IWRM Action Hub

CASE STUDY

Slovakia: Expedition of Liptov – monitoring of environmental quality in the Vah river basin

Summary

To improve monitoring and management of river basins in Slovakia, a project was initiated among secondary school students with the objective to attract the attention of youth and local communities to the protection of the river basin. The key lesson drawn from this case study is that linking education activities and local communities campaigns are effective tool for public participation.

Background

The case is geographically situated in the Vah river basin (sub-basin of Danube River), that is the longest river in Slovakia (403 km) covering a catchment area of 15,075 km^2. The upper region of Vah basin (approximately 80 km) is called Liptov and includes 3 larger towns of Liptovsky Mikulas, Ruzomberok, and Liptovsky Hradok and 78 small villages. The number of inhabitants in Liptov region is more than 130,000. The Liptov region is famous of thermal and mineral springs, beautiful High Tatras Mountains and several areas of high protected natural fauna and flora biotopes. It is called as tourist paradise due to numerous forests, ski resorts, open lakes, and unique caves. River network of the Liptov comprises tens of small local flows that end in Vah River. It is obvious that the quality of Vah river is influenced by many actors, starting with big industrial polluters (pulp and paper industry, machinery industry, electro technical industry, chemical industry) and ending with agglomerations that discharge waste waters directly into the river without (or primitive) treatment. Beautiful scenery of river basin is also damaged by unsensitive actions of farmers, low public awareness, and ignorant behaviour of local citizens. In addition, positions of public administration to environmental protection are rather politically declared

than really implemented. All these factors result in illegal dumps, leakage septics, liquidation of forests in river side, inappropriate agro-technical procedures, and “canalization” of river meanders.

Actions taken

The Civic Association TATRY initiated and organised the project that aimed to attract attention of young generation towards environmental problems in Liptov region, thus is the region where young people live. The project was called "Expedition of Liptov" and was focused on basic and secondary school students who conducted the practical monitoring of a selected river basin during the summers of 2002 and 2003 (each of 36 days of monitoring). Through young people, local communities were mobilized to improve the quality of river basin. The project was supported by the Regional Environmental Centre (REC) grant under the program of the Danish Ministry of Environment and Energy and the British Department of International Development.

The terrain monitoring consisted of practical monitoring of chemical and biological parameters of water quality. In addition, the terrain research included mapping of localities of invasive plants, illegal dump yards, and status of bank covers impacted by river flows regulations.

The monitoring results were evaluated in the support of environmental authorities in order to develop a comprehensive set of documentation. It was very important to teach students how to interpret the results of site monitoring. In addition, following promotion activities were conducted in order to fuel the mobilization of local communities:

- 1,000 pieces of “analytical papers” were disseminated to representatives of local governments and citizens
- Public hearing on monitoring results
- Publishing of monitoring results at local media and web pages
- Photo exposition with tour under the title: “Flows are not sewers” (this slogan in Slovak language is a rhyme)
- Distribution of 40,000 posters on water protection themes distributed to local households
- Initiative “Adopt your River” encouraged people to “adopt” the length of river; certificates of the adoption were sold and money collected was used for the environmental promotion
- Production of T-shirts “RiverWatch” – riecna hliadka
- Publication and dissemination of education material “River as living organism” that was distributed to 800 schools in Slovakia
- Organization of 19 education seminars
- Organization of painting contest “River – Live and Dead”.

Outcomes

The results of the monitoring were processed and recorded with the support of environmental teachers, water experts, and environmental authorities. The results of monitoring were very surprising for local communities that did not pay any attention in the past.

Pollution recorded was in parameters ammonium, nitrites, nitrates and phosphates. The pollution comes mainly from agricultural activities. A detailed description of agricultural practices was provided based upon the on-site observations: dung holes without any permeable walls, unregulated pasture of cattle, household septics ending directly in river flows.

Alarming outcomes were obtained from the observation of country side characteristics. It was documented that gradual technocratic regulation of river flows and melioration activities in agricultural sites do not correspond with the forecast of development of water resources in investigated region.

More than 250 illegal dump yards were determined. The existence of invasive plants (Fallopia japonica, Fallopia sachalinensis, Solidago canadensis, Heracluem mantegazzianum and others) was ascertained in 90 localities.

All results were submitted to the environmental inspectorate and other public environmental and municipal authorities. The environmental inspection is now using the monitoring data in planning of inspections in selected operators and waste water treatment plants.

Importantly, there are also outcomes with respect to education purposes of the Expedition Liptov. Students learnt why selected chemical parameters are important for the classification of water purity. Also, which types of river organisms indicate good or bad status of water. Impacts of environmental pollution were directly demonstrated from the observations of country. Students understood the importance of biological diversity. Also, they could practically see what are the functions of bank vegetations that protect the soil from the erosion. All the knowledge was received in “active” learning and self-observation. The successful project resulted in the initiative of local communities: more than 700 people agreed to clean up the river banks. During the 5,600 hours of voluntary work it was filled more than 1,400 bags of litter. Several other activities are now initiated dealing with the nature protection, removal of illegal damps, biotopes research, revitalization of villages, and others. Also, the project resulted in the establishment of so-called “River coalition” that grouped together different stakeholders in impacted localities. The main mission of the River coalition is promoting water protection based upon the approaches of integrated water resources management.

Lessons Learned

Practical monitoring survey supported the environmental education and students better understand the water cycle and water pollution in a complex way.

“Project” learning is attractive and brings face to face experience.

Linking education activities and local communities campaigns are effective tool for public participation.

Concept of IWRM is better explained when allow for practical experience of stakeholders.

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Related IWRM Tools
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