



Review

What do we expect from forests? The European view of public demands



Mariusz Ciesielski*, Krzysztof Stereńczak**

Forest Research Institute, Sękocin Stary, Braci Leśnej 3, 05-090, Raszyn, Poland

ARTICLE INFO

Article history:

Received 28 April 2017

Received in revised form

14 December 2017

Accepted 14 December 2017

Available online 4 January 2018

Keywords:

Forest

Recreation

Public preferences

Europe

ABSTRACT

The paper constitutes an overview of the hitherto prevailing knowledge of the factors which influence the attractiveness of forests. What is more, it shows, in a cross-sectoral manner, the study methods and general preferences of people in the context of recreational use of forests. 109 papers published in the years 2000–2016 have been analyzed. In the work, five main issues were discussed, which constitute the study subject i.e.: a) the preferred forest type and function; b) expenses incurred by people to reach a forest (time and distance); c) the society's demand for technical infrastructure and forest management; d) factors disturbing the recreation in forest areas; e) reasons and frequency of visits to forests for recreation purposes.

The results indicate that the following have an impact on the perception of forests: tree stand factors (age, species composition, etc.), social factors (age, material status, interests, etc.), and factors related to human activity (the extent of forest operations, noise, littering, etc.). Based on the literature, it is possible to indicate a model forest, which in view of respondents, is described as the one that is preferred for recreation purposes. The model differs depending on the analyzed part of Europe.

© 2017 Elsevier Ltd. All rights reserved.

Contents

1. Introduction	139
2. Methods	141
2.1. Search methods	141
2.2. Preparation of data	141
3. Results and discussion	141
3.1. Bibliographic overview	141
3.2. Study methods	141
3.3. Analysis of preferred forest types and functions	143
3.4. Analysis of maximum expenses	145
3.5. Analysis of demand for technical infrastructure and forest management	146
3.6. Analysis of factors disturbing recreation in forest areas	147
3.7. Reasons and frequency of visits to forests for recreation purposes	147
4. Conclusions	149
Acknowledgments	150
Supplementary data	150
References	150

* Corresponding author.

** Corresponding author.

E-mail addresses: m.ciesielski@ibles.waw.pl (M. Ciesielski), k.stereńczak@ibles.waw.pl (K. Stereńczak).

1. Introduction

Forests cover over 44% of land area in Europe. The value is different in individual regions of Europe and ranges from 26.4% in

Central and Western Europe to 52.1% in Northern Europe (Raport o stanie, 2016). Forests constitute an inherent element of the landscape and human existence, and they provide many ecosystem functions. Ecosystem functions in general are a subset of the interactions between its structure and the processes that underpin the capacity of an ecosystem to provide goods and services (Joint Research Center, 2005). Forest functions evolved throughout the centuries. Before the 19th century, forests were mainly used for timber production, but nowadays, the non-production functions of forests become more and more significant. Among them, there is a protective function, which includes the protection of waters among others (Calder, 2000; Pierzgalski, 2008), soils (Bao and Laituri, 2011), biological diversity (Kuuluvainen, 2011), as well as climate protection and shaping (McPherson et al., 2005; Livesley et al., 2016). Apart from the protective function, the social function of forests is becoming increasingly important (Paschalis-Jakubowicz, 2005). The concept of forest social functions is very broad and refers to issues such as: the protection of human health (Novak et al., 2014), the enrichment of job market (Porter et al., 2016), the management of degraded land (Palmąka, 2010), culture-forming and educational function (Ludwiczak et al., 2012). In the light of recent research, it seems appropriate to say that sustainable forest management is necessary even for specified social needs, such as recreation and leisure (Gołos, 2010, 2013; Eriksson et al., 2012; Gundersen and Frivold, 2008; Lindhagen and Hörnsten, 2000; Roovers et al., 2002; Smoleński, 2015).

Forest as the place of leisure and recreation is, mainly for residents of urban areas, space where they can execute one of the fundamental needs i.e. contact with the natural environment (Gołos, 2013). According to multiple theories, the contact with nature enables the reduction of stress level (a theory of psychophysical reduction of stress (Ulrich, 1984)), distancing from family and job related issues (attention regeneration theory (Kaplan, 1995)), has a beneficial effect upon human mind (Jaszczak, 2008), and improves concentration (Tomalak, 2006). The increase of life quality, the improvement of ecological awareness, and the need for regeneration, recreation, and leisure in terms of quoted theories cause that forest is treated as the place of people interest (Mandziuk and Janeczko, 2009). As far as recreation in forest areas is concerned, one may talk about the specific kind of activity (qualified tourism), identified as sylvan tourism. This includes the stay and excursion traffic, as well as other types of tourist traffic whose destination are forest areas (Danilewicz, 2006; Muszyński and Koziol 2013). Recreation, like other human activities, affects forest ecosystems. Therefore, in the age of increased demand for non-production forest functions, it is important to identify expectations of various groups of recipients as regards forest functions, as well as people's preferences in the scope of recreational use of forests. Detailed information on the matter will support decision-making on the rational management of forest resources, and the development of leisure infrastructure in forest areas. It is important since human recreational activity, may (although it does not have to) have the negative impact on biocenoses and tree stands, and may influence the development manner and works performed in forests. In order to minimize and limit the negative impact, it is necessary to recognize the society's needs to this extent, and the activity should be performed with regard to the nature protection rules. Improperly organized tourist traffic carries threats to forests such as fires, destruction of flora, irrational harvesting of ground vegetation, disturbing animals, littering forests, etc. Apart from nature related dimension, the attention should also be paid to an economic side of actions undertaken in the area of forests' recreational use. In multifunctional forest management, the identification of residents' needs is important in order to optimize functions

of selected forest areas. The inappropriate indication of areas of intensified non-production function of forest may lead to the ineffective use of financial resources (reduction of income from the sale of timber) (Gołos, 2013; Mandziuk and Janeczko, 2009).

People's preferences in the context of forest areas' recreational use have been studied for several decades. In Scopus scientific database, first works in the discussed area appeared at the turn of the 70s and 80s of the 20th century (Kazanskaya, 1977; Kellomäki and Savolainen, 1984). Studies were conducted on the grounds of forest sciences using achievements in the scope of social psychology, sociology, and economy. The combination of different disciplines allows for the widest possible range of results, which may be further used by practitioners for the rational forest management and planning (Gundersen and Frivold, 2008; Gołos, 2010). Multiple studies regarding social needs and preferences in the scope of non-production forest functions indicate the complexity of the subject. Many factors influence the fact that forest areas are more attractive for recreational use than other places. The first group of factors – social ones – are elements related to age, social status, knowledge, education, and experience of an individual. The other group relates to the place of residence, since different factors influence preferences of residents of the analyzed area, and different factors influence visitors. The third group of factors is related to the forest ecosystem itself, mainly to the following:

- **Accessibility of forest area** – distance from the place of residence, travel time, availability of public transport (Lindhagen, 1996; Janeczko and Woźnicka, 2009; Sławski and Sławska, 2009; Upton et al., 2015);
- **Forest appearance** – age, richness of ground vegetation, quantity of light reaching forest floor, species composition (deciduous, coniferous, mixed forest), diversity of species, number of forest strata/layers, quantity of coarse woody debris, signs/effects of forest management operations (mainly clear-cuts), natural or production forest (Kienast et al., 2012; Meijels et al., 2014; Edwards et al., 2012; Horne et al., 2005);
- **Forest management condition** – leisure infrastructure, forest management manner (Koemle and Morawetz, 2016; Verlič et al., 2015);
- **Factors disturbing forest perception** – noise, litter, too many visitors, etc. (Tyrväinen, 2001; Heyman, 2012; Janusz and Piszczek, 2008; Gołos, 2013).

The presentation of the systematic review of the literature on this subject matter is extremely important. It may be the foundation for indication of social needs and requirements in terms of recreational forest usage which are constantly changing (Paschalis-Jakubowicz, 2005). This process is especially visible in Central and Eastern Europe countries which have joined to the European Union, the economic and social conditions of these countries continue to improve. Analyse of needs should be the starting point for the development of new principles and forest management concepts, including breeding, management, and realization of social requirements. Moreover, taking into account of these factors ought to reduce the potential negative impact of recreation on the forest ecosystem.

Considering all mentioned dimensions and circumstances, the purpose of the paper is to present the synthesis of social needs and preferences in the scope of recreational use of forests in Europe. Due to the large number of studies in the subject area, this work focuses on five most frequently discussed issues i.e.: 1) the preferred type of forest and its function, 2) expenses incurred by people (analysis of accessibility), 3) technical infrastructure and forest management, 4) factors disturbing leisure in forest areas, 5)

Download English Version:

<https://daneshyari.com/en/article/7478263>

Download Persian Version:

<https://daneshyari.com/article/7478263>

[Daneshyari.com](https://daneshyari.com)