

PRECONDITIONING OF FOREST ECONOMY IN POLAND IN URBAN AREAS

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Abstract

In Poland, forests in and around towns are usually considered to play the function of protective forests. Economic operations should be harmonised with the requirements of touristic management as well as current and future demands for protection and development of forest landscape. The encountered challenges are associated with the specificity of urban conditions as well as a lack of appropriate legislation and authority of forest service regarding forest economy.

Key words: Poland, urban areas, forest economy.

Introduction

In Poland, forests situated within administrative control of towns and cities are treated as protective forests as stipulated in Art. 15 of the Forest Bill from 1991 which specifies that: *forests situated within administrative boundaries of towns as well as at the distance of up to 10 km from the administrative boundaries of towns with populations of over 50 000 are specially protected and will be referred to as "protective forests"*. In 2006 their total area amounted to 651 483 ha and constituted 7,22% of all forests in Poland.

In the year 1990, a Union of Polish Metropolises was established which, at present, includes the following 12 cities: Białystok, Bydgoszcz, Gdańsk, Katowice, Kraków, Lublin, Łódź, Poznań, Rzeszów, Szczecin, the capital city of Warsaw and Wrocław. In 2006, the area of forests in cities of the Union of the Polish Metropolises ranged from 48 422 ha (Łódź Metropolitan Area) to 182 590 ha (Katowice Metropolitan Area), in total – 1 582 972 ha. Woodiness in these regions ranged from 14% (Lublin Metropolitan Area) to 36% (Bydgoszcz-Toruń Metropolitan Area), on average - 26%.

At the present time, there are four municipal forest districts in Poland: two in Szczecin and one each in Łódź and Olsztyn. In the remaining municipal regions, forest economy is run by offices of district authorities, communes, municipal offices of green areas, boards of municipal roads or other organisational units. Municipal forests in Poland are financed mainly from communal sources of environmental protection funds from which, among others, forest service is paid [2].

Historical preconditionings

In Poland, interest in forests growing in towns and cities as well as in their neighbourhood goes back to 1990s. In 1993, eighteen forest areas associated with urban agglomerations were distinguished. This was associated with the fact of increased numbers of factors decreasing standards of human life and, consequently, with a growing demand for rest and recreation in direct contact with nature. It was believed that forests in those regions should form 'belts of high green' around towns ensuring favourable air circulation, fulfil the role of a filter reducing levels of contamination, alleviate consequences of the glasshouse effect and make recreation in natural conditions of nature possible. Therefore, these were areas characterised by a distinct influence of anthropogenic factors and a need to apply in them non-standard methods of management. The following criteria of their classification were adopted [8]:

- range of invested, key and urbanised areas of town agglomeration,
- level of investment of commune surrounding them,
- classification of forest working circles according to the category of recreational management,
- occurrence of spatial forms of nature and landscape protection,
- proportion of forest area, structure of sites and tree stands,
- communication network, time required to reach the centre of towns, number of citizens.

Within the area of the discussed eighteen agglomerations (Fig. 1a), the total of 80 forest districts were located, including 159 forest

working circles. It was assumed that economic activities of the above units would involve various tasks from the following fields: recreational management, development of spatial systems advantageous for urbanised areas (e.g. by forestation) and protection of forest environment against the impact of anthropogenic pressure.

Already at the beginning of the 21st century, Wazyński [12] reported 19 areas associated with urban agglomerations (Fig. 1b). The range of the zones surrounding towns included forests which were treated by residents of cities as well as their suburbs as recreational areas.

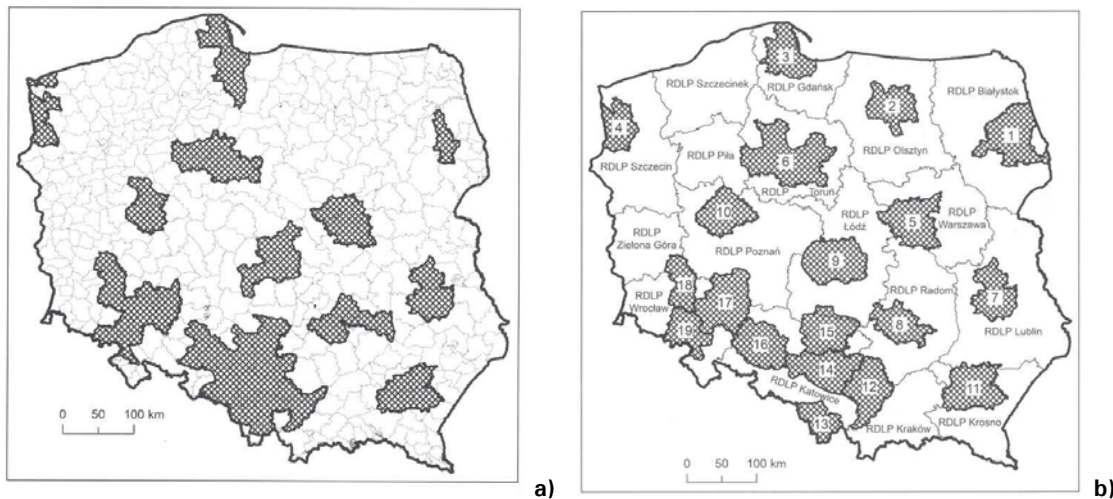


Fig. 1. Forests within the range of city agglomerations in Poland
 a) at the end of the 20th century [8], b) at the beginning of the 21st century [12]

Some parts of forest areas surrounding towns – in fact, forests of Warsaw and Upper Silesia Industrial Region – were also classified as the so called ‘forestry problem areas’. However, in the majority of the remaining forests in neighbourhoods of the discussed agglomerations, single features of such areas were also observed.

These regions (Fig. 2) included areas of complex management structure and considerable proportion of forests on which the occurring spatial conflicts associated with the state of forests, level of their external hazards as well as the role of forests in the development of ecological equilibrium reduced significantly possibilities of achieving forestry objectives within the framework of ordinary forest economy. The solution of the occurring conflicts exceeded possibilities of forestry and required many active measures mainly from the field of environmental protection and development.



Fig. 2. Problem areas of forestry in Poland towards the end of the 20th century [8]

Problem preconditions

Major problems associated with forest management include [1, 3, 5, 6, 7, 9, 13, 15]:

- fragmentation of forest complexes accompanied by absence of legislative regulations allowing their integration and enlargement of public forests,
- absence of regulations regarding boundaries of area of communal forests in planning documentation (e.g. local spatial development plan, studies of conditions and directions of spatial development),

- unsettled forest ownership,
- lack of exemption from charges on account of permanent administration for units managing communal forests,
- lack of possibilities of free takeover of forests and land belonging to the State Treasury for municipal ownership with the intent to keep forests integrated,
- incorrect and improper regulations concerning elaboration of simplified forest management plans resulting from depriving forest owners participation in the process of elaboration of these plans,
- institutional separation of supervision over forest economy (supervised by Starosta) and protection of forest land (supervised by the director of the Regional Direction of State Forests),
- making a unit of State Forests (i.e. organisation outside the sphere of public administration) responsible for the protection of forest land,
- difficulties in defining forests in towns; is a given piece of green area just a green area or already a forest?,
- establishment of subjects supervising forest economy depending on the forest form of ownership,
- lack of possibilities of the control of local communities over management of public state forests,
- absence of standard management methods of green areas, in particular of procedures or systems of forest state monitoring,
- lack of services with effective supervision over forests.

Common and easy access to forests, in particular, to municipal forests and forests neighbouring towns causes their littering and devastation of the infrastructure prepared for tourists (information boards, benches, tables, roofed areas, litter baskets). In the case of municipal forests, lack of proper legal regulations as well as authority of forest service pose special problems. In addition, it is also difficult to secure sufficient money resources from the forest fund for natural education and touristic management. Among problems encountered especially in municipal forests are motocross races and disregard of car ban in those forests. In addition, Christmas tree plantations as well as newly established forest cultivations are frequently damaged [2].

Forest economy

The forest management plan instruction currently in force in Poland (2003) advises that in the case of forests administered by the State Forests fulfilling touristic-recreational functions, economic recommendations should be harmonised with the requirements of tourism, protection and forest landscape development in accordance with "*Principles of silviculture*" (2003). The instruction clearly states that the following zones should be distinguished in forests growing within administrative boundaries of towns which are commonly accessible to urban populations as well as in protective zones of forests surrounding sanatoria and health-resorts:

- zone A – intensive recreational management for prolonged periods of rest where the following permanent objects of recreation are situated: bivouacs, camping sites, parking plots, sanitary facilities, water intakes;
- zone B – for one-day stays equipped in the simplest recreational and sanitary facilities;
- zone C – dispersed touristic-recreational traffic intended for the movement of persons, primarily, along walking paths and touristic routes.

It is also emphasised that the way of forest management in zones A and B should take into account maintenance or restoration of the forest to its natural character leaving as many paths, clearings and beauty spots as possible. Economic activities in forests under recreational management, especially with respect to forest utilisation, timber skidding and transportation should be carried out during periods of less intense touristic-recreational traffic. It worth mentioning that people frequently do not understand operations performed in the forest and such activities sometimes raise doubts or even protests. It is necessary for the entire forest administration to carry out mediations and education in this field.

In the case of municipal forests, usually there is no functional division of forests. Borowski (2006, quote after Ważyński [12]) distinguished five zones of recreational forest management which Ważyński proposed for communal forests:

- zone A – intensive, situated close to built-up areas with single- or multi-family housing within a walking or pub-

lic transport access to recreational areas; this causes daily, relatively numerous presence in forests of people throughout the day uniformly during the entire year,

- zone B – balanced, situated further away from built-up areas with single- or multi-family housing with possibility to reach forests by bicycles or cars; this leads to daily visits of people but mostly in the period from spring to autumn and free days,
- zone C – quiet, usually situated far from towns which results in uniformly dispersed traffic of people throughout the year,
- zone D – mass, situated away from built-up areas but with good conditions of access by means of public or individual transport with mass stay of people on single days during the year depending on weather and/or organised sports, entertainment or recreational events in which children under the care of grown-ups take part,
- zone N – inaccessible for people due to, for example, drinking water intakes, shooting ranges, areas of special purposes.

The fact that that forests growing in the neighbourhood of towns are classified as protective forests requires a specific approach to management operations. With respect to final felling, it is recommended to avoid clear cuttings, while bearing in mind the domination of recreational functions, the following cuts are advised [11, 12]:

- landscape cuttings – carried out during the first stage of forest adaptation to recreation in zones A and B with the aim to shape forest landscape from the point of view of optimisation of the recreational effect in forest environment;
- regeneration cuttings – carried out when it is necessary to regenerate a specific stand requiring individual approach,
- tending cuttings – carried out in accordance with silvicultural principles for commercial forests but taking into account aesthetics of the forest and landscape,

- sanitary cuttings – carried out in order to maintain good health and sanitary condition of the forest which, in turn, is to ensure effective rest in the forest,
- selection cuttings – carried out to maintain forests aesthetics and its transparency on both sides of walking and cycling paths and routes.

A wide range of selection of tree species for regeneration in communal forests should take into consideration specificity of urban conditions – soil and air contamination, wind, droughts, damages caused by people (breaking, trampling). Frequently, tree aesthetic values as well as the form of their growth are also important. The applied planting spacing should be loose taking into account direct neighbourhood of other tree stands as well as the appearance of the current and future landscape.

One of the primary tasks of foresters is appropriate adjustment of the forest to requirements of tourism and recreation. This involves, first and foremost, finding and marking suitable places for rest and recreation, parking lots, camping sites, paths and equipping them in proper elements of technical management (information boards, signs, fencing, litter baskets, toilets, fire grates, benches, tables, roofed spaces, landscape view points etc.). All these undertakings require individual approach which will fulfil basic aesthetic needs as well as requirements of forest fire protection and will not exceed execution possibilities of units responsible for forests in the neighbourhood of towns and cities.

Recapitulation

The significance of forests in urban regions in Poland increases continuously. There is a subconscious conviction among general public that the principal objective of municipal (communal) forests is to manage them in a way to fulfil recreational requirements of local residents rather than to maximize timber production in order to fill municipal coffers. Moreover, forests administered by the State Forests but growing close to town boundaries are perceived by the general public as places of rest and recreation. This, in turn creates certain problems associated with compensations for foresters for loss of profit – higher costs of maintenance, protection and recreational management of forests do not make up for smaller profits from secondary timber produc-

tion. An additional problem concerns conflicts of foresters with the general public which frequently does not understand the significance of the management and protection operations carried out in forests. This requires from foresters, on the one hand, carrying out forest education of local communities and, on the other, cooperation with individual self-governments. As a result, it is expected that a platform of mutual understanding can be worked out allowing reconciliation of different interests and sustainable development of forests for future generations of town inhabitants.

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