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oekotoxzentrum
centre ecotox

One Health: Concept, case studies, challenges and implementation

Tuesday, 23 June 2026
Hybrid Course

Course description

The One Health concept is a holistic approach to improving and sustainably protecting human, animal and environmental health. It recognises that human, animal and environmental health are closely linked. Antibiotic resistance management, zoonoses and pandemic preparedness, climate change and environmental health are just a few examples that show how changes in one area can have direct or indirect effects on the others. In this course, we present policy drivers for implementing the One Health approach, such as the legal framework and guidelines in Switzerland, and the EU, particularly in the areas of food safety, animal health and environmental protection. We present case studies from interdisciplinary research initiatives that support the One Health approach, discuss the scientific challenges in implementing the concept, and introduce new approaches to risk assessment of biological and chemical stressors.

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09:00	*Welcome Coffee/registration*
09:30	Introduction
	Concepts and examples
09:40	One Health – what it is, for whom is it interesting *Salome Dürr*
10:00	Case study endocrine disruptors *Etienne Vermeirssen*
10:20	Case study antibiotic resistances *Helmut Bürgmann*
10:40	*Coffee break*
11:00	Case study PFAS *Lothar Aicher, Alexandra Kroll*
11:20	One Health in socio-ecological systems and its significance for toxicology *Jakob Zinsstag*
	New toxicological assessment methods
11:40	Animal-free ecotoxicological testing methods in the One Health context *Ksenia Groh*
12:00	Next generation chemicals and drugs: towards effective, safe, and sustainable products *Dario Greco*
12:20	Zebrafish: Link between human toxicology and ecotoxicology *Colette vom Berg*
12:40	*Lunch break*

Economic aspects and regulations

13:40	Life cycle assessment in the context of One Health – opportunities and limitations *Carlos Gomez*
14:00	Regulatory challenges in implementing the One Health approach *Lena Hehemann*
14:20	One Health in Switzerland: An Overview *Stephanie Mauti*
14:50	*Coffee break*
15:10	Panel discussion
15:40	Online survey about the course
15:50	Closing remarks
16:00	Apéro riche

Target audience
The course is aimed at professionals from industry, authorities and science who are interested in the 'One Health' concept and its current and future implementation.

Course participants will receive a certificate of attendance.
The documentation will be available for electronic download before the course. The course language is English.

Course leadership
Dr. Alexandra Kroll
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Course organisation
Brigitte Bracken
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Course fee
CHF 370.–
The price includes course fees, documentation, meals according to the course programme. Not included are overnight stays.

Registration deadline
Tuesday, 2 June 2026
Online registration under:
www.ecotoxcentre.ch/expert-service/continuing-education

Course location
Room C 20
Forum Chriesbach (FC)
Eawag, Überlandstrasse 133, 8600 Dübendorf
or online (link will follow)

Speakers

Dr. Lothar Aicher holds a PhD in chemistry and is a Swiss and Eurotox Registered Toxicologist. He works as a regulatory toxicologist at the Swiss Centre for Applied Human Toxicology. He has many years of experience in researching and applying alternative testing methods and in assessing the health risks of chemicals.

Dr. Helmut Bürgmann studied geoecology in Bayreuth and earned his doctorate at ETH Zurich on molecular biological methods for characterising nitrogen-fixing bacteria in soils. After a postdoctoral fellowship at the University of Georgia in Athens, he joined the Surface Water Department at Eawag in Kastanienbaum as head of the Microbial Ecology research group. Here, he and his group are investigating various aspects of the spread of antibiotic resistance in aquatic systems.

Prof. Dr. Salome Dürr is an associate professor and research group leader at the University of Bern. She is a veterinarian and epidemiologist with over 20 years of research experience in the field of zoonotic epidemiology, the application and theories of One Health, and the modelling of infectious diseases.

Dr. Carlos E. Gómez-Camacho is a scientist at the Technology and Society Laboratory (TSL) of Empa, with a PhD in Chemical Engineering and experience in academia, industry, and consulting. At Empa, he helps translating science into solutions for society by supporting the transition toward a more sustainable future through systems analysis and Life Cycle Assessment (LCA).

Prof. Dr. Dario Greco is Professor of Bioinformatics at Tampere University and the University of Helsinki. He heads the Finnish Hub for Development and Validation of Integrated Approaches (FHAIVE), a multidisciplinary research centre with over 30 scientists that focuses on the development of alternative methods for chemical safety assessment. He is the coordinator of the FIN3R network for promoting 3R principles (replacement, reduction, refinement) in biomedical research.

Dr. Ksenia Groh received her PhD from the University of Bern on the molecular effects of synthetic endocrine disruptors on fish. She currently heads the Bioanalytics Group at Eawag, Department of Environmental Toxicology. Her research focuses on mass spectrometry-based molecular analyses (e.g. proteomics) and the development of animal-free toxicity tests (based on the Adverse Outcome Pathways (AOP) concept), as well as their application in chemical risk assessment.

Dr. Lena Hehemann is a postdoctoral researcher at the Faculty of Law at FernUni Switzerland. She studied law with a focus on environmental law at the Universities of Dresden and Exeter (BLaw) and the University of Iceland (LL.M.) and completed her doctorate at the University of Fribourg on a topic related to animal testing law. In 2021, she was accepted as an Associate Fellow at the Oxford Centre for Animal Ethics.

Dr. Alexandra Kroll works in the Risk Assessment Group at the Ecotox Centre and is the contact person for microplastics. She completed her doctorate at the University of Münster on the toxicology of nanomaterials. Her areas of expertise also include aquatic biofilms and the authorisation of plant protection products and medicines.

Dr. Stephanie Mauti is a veterinarian, epidemiologist and public health specialist with over 15 years of international experience in One Health, with a strong focus on the surveillance and control of zoonotic diseases. She is currently the One Health Delegate at the Swiss Federal Office of Public Health (FOPH), within the Section for Emerging Infectious Diseases and International Cooperation, Communicable Diseases Division.

Dr. Etienne Vermeirssen heads the Aquatic Ecotoxicology Group and is Deputy Director of the Ecotox Centre. He obtained his PhD from the University of East Anglia on the topic of 'Reproductive physiology in fish'. He is involved in the standardisation of, for example, tests for hormonal effects and the evaluation of in vitro biotests. Another of his interests is passive sampling of pollutants.

Dr. Colette vom Berg is head of the Environmental Toxicology Department and group leader for Molecular Toxicology at Eawag. After completing her doctorate at the University of Zurich, she spent several years conducting research at the Max Planck Institute for Medical Research in Heidelberg. At Eawag, she focuses on neuroactive substances and their molecular mechanisms of action in fish.

Prof. Dr. Jakob Zinstag-Klopfenstein is a veterinarian with a PhD in tropical animal production. He is Professor of Epidemiology at the University of Basel and Deputy Head of the Department of Epidemiology and Public Health at the Swiss Tropical and Public Health Institute. His research group investigates the interface of human and animal health with the focus on the health of nomadic peoples and the control of zoonoses in developing countries.

Location plan

Public transport
From Zurich Main Station (HB) via Stadelhofen by S-train (S3, S9, S12) to Stettbach. From there about 20 minutes walk to Eawag (see map), or by tram No. 12 to “Am Ring” or by bus No. 760 to “Empa”.

From Zurich Oerlikon by train S14 to Dübendorf and then by bus No. 760 to “Empa” or walk to Eawag, about 20 minutes.

From Zurich-Airport by tram No. 12 to “Neugut” or “Am Ring” (about 20 minutes driving time).

Car
Motorway A1, exit Dübendorf, to the right towards Dübendorf, 300 meters after the major crossing turn left into the Empa Eawag Campus.

Eawag buildings	
FC	Forum Chriesbach (Reception)
LA	Laboratory building
FX	FLUX
VH	Experimental hall
NT	NEST
A	Akademie

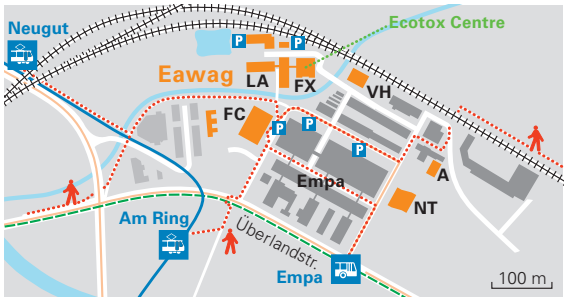

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Foto: Karin Beck and Helmut Bürgmann take water samples from the Dünnern river to test them for antibiotic resistances.