

FOREST EDUCATION PROGRAMMES PROPOSED BY THE FOREST NATIONAL ADMINISTRATION-ROMSILVA IN PARTNERSHIP WITH SPECIALIZED UNIVERSITIES AND OTHER STAKEHOLDERS (Ist PART)

Seghedin Georgeta *, Timofte Adrian Ioan **

*National Forest Administration-Romsilva, str. Petricani, nr.9A, București, România, e-mail: georgetaseghedin@gmail.com

**University of Oradea, Faculty of Environmental Protection, 26 Gen. Magheru St., 410048 Oradea;Romania, e-mail:adi_timofte@yahoo.com

Abstract

The paper addresses forest education programmes proposed by the Forest National Administration-Romsilva (FNA- Romsilva) in the context of the increasingly acute loss of biodiversity in all forms (genetic, ecosystemic, habitats and landscapes) by promoting the acquisition of a national forest consciousness.

Key words: forest education, awareness, sustainable management, standing crop, biodiversity, target group

INTRODUCTION

Given the current pressure of various non-governmental organizations on the loss of biodiversity in general and forests in particular, corroborated with the general public's misunderstanding of how forests are managed (some of which benefited after the 1990s of the laws of abusive forest restitution, not understanding that the momentary benefits offered by the wood from the forest affect its entire ecosystem in the future), the National Forest Administration (NFA) - Romsilva aims to enter into partnerships with stakeholders from academia, pre- university education and various environmental NGOs in order to develop educational programs for all age groups, in order to acquire a long-term forest awareness.

The general **purpose** of these programs is: to promote the specific activity of NFA-Romsilva (the only administrator of the state forest fund - 48% of all forests in Romania) and the role of forestry staff in ensuring the continuity and sustainable management of the national forest fund.

The activities proposed within the programs have the role of information, raising awareness of the public of various age groups - transferring knowledge to all social and professional categories, focusing on: the role,

functions and importance of Romania's forests, on the ways in which each citizen can benefit and contribute to their conservation and growth.

The general objectives pursued in the elaboration of the educational programs are: (O1.) the transmission of the information in order to acquire knowledge about the forest and the way of its administration; (O2.) forming a proactive attitude towards the forest as an ecosystem and developing a responsible attitude of civil society towards the environment; (O3.) carrying out practical *indoor* and *outdoor* activities to set the knowledge and develop the skills of the target audience.

MATERIAL AND METHODS

In order to develop these programs together with the above- mentioned stakeholders, it was necessary **to plan and carry out some steps**. These consisted in:

- identifying the partners with relevant results in the field of environmental education, from

the following areas of the civil society: school environment (forestry colleges), academia (Transilvania University of Braşov, “Ştefan cel Mare” University of Suceava; University of Oradea; University of Craiova), NGOs (WWF, Propark, Ecoassist, etc.) ;

- concluding partnership agreements and elaborating, in collaboration with partners, long-term educational programs, with the establishment of the topics to be developed. The main topics addressed are: what is the forest?, the role and functions of the forest, sustainable forest management and the role of the forester, established forestry techniques (care and management of stands, treatments), forest regeneration, stages of forest development, forest nursery - forest seedling reservoir, biodiversity conservation (virgin and quasi-virgin forests, protected natural areas, Natura 2000 sites);

- organizing four working meetings with the stakeholders and the working group set up at

the level of Forest Administration on the forestry education direction.

Once the educational programs have been developed, they must be implemented. The following steps will be considered as a **working methodology**:

- training of the personnel within the forestry directorates that cooperate with the target groups related to each educational program;

- concluding partnerships with school inspectorates/schools/ children's palaces, museums, local authorities, NGOs, etc .;

- drawing up a calendar of activities; contacting target groups; ensuring the logistics related to the activities (necessary facilities, transport, audio-video equipment, etc.);

- preparation of teaching materials (power-point presentations, short videos, cartoons, colorful images, stories, riddles, curiosities, etc.) in addition to the existing ones (e.g. Ecological education manual from Lunca Muresului National Park (N.P.) (www.luncamuresului.ro) and from Piatra Craiului N.P. (www.pcr.ai.ro), the Forest Education Manual elaborated by Vânători-Neamț N.P. (<https://vanatoripark.ro/>) etc.); presentations, conferences and Q&A sessions on various topics, interactive games, contests, hobby and craft workshops, book presentations, documentaries, debate sessions and other *indoor activities*; excursions on thematic routes, guided field visits to various objectives (trout farms, pheasant farms, plantations, stands, nurseries), practical demonstrations (how to plant a tree, how to exploit it), interactive actions, team games, competitions, workshops, summer schools, educational camps, therapeutic bathing in the forest (forest bathing) etc. and other *outdoor activities*;

- involvement in field volunteering actions with forestry specialists; monitoring the quantifiable results from both a quantitative (number of activities, meetings, etc.), and qualitative point of view (feedback questionnaires, development of partner network);

- dissemination of the results in the local media and in social networks, as well as the allocation of a budget at the level of forestry directorates in order to implement forestry-educational activities.

Following the organization of the four working meetings by NFA-Romsilva with all the

interested parties mentioned above and the consultation with them, the internal working group set up at the level of NFA-Romsilva on forest education proposed the implementation of the following educational programs:

Programme 1 - Little friends of the forest (addressed to the target group - kindergarten children);

Programme 2 - Let's get to know the forest! (target group – primary school pupils, grades 0-IV);

Programme 3 - Discover the universe of the forest! (target group – gymnasium pupils, grades V-VIII);

Programme 4 - Be active in the forest! (target group – highschool students, grades IX-XII);

Programme 5 - Be trained in the forestry field too! (target group - non-forestry students);

Programme 6 - Empowering local communities with forest (target group - local communities / forest owners);

Programme 7 - Raising awareness of forest-free local communities on the role and importance of the forests (target group - forest-free local communities).

RESULTS AND DISCUSSIONS

The desired **results** from the application of these programs are:

- *Training the future generations to know general notions about forestry and to understand the role of the forester in ensuring the continuity of the forest;*
- *Promoting the forestry professions;*
- *Involvement and support of local communities (NFA-Romsilva = reliable partner).*

The structure of an educational program is given below:

- **Programme:** Px
- **Target group:**
- **The objective:**
- **General skills:**

- **P1-P5:** learning, informing, skills and competences, raising awareness, involvement, curiosity;

- **P6:** informing, creating awareness, change of attitude and responsibility for the values and natural resources held.

- **P7:** raising awareness within the forest-free local communities with real possibilities (available land, support and openness from local authorities) on the importance, role and management of the forest (forest vegetation outside the forest fund.)

- **Planning of activities and result quantification**
- **Allocated budget/Financing**
- **Secondary skills:** What to do? What to feel? What to know?
- **Allocated time:** from 25 minutes-
- **Topics 1, 2, 3 ,,,,,,**
 - Objectives: 1, 2, 3
 - Examples of activities:
- **Identifying the human resources** needed to implement Px and establishing the responsibilities
- **Locations of Px.** Identification of pilot areas for implementation

- **Teaching methods and materials used**
- **Establishing the messages** to be transmitted to each target group category.

One of the educational programs addressed to high school students is presented in detail below (Seghedin, 2019).

Name of the program: **P4 - Be active in the forest!** (presentation of the Romanian Academy at the International Symposium - *Forests and Education. The activity of foresters in the development and defense of forests - a means of education in the spirit of respect for the forest*, 2019, Bucharest)

Target group: high school students (IX-XII) mature enough to get involved and participate in volunteering activities specific to forestry, to be correctly informed and to promote fair forest values on social networks, and where they have uncertainties about information in the online / media environment, to ask certain questions and to know where to look for the correct information.

Main competencies: learning, informing, skills, raising awareness, involvement, curiosity.

Table 1

Secondary competences

Secondary competences	
What to know?	What to do?
<ul style="list-style-type: none"> - the role and functions of the forest; what is a trophic network; - forest regeneration, how a forest is formed; - elementary forestry techniques (exploitation, regeneration, care works); forest nursery - reservoir of seedlings for the forest; - the role of the forester in the sustainable management of the forest; - recognition of forestry professions (forester, forest technician, forestry engineer); - the importance of forest protection, conservation and continuity; - types of forests and their geographical distribution, the succession of forest vegetation; the history of the forests in the area; - biotic and abiotic factors that intervene in the forest life 	<p>To spend more time in nature / forest, to get involved and participate more in forestry volunteer actions, in communication sessions, to become a volunteer forester / ranger for a day, to know how to plant correctly.</p> <p>To correctly promote forest values on social networks, and where there are uncertainties on the information in the online / media environment, to take an attitude, to ask questions and to know where to look for the correct information.</p>
<p>Allocated time: maximum 40 minutes for actions that take place in the classroom (presentations, games, trips).</p>	
<p>Examples of activities: thematic camps (3 days), summer schools, competitions.</p> <p>For example, in the program called FORESTER FOR A DAY! the following actions will be considered:</p> <ul style="list-style-type: none"> - explanation of some basic notions of forest orientation, how to organize a forest district (F.D.), - explaining the content of forest management maps, the conventional signs on the map and their materialization in the field (limits of F.D., plots, subplots, boundaries, etc.). - practical demonstrations with the direct involvement of students: how to plant, species recognition, species assessment and inventory, - detection of pests / other causes leading to tree disease, - food administration to species of hunting interest, - plantation maintenance and natural regeneration, - inventory of standing and rough converted wood, etc. <p>At the end of the day, the students will exchange impressions and be awarded with a diploma <i>Forester for a day!</i> - signed by the director of the F.D. (forestry directorate).</p> <p><i>The students can also be easily co-opted in the sanitation and reconditioning of the tourist routes, through which they will interact directly with the forest, taking responsibility for it.</i></p> <p>The programme CLEAN FOREST! - 1 day - consists in sanitation and reconditioning / arranging tourist routes; volunteer rangers patrols for a day, afforestation actions</p> <p>Other activities: monitoring the bark beetles, medicinal herbs workshops, etc.</p>	

One of the programmes carried out by NFA-Romsilva since 2011, is the international competition -Young People in European Forests (YPEF). This is the most important interactive forestry education competition in Europe. (<http://www.ypef.eu/>, www.rosilva.ro), whose main objective is to raise awareness and educate the young generation on Europe's natural heritage, biodiversity conservation and sustainable forest management. In Romania, the contest is organized under the patronage of NFA - Romsilva in collaboration with the Ministry of National Education and is addressed to high school students aged 14-19. The competition involves indoor and outdoor activities, orienteering, reading a map, species recognition, treasure hunting, measuring a tree using a stick of a certain length, cubing a tree, etc.

It takes place in teams of three students and has three stages: at county (organized at the headquarters of forestry departments), national (organized at one of the national or natural parks managed by NFA-Romsilva) and European level. The winning team at the national level will take part in the European contest which is usually organized in one of the European Union countries participating in this competition. More details can be found on the page www.rosilva.ro and on the facebook page of the YPEF contest at www.facebook.com/Concursul-International-YPEF-Tineri-in-padurile-Europei.

CONCLUSIONS

Given the great popularity of the implementation of the program - *Youth in the forests of Europe* since 2011 to date by NFA-Romsilva, in conjunction with other educational activities implemented over time, it was found that young people show involvement, curiosity in acquiring new knowledge in the forestry field. It can be concluded that the future implementation of these educational programs can only have a positive impact on the acquisition of a long-term forest awareness.

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