

Economic Aspects of Forest Education for General Public in Poland. A Case Study of Promotional Forest Complexes

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Abstract

Forest plays an important role in human life. Nowadays, a significant development of tourism and education can be observed in forests. For many visitors, forests are the destination of tourist trips. However, in order to develop tourism successfully there, the forest areas have to be properly developed. Recreation and relax in forest can become an additional source of income for forest districts and their administrative entities. This activity constitutes an important source of income for the local economy through the costs incurred by visitors for the journey to the forest for educational and recreational purposes. Within the framework of this institution there are Promotional Forest Complexes (PFCs), which task is to realize the social functions of forests. In Poland, in 2016, there were 25 Promotional Forest Complexes (PFCs). PFCs are an original Polish idea for promoting ecological forestry. Foresters within PFCs conduct various activities, including promoting sustainable forest economy, supporting scientific research and providing forest education for general public. The educational activity of PFCs is financed by two sources of funding: internal (own) financing and external financing. The main source of financing education in PFCs is the own resources of the forest districts. It should be noted that the use of forest education for the general public conducted by PFCs is free of charge for the general public.

The aim of this paper is to show the forms of forest education in Poland, as well as its economic aspects. It also presents the expenditures and benefits drawn from the development of the educational function of forests. The authors attempt to evaluate the prospective cost of visitors' attendance in these areas.

Keywords: forest education, forest function, Promotional Forest Complexes, tourist and recreational forest functions, economic aspects, Poland

Introduction

The forest has always played, is playing and will play an important role in people's lives (Djoudi et al. 2015) and, as a public space, it is available to all those who want to make good use of it. The productive role of forests has a relevant value producing also significant socio-economic benefits (Forest Europe 2015). The forest providing products and ecosystem services that are essential to the prosperity of humankind (FAO 2016). The change in the model of life of European societies and the increase in ecological awareness have led in recent decades to the fact that forests are becoming increasingly a component of public infrastructure of countries and fulfill more and more functions (Szujewski A. 1997).

Researchers identify over 100 functions, usually divided into three groups: economic (wood industry), protective (ecology) and social (e.g. recreation, education, tourism) (Mandziuk and Janeczko 2009; Ahtikoski et al. 2011; Sikora and Wartecka-Ważyńska 2017).

Forests are basic to many communities' existence (Kindler 2016, Miura et al. 2015) by bringing much material and non-material benefits (Pistorius et al. 2012, Uglis and Kozera-Kowalska 2017). The concept of ecosystem services is associated with services affecting the quality of human life. The original characteristics of these services include their support, supply, regulation and cultural services. All these components are built into biodiversity as the main ecosystem service (Wolfslehner 2017). These include provisioning services such as food and water; regulating services such as regulation of

floods, droughts, land degradations and diseases; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other nonmaterial benefits (Alcamo 2003). At present, the following forest functions related to ecosystem services can be identified (Lexer et al. 2014):

- supplying ecosystem services: wood and biomass for energy purposes, non-wooded pasture, drinking water, grazing livestock,
- regulation of ecosystem services: coal mining, land protection (rock cover, landslides, avalanches), habitat protection (birds, etc.) and nature protection, water protection, flood protection,
- cultural ecosystem services: hunting, recreation, forest education.

In forest areas, the function of the forest towards recreation is becoming more and more common (Cieszewska 2018). Demographic and environmental changes are considered as the reasons of these changes (Bell et al. 2007).

Nielsen et al. (2007) show studies from Europe that forests are among the most popular environments for outdoor recreation. Currently, we can observe significant development of tourism and recreation in forests (Bell et al. 2008). Due to their large area and spatial distribution, they are among the main tourism assets and destinations for many visitors (Wartecka-Wazyńska 2010, Janusz and Pochopień 2012). However, in order to there develop the tourist function, forests have to be provided with suitable infrastructure. Developing various forms of recreation in forests may become an additional source of revenue for forest districts and their administrative entities. Moreover, this type of activity is a source of substantial income for the local economy, due to the cost of travelling to the forest for educational-recreational purposes.

In Poland, a great majority of the forest economy is managed by the Directorate-General State Forests (Lasy Państwowe/State Forests), which is a state organizational unit without legal identity. It cares about the condition of forests and the preservation of natural and landscape assets. Forest management performed by it is based on the sustainable forest economy, which affects many different aspects, including the creation of forest promotional complexes. The forest is an ideal place for education, as it creates an opportunity for a direct contact with nature, as well as allows people to use their theoretical knowledge in practice (Jęczmyk et al. 2017).

Organizing educational activity in forests, running various educational centres and preparing an interesting offer for visitors require adequate financial outlays.

Forest Education

Professional forest education is constantly evolving, embracing science, research and training in the field

of human capital development in the forestry sector (Ratnasingam et al. 2013). According to Vanclay (1996), it includes four levels of participation:

- providers: universities, technical training schools and professional institutes;
- participants: forest managers, researchers, planners, policy makers and students;
- beneficiaries: potential employers, public and global biodiversity groups;
- intermediaries: media, schools.

Forest education in Poland has been created and implemented primarily by foresters to supplement the knowledge acquired as part of school and academic activities, and the most common recipients of this education are primary school students and pre-school children, but also often students and “unorganized” adults (Sieradzki 2008). The expansion in educational activity resulted from new expectations and social needs in relation to forests and forestry. Forestry model changed from raw, economic to sustainable, pro-ecological which to much greater extent takes into account the implementation of protective (ecological) and social (public) functions (Grzywacz 1994).

Forest education, that is the teaching and upbringing process covering the issues of shaping and protecting forest ecosystems and promoting the State Forests in Poland, as an organizational unit implementing the idea of sustainable development, should cover the whole society and extend to the whole life of a human being (Wierzbička et al. 2014, Grzywacz 2012). Forest education is one of the basic tasks implemented by the State Forests in Poland. Its goals are as follows:

- 1) dissemination in the society of knowledge about the forest environment and multifunctional, sustainable forest management,
- 2) raising public awareness of rational and appropriate use of all functions of the forest,
- 3) building social trust for foresters’ professional activity (Chrzanowski 2016).

Traditionally, it is assumed that two types of education are used in the State Forests in Poland:

- passive: based mainly on publishing activities, multimedia works, creation of didactic paths and participation in exhibitions and contests,
- active: focused on the direct, synergic contact of trainees with the trainer; most often these consist of green lessons, classes in educational chambers, competitions and trips with a properly prepared guide – a forester (Sieradzki 2008).

According to the assumptions adopted in the Forest Act (Sejm 1991), PFCs are forest complexes of particular importance in view of not only economic, ecological, social, but above all educational purposes. It should be noted that the use of forest education conducted by PFCs is free of charge for general public.

The aim of the article is to show the forms of forest education in the State Forests in Poland, as well as the cost of its conducting. It also presents the expenditures and benefits drawn from the development of the educational function of forests. A detailed analysis was made of the data set on the costs of functioning of the PFCs. Therefore, two research hypotheses are formulated in this paper.

H1. Promotional Forest Complexes as functional area within the Directorate-General State Forests (the State Forests) in Poland fulfil an important role in satisfying the needs of forest education of general public in Poland.

H2. The costs of forest education of general public within Promotional Forest Complexes are financed mainly by own forest district funds creating.

Study area

Forests cover over 215 million hectares in Europe, that is 33% of Europe's land area. Forest area is unequally distributed over the European territory and there are significant differences in the percentage of forest found in different European countries. However, the percentage of forest is between 30 and 45% in nearly half of the countries (Forest Europe 2015).

The EU-28 had close to 182 million hectares of forests and other woodlands, corresponding to 42% of its land area (EuroStat 2015). Sweden reported the largest forested area in 2015 (30.5 million hectares), followed by Spain (27.6 million hectares), Finland (23.0 million hectares), France (17.6 million hectares), Germany (11.4 million hectares) and Italy (11.1 million hectares). Of the EU-28 total area covered by forested land in 2015, Sweden accounted for 16.8 %. Spain (15.2 %) and Finland (12.7 %) were the only other EU Member States to record double-digit shares (EuroStat – Statistics Explained 2018).

Forests in Poland cover 9.4 million hectares, which places Poland among countries with the largest forested area in Europe (Zajac et al. 2014). In 2016, the forest cover in Poland, measured in compliance with the existed international standards, amounted to 30.8% and was lower than the European average 32.8% (44.7% – including the forests of the Russian Federation (Lasy Państwowe 2017)).

The organizational structure of the State Forests includes Promotional Forest Complexes¹ (PFCs) which task is to implement the social functions of forests. They are functional units of ecological, educational and social importance. They are large and compact forest ar-

reas, making up one or more forest districts, created in order to popularize the pro-ecological forest policy of the state. In Poland, in 2016, there were 25 PFCs which covered the total of 1,273,693.00 hectares.

The Complexes are functional units which do not have separate administration but are administered by the chief foresters of the forest districts located within the PFCs. They remain under the supervision of the chiefs of respective Regional Directorates of the State Forests (Fronczak 2007). Foresters point to the changeability of habitat conditions within individual PFCs, the diversity of the tree species and the multitude of functions the forest performs. They also promote the sustainable forest economy, support scientific research and provide forest education for general public (Lasy Państwowe 2016). The PFCs are regarded as a platform of cooperation between the forest administration and local authorities (Blichtarska et al. 2012).

The aim of the PFCs is to stimulate a wide interest in the natural environment, as well as to improve the methods of the sustainable and multifunctional forest economy, guaranteeing stable development of natural forest resources. The PFCs' priorities include popularization of the knowledge about nature protection and pro-ecological economic activity (Muszyński and Koziol 2013), as well as the ecological education of the society. Kruk (2015) claims that there were, on average, more forest education facilities in the area of forest districts located within the PFCs than in forestry inspectorates located outside their boundaries.

Materials and methods

The authors used the following research methods: empirical analysis of secondary materials, literature data analysis and statistical analysis. They were guided by the primary directive of empirical research, which stipulates that several complementary research methods or techniques have to be used in social and economic studies. Due to this principle, the potential disadvantages of some research methods that are used are reduced and compensated with the positive features of other methods, such as the possibility to achieve more unbiased results.

For the purposes of the theoretical-empirical analysis of the collected material, the authors analysed the existing literature on the subject, which referred to the theoretical aspects of the educational function of forests, as well as the conditions required for its implementation. In order to achieve the assumed objective, the

¹ It should be stressed that the Promotional Forest Complexes (PFCs) is an original Polish idea for promoting ecological forestry. Its only equivalent in Europe is the Swedish conception of a model forest, and outside Europe, a similar, slightly earlier Canadian initiative. The idea to establish the PFCs was approved by European foresters and scientists (Kruk 2015, Fronczak K. 2007).

collected material was analyzed. The article presents expenditures in nominal value without regard to inflation. Finally, the statistical analysis enabled the authors to establish the quantitative relations among the dependent and independent variables of the studied issue, as well as to prepare their visualization.

Statistical analyses were performed using Statistica 13.1 software package (Dell 2016). Data were analysed using the Pearson's correlation test to determine dependence between mean values of the forest districts' own resources spent on the forest education of the general public in Poland, the equipped with educational infrastructure and people's participation in education. Moreover, the data obtained were analysed using the Brown-Forsythe variance homogeneity test. The research methods and techniques that were applied, as well as the obtained results showed a general picture of the educational function of Polish forests, defined the forms and range of this education and enlarged the scope of problems for further discussion.

Results

The educational activity of the State Forests in Poland is financed from two sources - internal and external funds. The analysis of the source materials showed that in 2010-2015, the total of expenses incurred on the educational activity were 38.306 million EUR (Table 1). However, those expenses did not include all the investments or remuneration for the State Forests employees involved in educating the society.

Forest education is financed mainly with the means provided by forest districts and the Forest Fund (88.58% of all funds). In 2010-2015, the total quota of internal

financing increased over twice, from 3.2 to more than 7.2 million EUR, including shared own funds expenditure on educational activity rising from 81.9% to 91.7%.

Among the internal sources of financing, the most significant were the forest districts' funds, which at the time of study made up on average 96.5% of the financial means for educational activities. The expenditure calculated per one forest district was gradually increasing from on average 7.5 thousand EUR in 2010 to over 15.4 thousand EUR in 2015. It should be stressed that these expenses vary across Poland, e.g. in 2015, they ranged from 7,057.03 EUR (Krosno) to 41,531.57 EUR (Warsaw) on average.

The forest districts' own resources are supplemented with money provided by the Forest Fund, whose main task is to level the financial shortages caused by the fact that the main and administrative activities are run by unprofitable forest districts. These districts may receive support from the Forest Fund, also for forest education provided as a part of their main activity. In 2010-2015, the Forest Fund provided nearly 1.4 million EUR for this purpose. Over that period, the share of those financial resources spent on educational activity noticeably increased, especially during the last two years.

Another important sources of financial support for the forest education for the general public are the external funds, which include means from the state budget and the National Fund for Environmental Protection and Water Management. Over the analysed period, the State Forests received over 3.7 million EUR. At the same time, we could observe a plummeting percentage of the external financing – from 18.1% to 8.1%. As regards external sources, most funds came from the Province (Voivodeship) Fund, over 2.1 million EUR. The share of money

Table 1. The sources of financing educational activity in the State Forests in Poland, 2010-2015

Source of finance	Expenditure, thous. euro					
	2010	2011	2012	2013	2014	2015
Self-financing						
Forest districts' own resources	3,220.46	5,117.22	5,296.11	5,677.15	6,556.85	6,687.92
Forest Fund	20.84	36.37	19.01	213.46	527.84	563.25
Internal funds - total	3,241.30	5,153.59	5,315.12	5,890.60	7,084.69	7,251.17
External financing						
State budget	5.40	0.00	0.00	0.12	0.00	5.25
National Fund for Environmental Protection and Water Management	189.44	127.18	61.98	127.62	11.97	16.71
Province Fund for Environmental Protection and Water Management						
Province Fund for Environmental Protection and Water Management	282.00	373.30	339.73	478.91	341.30	352.76
Other sources	241.35	135.45	153.69	438.23	403.33	284.02
External funds - total	718.20	635.93	555.39	1,044.88	756.59	658.74
TOTAL	3,959.50	5,789.52	5,870.51	6,935.48	7,841.28	7,909.90
Expenditure per one participant of education (EUR)	2.37	2.88	3.02	3.39	3.62	3.64

coming from this fund in individual years varied from 19.3% to 53.6% of the total external financing. The highest percentage was recorded in 2011 (58.5%) and 2012 (61.2%). The contribution of the state budget was marginal as regards external financing; in 2011-2012 and 2014, it did not provide any financial support at all.

Based on the analysis, we can say that over the period in question, the expenditures on nature-forest education were growing every year, as regarded both the forest districts' own resources and external financing. On the one hand, the expenses were incurred to fulfil the statutory obligation as regard forest education; on the other hand, it was a reaction to the growing demand for this type of public goods. Operational activity is a commonly available good, provided to the society free of charge.

In 2010-2015, the overall number of people who took advantage of various forms of forest education reached over 12 million, with the biggest increase (over 29% compared to the previous year) recorded in 2011. During the remaining years the average annual increase in attendance was 5.3% (Lasy Państwowe 2011, 2012, 2013, 2014, 2015, 2016a).

It is worth stressing that the growing number of people interested in educational activities as well as the rising social expectations in this respect cause gradual extension of the range of tasks performed as part of for-

sources of financing education in PFCs were of course the forest districts' own resources. It should be stressed that the general structure of financing this activity in these complexes does not significantly differ from what was presented earlier with regard to the sources of financing the State Forests as a whole. The only significant difference regarded the amount of expenditure calculated per one forest district. The average expenses of one forest district ranged from 633.61 EUR in the Bieszczady Forests PFCs (in 2012) to nearly 290 thousand EUR in the Barycz Valley PFCs (in 2014). Having taken into account the calculated values of the first quartile (Q1) in the studied years, it was stated that the expenses of ¼ of the PFCs, calculated per one forest district came to 10,734 EUR in the first year of study and to 17,762 EUR in the last year of study. The cost of the forest districts' educational activity certainly depends on the cost of maintaining and functioning of their infrastructure, including education centres and forest classrooms, forest canopies, educational paths and individual education sites. It also depends on the education participants' attendance rate, especially that the use of forest education is free of charge for visitors. From the economic point of view, it is important what the costs are when calculated per one education participant. The figures in Table 2 show that in 2010-2014, the costs tended to grow, except 2015.

Table 2. The sources of financing nature-forest education in the Promotional Forest Complexes in Poland

Source of finance	Expenditure, thous. euro					
	2010	2011	2012	2013	2014	2015
Internal financing						
Forest districts' own resources	1,317.43	1,937.29	2,075.05	2,082.88	2,725.52	2,393.00
Forest Fund	0,00	36.37	15.25	291.90	504.51	538.24
Self-financing - TOTAL	1,317.43	1,973.66	2,090.30	2,374.78	3,230.03	2,931.24
External financing						
State budget	0.00	0.00	0.00	0.00	0.00	0.00
Province Fund for Environmental Protection and Water Management	71.20	122.81	91.80	130.56	158.40	96.80
National Fund for Environmental Protection and Water Management	82.47	116.24	62.82	19.50	0.00	7.49
Other sources	37.05	47.86	81.55	207.64	154.85	54.45
External financing - TOTAL	190.72	286.91	236.17	357.69	313.25	158.66
TOTAL	1,508.15	2,260.57	2,326.47	2,732.47	3,543.27	3,089.98
Expenditure per one education participant, EUR	2.59	3.00	3.02	3.38	4.27	3.60
Forest districts' own costs per one education participant, EUR	2.26	2.57	2.70	3.58	3.28	2.78

est education. As a consequence, the expenditure on this activity is steadily growing as well.

In 2010-2015, the State Forests spent nearly 15.5 million EUR on the nature-forest education provided in the PFCs (Table 2), which made up 40.4% of all expenditure on this part of the State Forests' activity. The main

While analyzing the data concerning the forest districts' own resources spent on the nature-forest education of the general public (Table 2), it was observed that the factor which significantly varies the amount of the available funds is the number of the forest districts which form a PFCs. The data comes from annual Report

of the State Forests (Lasy Panstwowe 2011, 2012, 2013, 2014, 2015, 2016a). It is confirmed by the analysis of the ANOVA variance, which was conducted applying the Brown-Forsythe variance homogeneity test ($df = 2$, $p < 0.000$). In order to check the strength of the relationship between the studied variables, the correlation coefficient was calculated. The results of the analysis proved a statistically significant positive correlation of an average strength (0.273, $p = 0.001$) between the amount of financial resources and the number of forest districts.

As it has been mentioned before, the cost of nature-forest education provided by forest districts depends on many factors. A particularly significant one is their equipment with educational infrastructure, i.e. the core of the rich educational offer of the PFCs. Its maintenance, however, generates costs. Due to the role the PFCs play in the education of general public, they are more predestined to provide it than other forest districts. Currently, the PFCs run 34 nature education centres and 53 forest rooms. On top of that, there are 121 educational canopies, so called “green classrooms”, as well as 234 forest educational paths. Also, it should be stressed that the infrastructure listed above is supplemented with 529 forest education spots and 563 other educational sites. The above-mentioned infrastructure is not directly connected with the forest economy.

In order to check whether there is any connection between equipment with educational infrastructure and the forest districts’ own expenses on its maintenance, a correlation analysis was conducted. It showed a positive, statistically significant correlation between these two variables (Table 3). In the case of the education centres, the relation was strong and, in the case of forest education rooms, average. In the remaining cases, the correlation was weak.

We found out that the primary task of the PFCs is the nature-forest education of the general public, based on the data from annual Report of the State Forests (Lasy Panstwowe 2011, 2012, 2013, 2014, 2015, 2016a). The sites serving the purposes of this education are particularly suitable for tourist penetration. It is confirmed by the

Table 3. The analysis of the correlation between the forest district own resources spent on the forest education of the general public in Poland, the saturation with educational infrastructure and people's participation in education

Educational infrastructure	Infrastructure		Participation	
	Pearson's correlation coefficient	p	Pearson's correlation coefficient	p
Education centre	0.6193	0.000	0.4075	0.000
Forest education room	0.4867	0.000	0.6235	0.000
Forest canopy	0.2723	0.001	0.4082	0.000
Forest educational path	0.2575	0.002	0.3953	0.000
Forest education spot	0.1899	0.026	0.3168	0.000
Other education sites	0.2742	0.001	0.3194	0.000

attendance data (Figure 1). Over the studied period, one forest district in the PFCs was visited by on average 11.3 thousand people, while in other ones, which are not part of the PFCs, the attendance was nearly three times lower (3.4 thousand people). It is worth noting that the highest turnout of visitors was recorded in 2011. The presented data indicate an increase in the number of visitors year after year and in 2015 the number of visitors was more than 13.5% higher than in 2010. The average annual growth rate amounted to almost 3%.

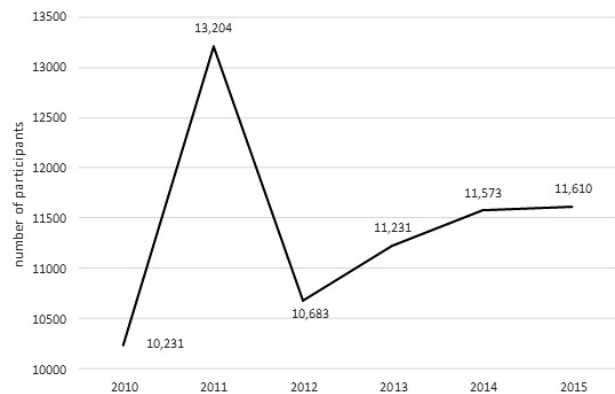


Figure 1. Participation in the nature-forest education of the general public, provided by the Promotional Forest Complexes in Poland, 2010–2015 – average in 1 PFCs

The analysis presented above shows that interest in the PFCs is growing year by year, but it depends on many factors. One of major determinants is the saturation with educational infrastructure (Table 3) and the degree to which it is used. This is the starting point for organizing various forms of education. In order to check people’s interest in individual forms of education and their participation, the authors conducted a detailed analysis of the data from 2015, using Pearson’s correlation coefficient. The results are presented in Table 4.

Considering the forms of suggested educational activities, it was established that most interactions took place during field classes. The PFCs employees organized other forms of education as well, such as lessons at

Table 4. Interest and participation in various forms of nature education in Poland

Forms of education	Pearson's correlation coefficient	p
Field classes	0.6519	0.000
Classes in a forest room	0.7866	0.000
School lessons	0.1732	0.408
Educational meetings outside school	0.4125	0.040
Forest competitions	0.2951	0.152
Educational campaigns	0.4963	0.012
Educational exhibitions	0.6396	0.001

schools, forest competitions, etc. The correlation analysis showed lack of significant correlation in the case of school lessons and forest competitions. Those results clearly pointed to the general public's considerable interest in forest education during a direct interaction with the forest, in the bosom of nature. The analysis certainly confirms the sense in preserving the PFCs as places where nature-forest education classes can be run in Poland.

Discussion

Economic, ecological and social functions, including the educational ones, performed by the State Forests in Poland, are related to their economic conditions. The authors of the article paid particular attention to some economic elements (sources of financing, costs, expenditure), which determine the forests' educational activity, run for the benefit of general public. Expenditure on forest education is the fulfilment of the statutory obligation to provide forest education, as well as the answer to the growing demand for this type of activity. The growth of social expectations as regards educational activities in forests causes gradual extension of the range of tasks performed by the State Forests as a part of forest education. This, consequently, results in a gradual increase in the expenditure on this activity. The financial outlays depend on the costs of maintaining and functioning of different centres, the available offer and people's participation in forest education. The main source of financing forest education are the forest districts' own resources and the Forest Fund, which are supplemented with external resources, such as the funds from the state budget, or the Environmental Protection and Water Management Fund.

As for the economic value of the PFCs, it consists not only of the costs of their functioning, but also the educational and recreational benefits for the society. In order to estimate these benefits, we may use a model of the cost of travel (Bartczak et al., 2008). Assuming that the average cost of travel of one forest education participant is 5.00 EUR, we obtain a stream of educational-recreational benefits for the economy worth over 4.3 million EUR net. The growing number of participants using the offer of the PFCs indicates that the benefits brought by the latter will increase even more in the coming years.

Conclusion

Over the studied period, the expenditures on nature-forest education were increasing from year to year, which regarded both the forest districts' own resources and the external financing. The State Forests in Poland are legally obliged to conduct business on the principle of financial

independence, according to which costs must be covered from own revenues. The conducted research confirmed the hypotheses set above in the paper.

It is worth pointing out that the growing number of people taking advantage of the educational activities and the rising social expectations are successively broadening the range of tasks performed as a part of forest education. This, in consequence, leads to a gradual increase in the expenditure on this activity. The State Forests also provided financial means for the nature-forest education in the PFCs, which is an original Polish idea for promoting educational forestry. Each year, more and more people are becoming interested in visiting the Promotional Forest Complexes, which results in the growing number of offers. They include different forms of education, e.g. school lessons, forest competitions, etc., but the most popular have been field classes.

Polish people take interest in nature and want to be close to it. An answer to this demand is the educational and tourist offer of the State Forests. The development of various forms of forest education, combined with different forms of recreation and rest in these areas may become an additional source of revenue for local society, as well as a way of promotion of the area.

In the case of this article, the point is to point out that apart from the profit-oriented economic functions generally accepted in forest activities, social functions that generate costs, but do not bring economically measurable revenues, develop more and more. This does not mean that there will be no such income in the future. For example, an important educational function of forests in Poland, the implementation of which requires rational financial outlays covered from the profit of economic activities of forests, plays a significant role in shaping the social awareness of the society. It causes the perception of forests as the value of the common good and the need to protect and care for it. Therefore, it can be assumed that in the future, as a result of educational activities and the positive attitude of the society towards the need to protect this common good, measurable economic effects will be achieved, which will at least partly compensate for the previously incurred costs of forest education.

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