

USE OF WOODLAND GREENERY FOR RECREATIONAL PURPOSES

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Abstract:

Urban woods for a town are like lungs for a man. For one thing, woods lying within the administrative borders of a town provide it with ventilation and airing capacity. Secondly, they are an excellent destination for those who look for relaxation, recreation and contact with nature. Urban forests are an important element contributing to the well-shaped urban space, thus having an essential effect on the image and atmosphere of the town, and enhancing its appeal. All Polish cities have municipal forests. It is a big challenge to manage urban woods in the best possible way. Most importantly, an urban forest must be adequately prepared and adjusted to the needs of its users, while being protected against the destruction of the natural environment. This paper is an overview of the information about urban forests in Poland and across the world, including statistical data. Also, selected examples of the management of urban woods for recreational purposes are presented. Active outdoor relaxation is now an increasingly popular form of spending one's free time.

INTRODUCTION

The evolution of an urban community is a driving power behind the development of any town, but for town residents it is crucial to live, work and relax in amiable surroundings. Living in a harmonious landscape, shaped by functional spatial systems of streets, blocks of buildings and green environs, which can be assured by rational urban space management, is one of the factors contributing to the sense of well-being. Good balance between man-made and natural elements is essential not only from the point of view of ecology, but also because it gives people the much wanted comfort of living in a carefully composed landscape and friendly environment. People willingly take a rest ‘in the wild’, away from a town, whether they live in highly industrialized areas with relatively few green spots, or in urban areas rich in open, wild-like spaces. Town dwellers specially expect that municipal woods will encourage recreational use. The very location of a municipal forest, in close proximity to a town, means closeness and accessibility, which both encourage the general public to frequent such woodlands.

In 2000, forests and wooded areas covered 3 869 million ha, which is about 30% of the world's land area. This included over 1039 million ha of woodlands in Europe. In 2010, the total area of forests and woods on the earth was estimated to equal 4 million hectares, that is 31% of the total terrestrial area of the Earth. The forests and woods in Europe grew on about 1056 million ha (fig 1).

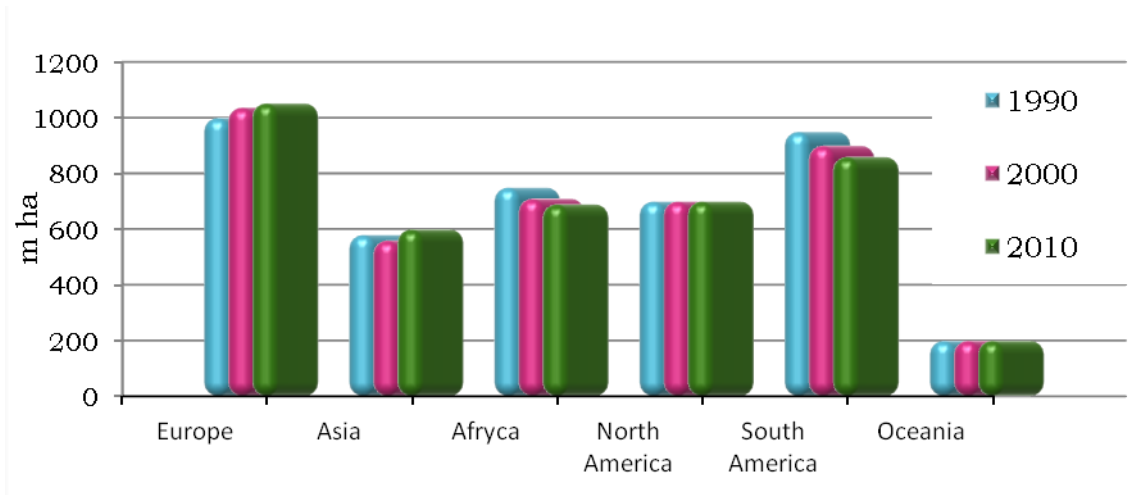


Fig. 1. Aggregated area of forests in the world in particular years.
Source: The authors based on [1]

According to the standard adopted in international assessments, which includes lands associated with forestry, the total area of forests in Poland at the end of 2009 was 9.3 million ha. This makes Poland one of the countries with the largest afforested acreage in Europe (after France, Germany and Ukraine). The data however, do not give us the actual understanding of the rate of forest cover in the country. This information can be obtained if we compare the area of forests to the total area of a given country. The afforestation rate thus calculated will show that Finland, Slovenia and Sweden excel in Europe, scoring above 50% (fig. 3).

In 2009 the Polish forests make up 0.23% of the global forest resources and 0.87% of the afforested land in Europe. Globally, there was on average 0.6 ha of forest per capita, in Europe – 1.4 ha and in Poland just 0.2 ha. The area of woodlands per capita in Poland is among the lowest in Europe.

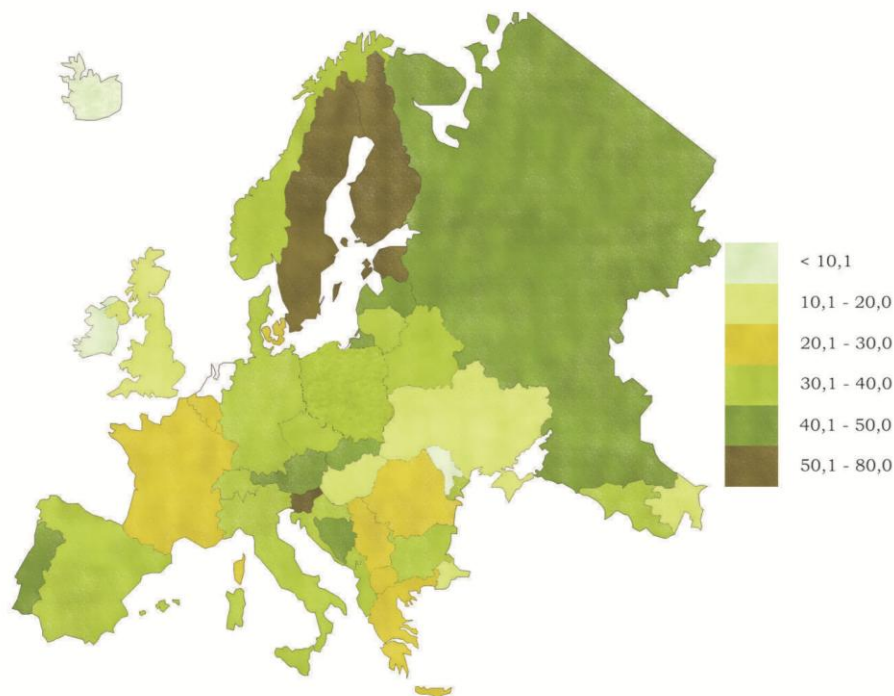


Fig.3. Afforestation rates of European countries in 2009 [%]
Source: the authors based on [2]

Urban forests in Europe cover millions of hectares and enjoy immense popularity among town residents. It is estimated that in the states of Central and Eastern Europe, municipal woods represent from 1 to a few per cent of all forests [3]. Moigneu completed a study that demonstrated that between 0.25 and 0.5 of all trips to forests in France are visits to the area of 80 thousand woodlands in Greater Paris. For centuries the Bois de Boulogne in Paris, a forest-like park covering over 800 ha, has been a popular destination among residents of the French capital city looking for relaxation and entertainment [4].

There are big differences in the total acreage of green areas between European cities. On average, it equals 30% of a town's total surface area. In extreme cases, it is 5% in Madrid up to 60% in Bratislava. Investigations in 26 European cities have shown that wooded areas cover an average of 19% of the whole urban area and annually each 1 ha of urban forests is used by a few thousand people for recreational purposes [5]. Given a choice of where to go, most urban dwellers choose forests no more than 2 km from their place of residence [6]. Despite playing such an important role, urban forests in Europe have not been submitted to complex inventorying yet, which explain the incompleteness of the data presented herein.

FORESTS FOR RECREATIONAL PURPOSES.

Forests can play a recreational function whether their structure has been altered by man or remained unchanged. Forests which through natural selection demonstrate high resilience and adaptability to the habitat-specific features, with negligible human interference, are described by Marszałek as primordial woods. In Western Europe and in Poland, such old-growth forests have almost disappeared, so that the remaining examples are invaluable research objects [7]. A forest which by human action, including tree breeding, planting and care has attained a tree stand similar to a natural one is called a managed forest. Its intended use, way of forest management and utilization by man depend on the function a given forest performs. Recreational purposes are most often assigned to non-production forests, that is the forests not used for production of timber and other forest products [8].

Non-production forests are divided into two groups:

- protection forests, which perform protective (ecological) functions,
- social forests, used to satisfy social and recreation needs.

In the Polish forest management practice, ecological and social functions of forests and wooded areas were first recognized in 1957, when the Forest Management Guidelines were published. Two new categories of protected forests were then introduced: forests with healing power and beneficial micro-climate, and forests which create a zone of tall green plants, used also for recreation. In the second edition of the book, titled *Guidelines for Forest Breeding*, paragraph 11 stated that mass tourism is excluded in forests to the extent of essential needs in cases when the said areas have not been given the status of protected woods for another reason [9]. In the third edition of the Guidelines, a new category of forests was distinguished, i.e. 'forests for mass recreation of people [10].

The last category comprises forests in areas with unique recreational and aesthetic qualities. Also, two other categories, that is 'forests with healing power' and 'forests of a tall green plant zone', especially when lying near towns and residential areas, can be used for recreation, mainly health improvement and rest. According to the definition contained in the Guidelines for Forest Breeding of 1998, recreational management of a forest comprises a set of plant breeding and technical operations for the sake of increasing the tourist, recreational and landscape values of wooded areas, while reducing the negative impact of human recreation on nature [11]. Foresters prepare woodlands to sustain an increasing number of visitors: car parks, tent fields and camp sites are built. Other popular facilities include a variety of point sites (e.g. scenic sites), linear structures (e.g. educational trails, bicycle paths, hiking trails,

fitness routes, etc.), spaces (e.g. forest clearing with recreational facilities) and small furniture (e.g. benches, bins, shelters, etc.) [12].

Poland has created a system of Promotional Forest Complexes (PFC), which is unique in Europe. The objective is to make forests more open to the society, to disseminate knowledge about woodlands among the younger generation of Poles, and to promote a multi-functional and permanently sustainable forest management. A similar concept known as a model forest has been developed in Sweden. Outside the Old Continent, an identical concept appeared slightly earlier in Canada [13]. In 2013, Poland had 25 promotional forest complexes, which in total covered 1 222 537 ha. They are situated in both woodlands with well-preserved natural qualities (e.g. the Białowieża Forest) and in wooded areas which in the past were exposed to intensive human tampering (e.g. the Tucholskie Woods) [14].

Urban and suburban woods play an extremely important role in promoting a healthy lifestyle and outdoor recreation. These forests growing in urbanized areas are essentially different from other woodlands in such aspects as proximity to a town, structure and characteristics of the ecosystem itself, or the number of recreational facilities [15]. Urban forests are often fragmented into small patches. Most Polish towns have urban forests that are less than 100 ha large. There are just 23 cities and towns in Poland that have more than 300 ha of forests each (10).

Warsaw is one of few European capitals that encompasses forests within its borders. There are 15 urban forests in the Capital City of Warsaw. They are prepared for recreational visits mainly by having information boards, walking paths, educational trails – designed to improve visitors' knowledge about forest and forest animals, health paths – combining elements of marching, running and exercise, bicycle paths and horse-riding trails. There are also playgrounds, forest clearings with recreational facilities as well as car parks with shelters, benches and bins [16].

Kraków, another Polish city, has the so-called Wolski Forest, covering 437.95 ha and officially named the Municipal Park and Zoological Garden in Kraków, the Municipal Woods of Kraków. Its history as a recreational facility dates back to the 17th century, when it became a popular destination for outings among residents of Kraków. In 1981, owing to its unique values, it became part of the Bielańsko-Tyniecki Landscape Park, which in turn was incorporated to the Jurajski Landscape Park Complex. In 1917-1928, first clearings in the forest were made for visitors, and hardened footpaths for strollers were made. A zoological garden, which exists to this day, was opened in 1929.

The Wolski Forest is a year-round destination for Kraków residents and tourists seeking relaxation. It is also a source of fresh air for the city. The forest provides visitors with recreational facilities in forest clearings and with trails for hikers, cyclists, horse riders and skiers. There are also numerous attractive sites and objects such as nature reserves and stands of rare and protected plants, the Tadeusz Mazowiecki Avenue of Oaks, the Marshall Józef Piłsudski Mound of Liberty, a concrete bunker called Kazamata (fragment of the FB 36 Fort), remains of the FB 37 Fort in Sowiniec, the Monastery and the Hermitage of the Camaldolese Brothers as well as a number of holy shrines and figures [17]. The way this forest has been arranged and managed, including many sites connected to the history and culture of Poland, makes the Wolski Forest an exceptional recreational forest complex, which is willingly frequented by both residents of Kraków and visitors from Poland and other countries.

The Municipal Forest in Olsztyn meets the criteria which distinguish recreational woodlands, and so it helps residents of Olsztyn to satisfy their needs to rest and relax. The forest grows in an area endowed with high tourist assets and varied land relief. Besides, there are two lakes (Długie Lake and Syginek Lake) and two rivers (the Łyna and the Wadąg) in close proximity to the forest. In total, an area of 1 284,32 ha of woodland was specifically set out in a management plan [18] to create conditions for mass recreation. The chosen part of the forest

is characterized by high natural resilience to recreational use. Town residents and visitors can rest and relax in the Olsztyn Municipal Forest, taking advantage of such facilities as two sled tracks, two ropes courses, playgrounds for children, forest clearings with picnic facilities, signposted educational trails, strolling and jogging paths, fitness tracks. The shooting range and kayaking on the Łyna River are two other popular options.

In 1907, a tuberculosis sanatorium was built in the forest near Olsztyn. At that time, it was a sanatorium for women called Frauenwohl. The building is still used by the health care system and is now known as the Independent Public Hospital for Tuberculosis and Lung Disease Patients in Olsztyn.

The Municipal Forest in Olsztyn contains remains of the Forest Stadium, opened in 1920. It held mainly athletic events as well as several football matches played on the pitch. In August 1960, the Polish Athletics Championships took place on the Forest Stadium, remembered for the new world record in the triple jump, set at 17.03 m by Józef Szmidt. At present, the stadium is partly overgrown with plants and completely ruined, only used for some individual sports practice and for picnics. Visitors to the Olsztyn Municipal Forests discover with interest two war-time cemeteries: for German and for Russian, dating back to 1914. They are resting places for soldiers killed during the First and the Second World War.

SUMMARY

The recreational use of forest greenery is a good solution. It has gained importance in our times, hectic, stressful and noisy for town residents. Living in a town often causes mental and physical fatigue. Stress and noise are also implied as causes of civilization diseases. Forest management should rest on such pillars as protection and preservation of aesthetic and landscape-related values, and on the creation of optimal conditions for people's recreation and relaxation. Forests play an important role in the everyday life of people – above all, they are a natural filter which absorbs carbon dioxide and enriches the atmospheric air with oxygen. Thus, our aim should be to take advantage of the healthy forest micro-climate. The bio-climate in woodlands is suitable for good relaxation and beneficial to the human physical and mental health. However, the forest landscape should be shaped in such a way as to achieve a satisfying form of forest management while sustaining its optimal tree stand.

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