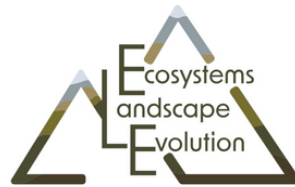




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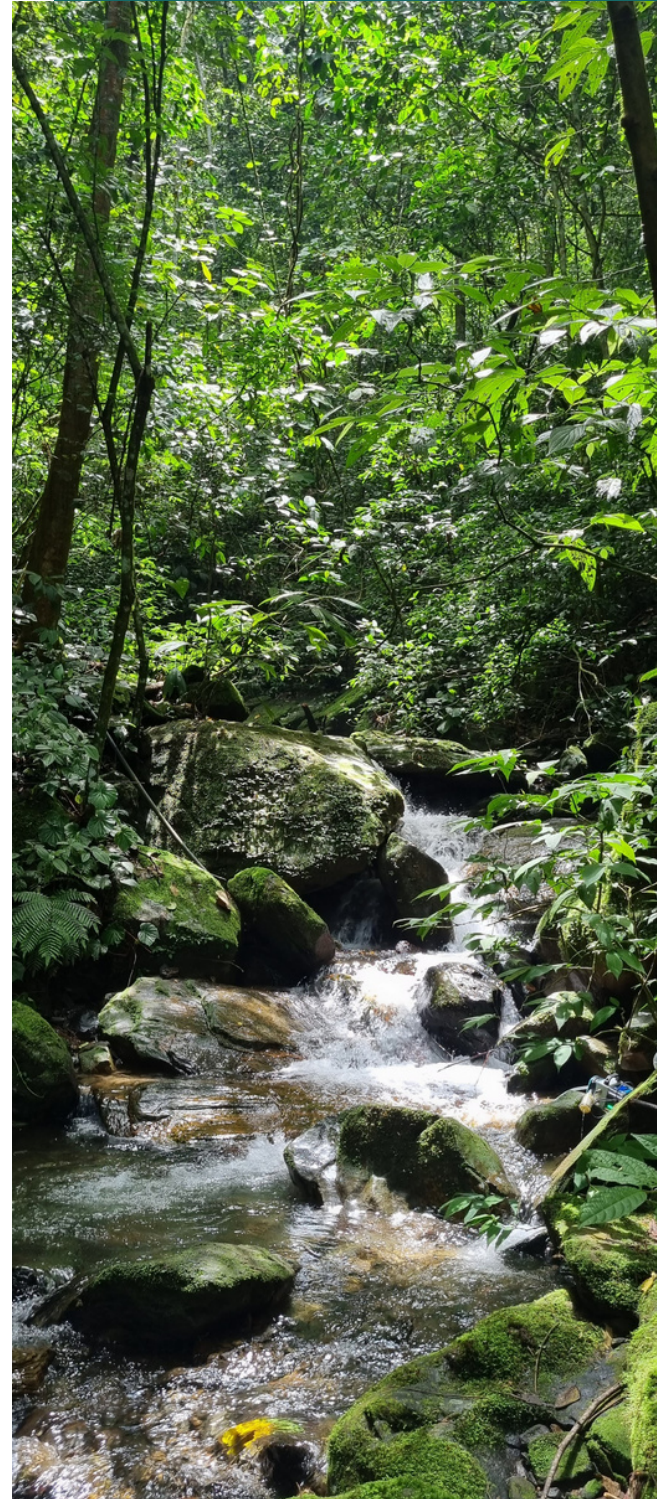
eawag
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INFRASTRUCTURE AND STANDARDS FOR SWISS-WIDE ENVIRONMENTAL DNA ANALYSES

Workshop
7 and 8 December, 2023
Spiez

The WSL Biodiversity Center is pleased to announce the forthcoming workshop “Infrastructure and standards for Swiss-wide environmental DNA analyses” that will take place on 7 and 8 December in Spiez. The goals of this workshop are to present an overview of eDNA tools that are ready for use and available to practitioners, and to write a white paper on best practices and recommendations for eDNA monitoring for use in Switzerland.

The workshop is organized by the Ecosystems and Landscape Evolution Group (ETH Zurich & WSL), the Rhizosphere Processes group (WSL), the Altermatt lab (UZH & Eawag), and the WSL Biodiversity Center (WSL). In addition to WSL and Eawag researchers, participants include representatives from government offices, NGOs, and other research institutions who work with eDNA monitoring or are involved in established monitoring programs.



Environmental DNA (eDNA) is becoming a more and more popular tool for biodiversity monitoring in soil, terrestrial, and freshwater ecosystems. In Switzerland, both cantonal and federal agencies rely on eDNA service providers to monitor invasive species and evaluate restoration projects. While eDNA is often described as a rapidly evolving field due to improvements in sampling processing costs and sequencing technologies, some methods are well-established enough to be applied by practitioners. There is a need to use standards when applying these methods for quality assurance given the increasing number of eDNA service providers and projects as well as to ensure the repository of samples and data toward future use.

AIMS

In this workshop, we aim:

- to work together with cantonal and federal agencies to assess their needs in terms of eDNA monitoring;
- to inform cantonal and federal agencies on the state of the science, maturity, and best practices for eDNA monitoring, focusing on tools that are ready to be used by practitioners;
- to brainstorm the potential application for complementary monitoring programs;
- to inform on the future accompanying role and services of Eawag and WSL;
- to write the outline of a white paper on eDNA best practices guidelines for government agencies.

The content of the white paper (aim 5) will be determined by the needs of the cantonal and federal agencies (aim 1) as well as the discussions held during the workshop (aims 2-4). Some potential topics that we anticipate including are sample sizes and study design, the quality of eDNA samples, and the variations in technique requirements depending on the type of organism. After the workshop, researchers from WSL and Eawag will continue to work on the white paper, with the goal of publishing it in 2024.



PROGRAM

The workshop will take place in Spiez (hotel Seaside). The first day will focus on presentations on eDNA tools and group discussions on the needs of government offices. The second day will be dedicated to synthesize the results of the first day and to write the outline of a white paper on best practices.

Participants are encouraged to stay for the duration of the workshop, but it is also possible to attend only specific days.

Day 1: Thursday 7 December	
9:30- 10:00	Arrival and registration
10:00 - 10:20	Welcome and introduction
10:20 - 10:50	Toward standardizing eDNA biomonitoring in Germany (Florian Leese)
10:50 - 11:10	Introduction to the eDNA workflow with an overview of the origin of the methodology with soil analyses (Aline Frossard)
11:10-11:30	eDNA metabarcoding applied to aquatic organisms (Florian Altermatt)
11:30-11:50	Recovering the eDNA of terrestrial organisms in rivers (Loïc Pellissier)
11:50-12:30	Q&A
12:30-13:30	Lunch
13:30-13:45	User input talk, good and bad experiences with eDNA
13:45-14:00	User input talk, good and bad experiences with eDNA
14:00-14:15	Results of the survey, what works and which further support is needed
14:15-15:45	Group work: discussion to deepen critical topics identified from the survey
15:45-16:15	Plenary: synthesis of the main points of the discussions
16:15-16:30	The potential services from Eawag/WSL
16:30	Apéro

Day 2: Friday 8 December	
8:30- 9:00	Presentation of the objectives of the second day and organisation
9:00 - 10:30	Brainstorm and writing session 1
10:30 - 10:45	Coffee break
10:45 - 12:30	Brainstorm and writing session 2
12:30-13:30	Lunch
13:30-14:30	Brainstorm and writing session 3
14:30-15:00	Wrap up and conclusions

MORE INFORMATION

If you are interested in participating, please scan the QR code to visit our webpage or contact:

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