the Narwiański National Park and its buffer zone. Problemy Ekologii Krajobrazu 27, 277-285 [In Polish with English abstract].
- Meyer B., 2011. Tereny leśne Szczecina jako obszar aktywności turystycznej i rekreacyjnej mieszkańców. Studia i Materiały CEPL w Rogowie 28(3), 207-212 [In Polish].

- Myga-Piątek U., 2001. Spór o pojęcie krajobrazu w geografii i dziedzinach pokrewnych. *Przegląd Geograficzny* 73(1-2), 163-176 [In Polish].
- Okólski M., 2010. Wyzwania demograficzne Europy i Polski. *Studia Socjologiczne* 199(4), 37-78 [In Polish].
- Paschalis-Jakubowicz P., 2009. Leśnictwo a leśna turystyka i rekreacja. *Studia i Materiały CEPL w Rogowie* 4(23), 29-35 [In Polish].
- Richling A., 2015. O istocie krajobrazu rekreacyjnego i turystycznego. [In:] Bilaska-Wodecka E., Soljan I. (Eds.), *Geografia na przestrzeni wieków. Tradycja i współczesność*. Instytut Geografii i Gospodarki Przestrzennej Uniwersytetu Jagiellońskiego, Kraków, 299-307 [In Polish].
- Skowronek E., Tucki A., Józwiak M., 2015. Tourist Landscape as an element of image and tourism attractiveness framing. Perception of Zwierzyniec town's tourist landscape. *Ekonomiczne Problemy Turystyki* 2(30), 183-197 [In Polish with English abstract].
- Sławski M., Sławska M., 2009. Las jako miejsc wypoczynku i rekreacji – analiza oczekiwań społecznych na przykładzie gminy Rogów. *Studia i Materiały CEPL w Rogowie* 4(23), 140-150 [In Polish].
- Ustawa z dnia 28 września 1991 r. – ustawa o lasach (Dz.U. 1991 nr 101 poz. 444 z późn. zm).
- Ustawa z dnia 7 lipca 1994 r. – prawo budowlane (Dz.U. 1994 nr 89 poz. 414 z późn. zm).
- Walas B., 2013. Trendy w popycie, podaży turystycznej a komercjalizacja produktów – prezentacja na konferencji Nowe trendy w turystyce 2013 [unpublished].
- Ważnyński B., 2011. Urządzenia i rekreacyjne zagospodarowanie lasu. PWRiL, Warszawa [In Polish].
- Wieber J.C., 1981. Etude du paysage et (ou?) analyse ecologique, *Travaux de l'Institute de Geographie de Reims* [In French].
- Wojciechowski K.H., 1986. Problemy percepcji i oceny estetycznej krajobrazu. Uniwersytet M. Curie-Skłodowskiej, Lublin [In Polish].
- Wojciechowski K.H., 1993. Atrakcyjność wizualna krajobrazów jako składnik walorów rekreacyjnych. [In:] Pietrzak M. (Eds.), *Ekologia krajobrazu w badaniach terytorialnych systemów rekreacyjnych*. Wydawnictwo Krajowego Instytutu Badań Samorządowych, Poznań [In Polish].
- Zasady hodowli lasu, 2012. Centrum Informacyjne Lasów Państwowych, Warszawa [In Polish].