

## THE DEVELOPMENT OF FOREST EDUCATION IN THE STATE FORESTS IN POLAND

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### Abstract

The article shows the problem concerning development of forest education conducted by State Forests in Poland. Forestry education, which is the part of the ecological awareness of society, bases on the broadly defined principles of sustainable development. „The society forest educational program in forest divisions” was implemented in Poland in 2004. To this day, based on data collected from all over the country, two reports were prepared, which are a collection of information about the development of educational activities in the units of State Forests. Basic assumptions of this program are carried out in forest divisions using various forms such as - field classes conducted mainly on the forest nature trails, lessons in the nature-educational centers and chambers of forestry education, classes with foresters in schools and others, such as - competitions, exhibitions and outdoor events were the subject area concerns the forest. The main recipients of content transmitted through the above mentioned activities are children and school children in age 7 to 15 (they constitute over 75% of the total number of participants in classes). Involvement in these forms providing information about the forest has increased by almost 30% (up to year 2006) since the beginning of the program. The base of facilities used in forestry education and the number of people qualified to carry out such activities also grows every year.

**Key words:** sustainable development, forestry education, forest, field classes, forest nature trails

### Introduction

Environmental education, and by the same forestry education, for sustainable development is a very complex process, which undoubtedly concerns all social and professional groups in each country. Instilling respect for the natural resources of nature, the ability to use them without damaging the ecological balance is one of the most important tasks facing especially the teachers of our young generation.

To fulfil the special conditions which it was created for, environmental education must be interdisciplinary and intergenerational. To its specific tasks should belong: awareness, informing, shaping attitudes, the acquisition of knowledge necessary to solve environmental problems.

Environmental education in the formal education system begins with starting pre-school education. Kindergartens in Poland are an important link in supporting parents in shaping the child's personality. Important place in this process should have environmental education, which aims, i.a.: the setting off desires and building skills to observe the nature, shaping the sensibility of both the beauty and the damage in the environment, and learning respect for other creatures.

At the stage of primary and secondary schools the aim for the entire school community – headmasters, teachers, students and their parents should be the use of the possibilities

contained in the core programs, in order to release and consolidate pupils needs to live in accordance with the ideas of sustainable development.

Environmental education in higher education should concern education aimed at introducing environmental issues in the future graduates of all colleges and universities. The scope of this training, its forms and compulsory should be treated in different ways. It is also important to create new courses, which prepare specialists to work in the field of environmental protection as well as the organization of postgraduate studies to complete knowledge in the field of environmental protection.

Because of above mentioned actions in recent years we can see how environmental awareness is growing among children and adolescents. However, in order not to wait for the results of our work for next few years, when our children are in positions of managing our environmental goods, it is needed also to arouse the interest of adults to acquire additional ecological knowledge in formal and informal education system. Special role in the development of environmental education among adults must fulfil the government structures. The best and quickest way to raise the adults ecological awareness is to commit a large number of residents in decision-making processes.

### Ecological Education in the State Forests

Long time since the foresters have been involved in environmental education of society. For several years, it is no longer a voluntary matter, because the State Forests set themselves the forestry education of society as a formal aim. Since that time there is a need to improve knowledge and skills in the education and promotion of forestry.

Recent years have been a period of hard work in the State Forests in the field of forestry education. It all began in 1997 when the Minister of Environmental Protection Natural Resources and Forestry accepted the document called „National Strategy for Environmental Education”, which was a consequence of the implementation of the recommendations of Agenda 21. As a result, environmental education, and thus forestry education, became a reality.

Directly in the State Forests education developed at the beginning of this century. In 2002 to the Forest Districts were sent questionnaires on the implementation of forestry education in those units (Order No. 41 of the Director General of the State Forests). In response, 440 questionnaires were received.

After analysis of the above mentioned surveys the series of trainings at the national level for forestry education leaders were organized. There were five meetings involving about 80 people. Training topics related to, i. a. methods and techniques of working for different age groups, creating environmental educational projects, ways of creating the image of the forester and the methods of seeking allies and sponsors of educational activities.

The team then developed a draft document ordering forestry education in the State Forests. The first is – „The guidelines for the development of forestry education in the society in the State Forests”. This document is a hierarchy of specific tasks and assigns them to the relevant administrative levels of the State Forests, i.e. , the Forests Districts, the Regional Directorates and the Directorate General of the State Forests. The second document is a „Forestry education program in public the Forest Districts”. This document establishes the framework for the creation of a special forestry education program for the Forest Districts, which include:

- Minutes of the commission meeting concerning public forestry education

- program in the Forest Districts;
- Characterization of the natural forest of education;
- Forestry education facilities;
- Partners in forest education;
- Educational publishers in the Forest Districts;
- Annual plans of educational activities;
- Annual reports of educational activities;
- A summary of educational activities in the Forest Districts for the past 10 years.

Both of these documents came to the practice by the Director General of the State Forests Decree No. 57, in May 9th, 2003.

As a help in the implementation of the regulations the team has developed „The manual for forestry education”. This publication is in the form of thematic books. Booklets contain, i. a. history of forestry education, instruction of creating the educational path, the instructions of the forest classes, the topics of classes in the forest, etc.

### The development of forestry education in the State Forests

Based on data collected in surveys in 2002 and a report of educational activities in the State Forests in 2007, a huge progress in the field of forestry education in the State Forests is seen.

In public education attended:

	Year 2002	Year 2007
Forest manager	67	360
Deputy forest manager	123	348
Forest supervisor	158	384
Specialist, department manager	457	1055
District forest manager and deputy	1411	4678
Ranger	34	468
Forest trainee and other	139	272

The data from two reports shows that the largest group of forestry educators are the District Forest Managers and their deputies. A major contribution to forestry education are also specialists, department managers and forestry technicians. This situation derive directly from the structure of employment in the State Forests as well as the generally accepted principle that District Forest Managers „attend” forestry education in schools territorially belonging to their Forest Districts.

Worth noting is a fact of large interest and

personal involvement of District Forest Managers, their deputies and supervision engineers in forestry education in the Forest Districts .

The survey in 2002 showed that, for forest education were created:

- 24 educational centres;
- 28 forest exhibition rooms;
- 65 educational classrooms;
- 20 reading-rooms;
- 369 educational paths;
- 140 permanent collections.

However, in the report of 2007 is already mentioned about 40 educational facilities, 235 forest exhibition rooms and 833 forest educational paths, and as more report shows the existence of 458 educational breezways, so-called green classes.

The report also gives information, that the Forest Districts collaborated with 7872 various schools in 2007. Schools and teaching environment is a natural partner in the educational activities of the State Forests. An offer prepared by the Forest Districts, often with the participation of teachers, here goes on fertile ground and directly in the demands of schools pursuing formal education, particularly in the natural sciences.

The most common form of forest education are field classes and tours in the forest with a guide (Fig. 1.). In this case, from forest ranger-guide is required not only the substantive knowledge, but also teaching skills. Lessons are

conducted using local educational facilities, mostly educational paths and the selected areas, such as nursery, an interesting stand, or nature reserve.

The educational activity reports show that outstanding are „lessons in the forest exhibition rooms“. This form of education is gaining importance, because in the past few years we can observe a dynamic growth of the number of forest exhibition rooms building in the Forest Districts and adapted to teach.

Another important form of forestry education are classes conducted by foresters in schools. Most of them are the lessons of nature, environment, or the biology of forest management topics such as the forest fire protection, nature conservation or management of forest resources, in Poland and the whole world. Sometimes, during the lessons foresters say about their profession and forestry work. In the whole country, in 2007, foresters conducted 4.9 thousand lessons in schools.

Mostly in primary and secondary schools. Participated students were nearly 217 thousand. Forest art, photographic, literature and natural-forest knowledge competitions are very popular among children and young pupils, as well as with their teachers and educators. An additional draw for the participants to this form of education are awards funded by Forest District, Environmental Protection Funds and other sponsors. These awards are usually books, but sometimes also group tours to the forest trail with forester.

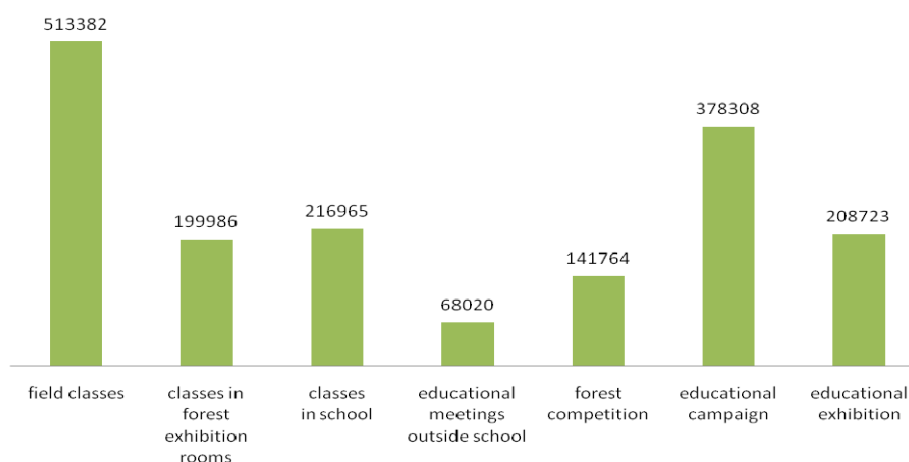


Fig. 1. Number of participants in each type of activities carried out in the State Forests

Impressive is also the total number of participants in all forms of forest education. In 2007 it exceeded 1,7 million, the majority were children and adolescents from primary schools

(7-12 years old) and high school students (12-15 years old) (Fig. 2.).

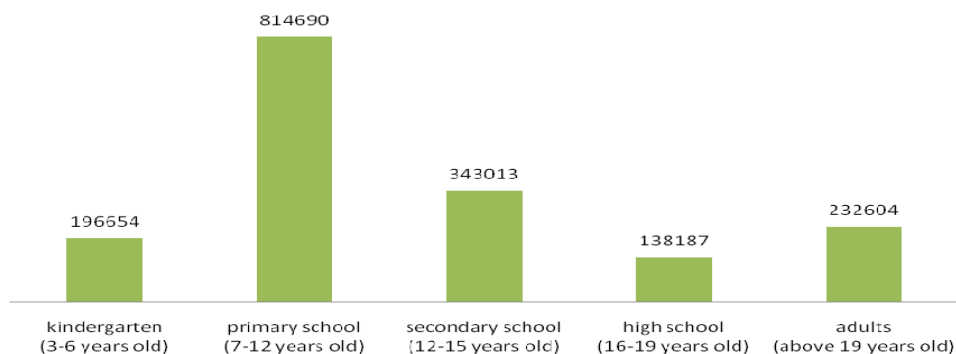


Fig. 2. Number of participants in forest education by age group

In addition, the State Forests has created over 2100 projects with media representatives and more than 2350 projects with other subjects (local governments, fire service, landscape and national parks, NGOs). The data contained in the reports shows that the vast majority of the Forest Districts collaborate with environmental education centres, landscape and national parks. In this case, we are often faced with a situation where several Forest Districts are working with the same subject, which in practice helps to maximize the educational effect. This situation also applies to cooperation with NGOs on environmental profile, which includes, inter alia, Eagle Conservation Committee, Polish Society for the Protection of Birds (OTOP), Forest Friends Association and Naturalists' Club.

State Forests undertook the organization of the following projects in year 2007:

	Number of undertakings	Number of participants
Educational meeting	1 901	68 020
Forest competition	1 374	141 764
Educational campaign	2 623	378 308
Exhibitions	473	208 723
<b>Other (fetes, fairs)</b>	<b>X</b>	<b>883 500*</b>

\* - estimated number

Significant share of the educational activities of the State Forests has 57 Forest Districts belonging to 19 Promotional Forest Complexes. Promotional Forest Complexes (PFC) are functional areas of ecological and social significance. Environmental education of society is one of the major tasks assigned to those areas since the beginning of their existence (1994).

The Forest Districts of the PFC are usually more „saturated” with educational infrastructure than the Forest District outside the PFC. This applies especially to the location of centres of

education, to a lesser extent, forest exhibition rooms, green classes and educational paths. At the average PFC' Forest District turnout of participants of education was three times higher than in other Forest Districts of the State Forests in 2007. This translated into a greater number of properly completed forms of education - outdoor activities (2,6 times), educational meetings outside school (2,7 times), lessons in forest exhibition rooms (6,4 times), educational exhibitions (5 times more).

To the forest education of the public in the PFC' Forest District is involved the same number of employees (average 18), as in the Forest District outside the PFC, but the „educational” posts in the State Forests (50-100% of the time working in education) are almost entirely in the PFC, and most are assigned to the centres of forest education.

In 2007, the State Forests spent on public education 15,7 million zł (1 euro = about 4 Polish zlotys), but the amount does not include salaries of staff involved in education.

Sources of income	Amount (thousands zł)	Share (%)
Prime costs of Forest District	11 731,1	74,5
Forest fund	499,2	3,2
National budget	1 661,3	10,6
Provincial Fund of Environment Protection and Water Management	1 346,9	8,6
National Fund of Environment Protection and Water Management	95,5	0,6
Other sources	401,6	2,5
<b>Overall</b>	<b>15 717,0</b>	<b>100,0</b>

From the State Forests' financial amount spent on educational activities in 2007, it was funded primarily:

1. the creation, maintenance and equipping of educational centres in PFCs, forest exhibition rooms, forests paths and other educational facilities,
2. purchase of teaching materials and resources to carry out forestry education, including tables, publications, equipment for observing nature, audiovisual equipment,
3. preparing and printing its own educational publishers - folders, guides and maps.

Directly in the educational activities of society are involved: the Forest Cultural Centre in Goluchow (240 thousand participants in various forms of education), Kostrzyca Forest Gene Bank (over 3400 participants of education) and the State Forests Information Centre. There is also a huge number of publications bearing the logo of the State Forests: „Hope is green”, „Forests in Poland 2007”, „Manual for forest education”, „Voice of the Forest” and „Forest Echo”.

#### **Forestry Education in the Forest District statistically**

From the calculations based on data contained in the reports of the educational activity emerges a picture of the average - in terms of statistics - educational Forest District of the year 2007. On average 16 employees each Forest District is committed to the public forestry education. The forest education uses primarily the forest educational paths. Other usable facilities such as nurseries, seed stands and conservative stands are commonly used for educational purposes. Also natural sites not directly related to forest management, such as nature reserves, parks and dendrological gardens. More than half of the Forest Districts (235) has its own forest exhibition room.

In year 2007 in various forms of forestry education organized by a Forest District participated more than 4 thousand people. These were mainly school children and adolescents aged 7 to 15 years (67,1%). Participants often used field classes and trips with a guide. Many educational events organized within the Forest District, such as Clean Up the World or Earth Day were also very popular and drew up many people. The statistical Forest District conducted in that year 32 field lessons, involving a total of 1,2 thousand people. Forest District staff conducted 13 classes in their own forest

exhibition rooms for 464 persons and 11 lessons in schools for 503 students. In addition, four lectures were delivered at a forum of self-government, or at a rural meeting for 158 auditors.

Forest District has prepared three forest competitions (natural science, art), and each of them attended an average of 103 people. In addition, it organized or co-operated with organizing of six educational events such as Earth Day, Clean Up the World, and winter feeding animals, etc. In one such action were involved an average of 144 people. Statistically speaking, each Forest District mounted an exhibition of drawings, paintings, photographs, exhibits, etc., which was visited by an average of 441 people.

In other forms of natural-forest education organized by the Forest District (for example, stands at the fairs and festivals, mushroom hunting, consultations with writing research papers) attended by more than two thousand people.

The statistical Forest District cooperated in 2007 with 18 schools, with two, rarely one environmental NGO. Every second Forest District cooperated with landscape or national park.

In order to promote events, education and knowledge of the forest every Forest District maintains contacts with one or two local newspaper editorial boards, and two of every three Forest District cooperate with the radio station and television station.

#### **Regional Directorate of Zielona Gora as an example of forestry education**

Regional Director in Zielona Gora imposed an obligation on all Forest Districts in RDSF Zielona Gora to run public forest education, with particular emphasis on children and adolescents. Accordingly the foresters are required to appoint from among the Forest District staff a person responsible for conducting education at Forest District, which also will participate in internal training courses to raise their skills in this regard.

The task of public forest education is carried out in RDSF Zielona Gora, through:

1. Leading a continuous (annual since 1997) and common, to all Forest Districts, forestry educational campaign called „Spring without a flame” (educational project), in which foresters allies in the campaign are: the State Fire Service, representatives of the Church, local

- government, teachers and the media.
2. Operating in the PFC „Bory Lubuskie” the „Nature-Forest Education Centre” with regional range, operated by the forester and the educator. This Centre leads in region in terms of public forest education. Here are held annual meetings of educational leaders from all Forest Districts and trainings for them, as well as workshops for teachers organized jointly with the In-service Teacher Training Centre in Zielona Gora and other outside educational activities for society and inside, for foresters.
  3. Organization of natural-forest paths. Above name is used, because in addition to knowledge about the forest and forester's work, they represent the local values of nature, often local attractions, historic landmarks. In each Forest District exists, at least one and often two or more paths. To those paths are compiled guides that also serve as promotional materials of forestry. It is worth stressing that in order to finance the construction of paths, foresters cooperating with municipalities and local sponsors.
  4. Forest Districts run their own competitions and education - promotional events, aimed to the schools in their area, such as competition for pupils „We learn the forest”, jointly organized by Nature-Forest Education Centre and schools of Zielona Gora, „Live in harmony with nature” which has been organized jointly with the Forest District Zielona Gora and Primary School nr15 in Zielona Gora, „Forest Youth Games” organized by the Forest District Swiebodzin for all the schools in their area, etc.
  5. For the each school there is assigned a forester, whose task is continuous cooperation with the managing and organizing education.
  6. Implementation and emissions of films dealing with forestry, nature and distribution of video cassettes to all schools in the area of Regional Directorate at the State Forests (RDSF).
  7. Working with schools in the organization events with a national range, as the „Clean Up the World”, „Earth Day”, „Holiday of the Tree”, „Clean forest”.
  8. Distribution to all schools and institutions selected journals „Explore the Forest”, „Forest-Human-Future”, „Polish forest”.
  9. Constant cooperation with the In-service Teacher Training Centre in Zielona Gora in the yearly (since 1999) trainings and workshops for foresters and teachers, raising their knowledge and skills in the matter of natural-forest education of children and adolescents, using the educational infrastructure created by the foresters in the woods of RDSF Zielona Gora.
  10. The cooperation agreement with the University of Zielona Gora was signed by RDSF Zielona Gora, by which student activities are carried out in the field. Also a list of thesis carried out in the Forest Districts for the coming years was developed.
  11. Constant cooperation with the Provincial Fund for Environmental Protection and Water Management in co-funding educational projects.

#### **Forestry education - ideas for the future**

Although forestry education is well-conducted by the State Forests, there still is a need for the development. It should begin in integrating it into the core program for polish schools. In the regulation of the Minister of National Education of 23 August 2007 regulating the core curricula, there is not even the word „forest”, and further more environmental education itself is to be conducted only from the fourth grade of elementary school. To begin the changes in that regard, Forest Friends Association has created a draft of proposed changes to the „Act of forests”. This project defines in detail the forestry education as a „set of actions for the education of children, adolescents and adults, and teacher education and training, designed to take into account the forest subject area in the teaching of nature, biology and environmental education”.

The opportunity to develop forestry education are also forestry education programs, prepared by District Forest Managers for 10 years under a forest management plan. Partial annual plans that are a part of those programs, regard to the construction, expansion and management of forestry education sites and preparation of forestry educational projects.

It is important that plans were created after an earlier examination of the needs and expectations of the schools and to verify their implementation. Valuable helpers in the right satisfying the educational needs may be methodological advisors who can activate an experience intellectual potential of the foresters in the field of forestry education. The use of educational facilities should be also improve. These objects are often used in an appropriate way, since knowledge about the capabilities of the infrastructure is inadequate disseminated among teachers.

The forestry education in schools in large urban areas requires special support. Reaching the teachers in large cities and to acquaint them with the existing educational offer requires the establishment of the metropolitan teams of experts, to work where the representatives of the State Forests and methodological advisors will be invited. There should be organized field classes for teachers, especially from large cities, showing the practical possibility of using the database of State Forests, in particular for the purpose of the Green Schools. A requisite condition for use the State Forests' infrastructure by metropolitan schools is to assist in obtaining funds to carry out outdoor activities, in particular, to cover transport costs.

It should be stressed that such a dynamic development of forestry education is made possible by excellent cooperation with other institutions. This cooperation is valuable and we should care for its development, and what is most important, this cooperation offers the ability to create and implement innovative programs conducive to the diversification of form and content of forestry education.

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