Umwelt Bundesamt

AAP Advisory Assistance Programme

German Environment Agency

Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety

PROJECT INFORMATION

Hydrobiological methods to determine the ecological status of rivers in Bulgaria

Updated: September 2026



Macrophyte sampling at a mountain stream in Southwestern Bulgaria

Source: Maria Avramov

Background

Water in sufficient quantity and quality is an irreplaceable basis for life on Earth and, as such, for human existence. Water bodies should therefore be understood as habitats in which ecological processes take place that have to be stabilised or restored. To improve the ecological status of water bodies, the Water Framework Directive introduced several instruments which must be implemented and enforced within an ambitious timetable, including the monitoring of surface water quality by using hydrobiological methods.

Project details

Implementing authorities face the challenge of providing appropriate working facilities and sufficient personnel for the hydrobiological monitoring, while ensuring a smooth monitoring process across relevant entities. This project focused on how the monitoring of phytobenthos, macrophytes and macrozoobenthos can be efficiently implemented with limited staff capacity while fulfilling all necessary quality standards.
A visit to a laboratory in Germany as well as several online consultations facilitated an intense professional exchange with German experts. Joint sampling trips in Bulgaria and taxonomical trainings provided an opportunity to discuss methodological challenges and to practice the rapid and reliable identification of difficult-to-determine indicator organisms. Based on the obtained insights, improvements to working conditions were initiated, including the procurement of new microscopes and of an up-to-date taxonomic software. The improved exchange of information among the involved laboratories in Bulgaria has increased work efficiency and is now being continued with new formats on the laboratories' own initiative.

Project country: Bulgaria
Duration: 02/2020 – 09/2026
Beneficiaries: Executive Environment Agency, River Basin Directorates of the Ministry of Environment and Water
Implementing entities:
Jens Kroker
Dr. Maria Avramov
Dr. Claus Orendt
Saxon State Operating Company for Environment and Agriculture
Dr. Ariane Nowak
Project number: 133742

Thematic management:
German Environment Agency (UBA)
Dr. Jens Arle
Tel.: +49-340-2103-2511
jens.arle@uba.de

Project coordination:
AAP Project service unit
Katarina Lenz
Tel.: +49-340-2103-2243
katharina.lenz@uba.de

Advisory Assistance Programme (AAP) for environmental protection in the countries of Central and Eastern Europe, the Caucasus and Central Asia and other countries neighbouring the European Union – a programme of the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety

AAP Project service unit:
AAP-info@uba.de

www.uba.de/en/project-database-advisory-assistance-programme
www.uba.de/en/advisory-assistance-programme