



Exploring Biodiversity of Rivers and Streamlets in Armenia – A Model for Environmental Education

Background

“Exploring Biodiversity of Rivers and Streamlets in Armenia” is a country-wide Environmental Education (EE) campaign designed by the GIZ-Sustainable Management of Biodiversity (SMB) Programme. It was implemented in close cooperation with the RA Ministry of Nature Protection (MoNP) and the RA Ministry of Education and Science (MoES). Launched in the context of the United Nations’ “International Year of Biodiversity” in spring 2010, the campaign was implemented in more than 100 secondary schools throughout Armenia and directly contributed to the fulfilment of the National “Strategic Program for Ecological Education”. In the successful efforts to implement this project, all participants rallied behind the campaign’s core message: “Rivers are living ecosystems. Like blood vessels they drain the whole country. Their ecological state reflects the healthiness of Armenia’s environment!”

“These activities helped us to see simple waters with different eyes – with the eyes of researchers. This is very important.”

*Kristine Khanoyan,
7th grade pupil, sec. school № 1
of Jermuk town, Vayots Dzor*

“I wish that initiatives like this one are organized frequently, since they make our childrens’ everyday life more interesting.”

*Narine Zaqaryan, parent of a
pupil from sec. school № 29,
Gyumri town, Shirak*

Objectives

The overall vision of the “Exploring Biodiversity of Rivers and Streamlets in Armenia” campaign was to educate young people and raise awareness about rivers and streamlets as living ecosystems. The aim was to reach and inspire 9-15 year-old children and young members of eco-clubs to get enrolled in an adventurous action - exploration of riverine biosphere and evaluation of water quality. The intention was to help the children build up tight emotional connections with nature, as well as to encourage them to become real environmental protectors and advocates.

The main objectives of the campaign were as follows:

- Create a model for practical environmental education in secondary schools;
- Raise awareness about rivers and streamlets as living eco-systems;
- Teach and actively involve children

in the analysis of their environment and, therefore, develop a strong feeling of responsibility and ownership for their surrounding environment;

- Gain an overview on water quality of rivers and streamlets in Armenia.

Implementation of the campaign

In preparation for the practical phase of the campaign, RA science teachers attended a special training which focused on the methodology of biological water monitoring and environmental pedagogy. The participants received methodological materials, practical guidelines and equipment for use during the upcoming eco-excursions with their classes. The GIZ-SMB Programme announced a “Rivers – Living Ecosystems” competition for the campaign participants. As a result, children got involved in the practical exploration of biodiversity and water assessment initiatives. School-classes and eco-clubs organized excursions to rivers and streamlets of their communities to search and identify micro-invertebrates, which served as bio-indicators for determining the quality of the examined water bodies. Children enjoyed participating in the campaign, and, especially, in the playful outdoor activities organized throughout the summer of 2010.



Following the practical assessments, competition participants submitted their comprehensive water analysis results (accompanied with art-work). These were evaluated by an invited jury which selected the winners.

Results and Outcomes

At the example of the presented biodiversity campaign, a model for practical environmental education based on outdoor activities has been elaborated and effectively tested in the RA secondary schools. A total of 120 teachers and eco-club trainers from all parts of Armenia were trained on the methods of biological water examination and modern environmental pedagogy. Over 100 school-classes and seven eco-clubs, numbering 1200 students in total participated in school excursions during which they performed water monitoring assignments. In addition, youth willingly participated in numerous related environmental events and initiatives, such as summer eco-camps and the FPWC organized "Green Bus" project in which a bus toured Armenia's remote regions to promote biodiversity of rivers and other environmental issues. A model for the EE in Armenia was introduced and tested, which main accomplishments were:

- Development of a teachers' training (including a field guide for macro-invertebrates living in rivers, comprehensive instruction on how to assess water quality with school-children, playful pedagogic approaches for familiarizing children with nature and biodiversity);
- Training of 120 teachers and eco-club trainers.

"This is a model of a new form of education - a bright example of integrated teaching. It gave students an opportunity to carry out small scientific analysis through independent research work and make conclusion based on their own experience. This is a harmonic example of ecological education and upbringing, which leads towards the formation of ecological culture. We express our sincere gratitude to the GIZ-SMB Programme for this unprecedented project."

Dolores Ghapantsyan, Biology teacher of Yerevan's "Yerevak" Educational Complex

A competition was announced and successfully concluded, during which:

- Children's teams analyzed water quality and established the ecological state of rivers and streamlets in their surroundings;
- Reports of water quality assessment in more than 200 sites all over



Armenia were submitted;

- The received results reflect the actual ecological condition of rivers and give a general impression of the quality of Armenia's river systems.

In combining both, practical field-work with theoretical (academic) knowledge received in the class-room, students were able to develop a strong and sustainable perception of nature. Furthermore, this initiative increased the efficiency of biology lessons and created a better understanding of the importance of biodiversity for our well-being. The need to use natural resources sustainably was emphasized during different events undertaken within the scope of the "Exploring Biodiversity of Rivers and Streamlets in Armenia" campaign 2010.



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