



# BioTopic

## Exploring Forest Ecosystems in Armenia - Environmental Education in Armenian Schools

### Background

Forests are highly important ecosystems for our economic and social wellbeing. They provide us with precious timber, wild fruits and vegetables, mushrooms and medicinal herbs. Furthermore forests play a major role in the reproduction of clean water for drinking as well as for the irrigation of fields. Forests balance the local and global climate, filter the air from dust and produce oxygen. The roots of the trees prevent soil erosion, avalanches and rock falls.

GIZ-Sustainable Management of Biodiversity Programme (SMB) launched the "Exploring Forest Ecosystems in Armenia" Campaign in order to promote the high value of forests as well as importance of environmental education in Armenia. For the second time a countrywide Environmental Education (EE) campaign was implemented in close cooperation with the RA Ministry of Education and Science (MoES) and the RA Ministry of Nature Protection (MoNP) aiming to familiarize children and teachers of Armenian schools to outdoor ecological activities using new pedagogic techniques. Strong support was received from the National Institute of Education (NIE) and its regional branches.

Launched in the context of the United Nations' "2011-International Year of Forests", the campaign was implemented in more than 150 secondary schools throughout Armenia and directly contributed to the fulfilment of the "Resolution of the RA Government on Approving 2011-2015 Action Plan Based on the Concept Paper on the Establishment of a Comprehensive and United National System of Environmental Education, Development and Awareness".

The focus of the campaign was to explore forest with the means of special pedagogy, which helps to experience it with all senses in order to raise deeper interest in forest and nature. Pupils become acquainted with the forest not only by looking at it but also by smelling, hearing, tasting and grasping which increases the students' motivation and is a good supplement to theoretical lessons in nature science. Forest education leads to a comprehensive understanding of nature and thus is important for people of all ages.

### Objectives

The overall vision of the campaign "Exploring Forest Ecosystems in Armenia" is to educate 9-15 year old school children in practical ecology

and raise awareness about forests as important and precious ecosystems. The young generation should become familiar with forest plants and animals, know them by name, get to know their peculiarities, and learn about their ecological relationships. Consequently the main objectives of the campaign were as follows:

- Create a model for practical environmental education and outdoor activities for secondary schools in forests;
- Get acquainted with the biodiversity of forests and their ecology and develop an understanding of forest ecosystems;
- Raise awareness about the importance of forest ecosystems and develop a strong feeling of responsibility and ownership among the young generation.







## Implementation of the campaign

More than 150 science teachers signed up voluntarily to support the campaign upon its announcement early 2011. A training module on how to practically experience the ecology of forests with secondary school students has been designed by an international specialist on environmental education. All enrolled teachers participated in a 3-day training on how to conduct school excursions in nature and how to explore forests with motivating pedagogic methods. The participants of the teachers training received methodological materials and practical guidelines to use in the upcoming excursions with their classes. Effective environmental education can be attained by most immediate experience and by personal action. There is no better place for this work than directly in the nature. Therefore, children got involved in the practical exploration of biodiversity and organized excursions to the woody areas and forests of their communities to search and identify soil creatures, get to know the types and age of trees, play joyfull games and get involved in other research-based activities. To further motivate and inspire the children, the GIZ-SMB Programme announced a "Forests are Precious Ecosystems" competition for the campaign participants.

## Results

With the "Exploring Forest Ecosystems in Armenia" Campaign in 2011, GIZ-SMB together with its partners developed and successfully tested a second model for outdoor environmental education in Armenia. 131 trained teachers from all parts

of Armenia participated in the campaign with their school classes and eco-clubs involving more than 2000 pupils. The students got enrolled in adventurous actions of exploring forest biocenosis and ecosystem functions. Children learned about fauna and flora of forests, their ecology and the environmental services forests provide to our society. They especially analyzed invertebrates living in the forest soil layer, and got instructed how to discover and interpret animal traces. The students conducted experiments on how to measure the height of trees and examined plant transpiration. School classes carried on the forest campaign in numerous related environmental events and initiatives, such as special theatrical performances and movie makings about forest ecosystems, visits to state reserves and dendro-parks of Armenia.

School classes all over Armenia guid-

ed by their teachers have thoroughly analyzed and reflected the useful ecosystem services Armenia's forests provide. As a result, 35 school classes and eco-clubs have submitted a huge variety of self made artworks, posters, essays, collages, photography, stories, power point presentations and films. Out of all these submissions a jury consisting from biologists, forest and environmental education specialists selected the best works for an exhibition and named the 5 teams who won the competition.

The tradition of organizing EE campaigns every year has gained cordial and enthusiastic reception and caused great motivation among school children and teachers all over Armenia. They are continuously gaining a better understanding of the importance of biodiversity for our well-being and the need to use natural resources sustainably.



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