Welcome to the Eawag

Eawag: Swiss Federal Institute of Aquatic Science and Technology

Introducing the EAWAG

- Institution
- Action Fields
- Cross-Cutting Projects
- Eawag in Numbers

Focus of the Eawag

- **Eawag‘s main research subject is water.**

Understanding all aspects of water

on the chemical and physical levels

on the systems level

on the societal level

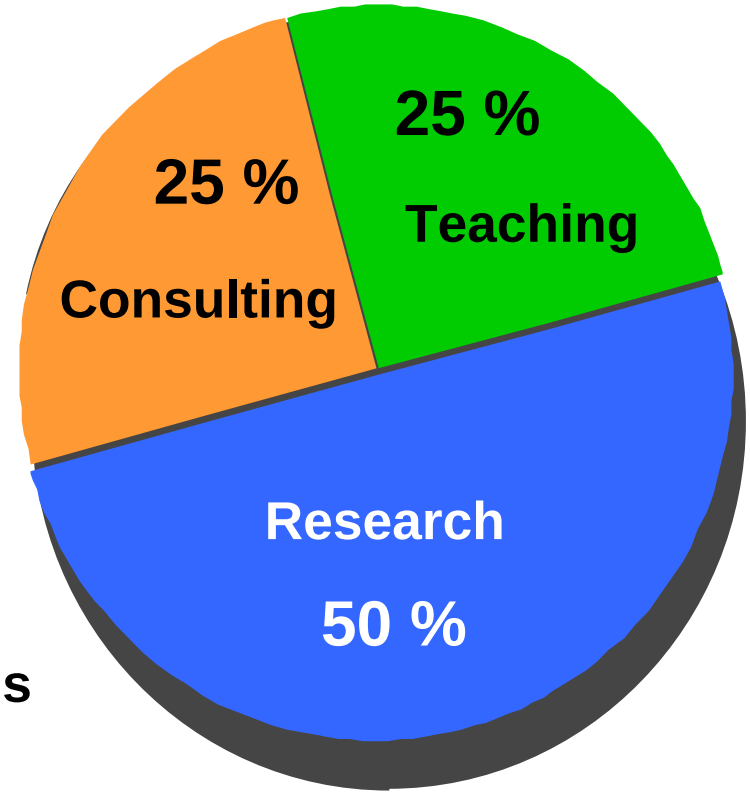
and interactions between these levels

Mission of the Eawag

- **To function as an interface between science and society (between research and practice)**
- **To develop concepts and technologies for sustainable and continually improved usage of water**
- **To harmonize ecological, economic and social interests for sustainable management of aquatic resources**

Activities of Eawag

- **Research on water and Development of problem solutions and sustainable technologies**
- **Teaching at universities**
- **Education of professionals**



- **Consulting to politicians, public administrations, commerce, environmental and industrial associations and the public**

Scientific Perspectives of Eawag

Complexity of subject as well as bridging function between research and practice requires several scientific perspectives:

- **Disciplinary Perspective** → Understanding fundamental processes in nature, technology and society
- **Interdisciplinary Perspective** → Understanding natural, technological and social systems
- **Transdisciplinary Perspective** → Assessment and evaluation of the interactions between humans and the environment. Development of problem solutions which include stakeholders.

Affiliation in the ETH Domain

- **Federal Government**
- **ETH domain:**

  ETH-Zurich, ETH-Lausanne,
  PSI, WSL, Empa, Eawag

Structure of the Eawag

Directorate
Directorate Staff

Research Departments

- Environmental Chemistry (UChem)
- Surface Waters (Surf)
- Environmental Microbiology (UMik)
- Applied Aquatic Ecology (Apec)
- Environmental Toxicology (UTox)
- Water Resources and Drinking Water (W+T)
- Limnology (Lim)
- Environmental Engineering (Ing)
- Fish Ecology and Evolution (FishEc)
- Urban Water Management (SWW)
- Systems Analysis, Integrated Assessment, Modeling (Siam)
- Water and Sanitation in Developing Countries (Sandec)
- Socio-Economy

Support Services

- Finances
- Human Resources
- Technical Services
- IT Services
- Library
- Apprenticeship
- Nursery

Action Fields

- **Urban Water Management**
- **Aquatic Ecosystems**
- **Chemicals and their Effects**

Action Field «Urban Water Management»

- **Drinking water supply:**
  - sustainable management of drinking water ressources
  - methods for drinking water treatment
  - methods for assessing the drinking water quality

- **Waste water treatment**
  - methods for waste water treatment
  - strategies for redirecting long-lasting systems
  - alternative concepts in waste water treatment

Focus on the requirements of both industrialized countries as well as of developing countries.

Action Field «Aquatic Ecosystems»

- Basic research in order to understand the relevant processes in aquatic ecosystems
- Stream rehabilitation (aims, measures, predictions, decision support)
- How to deal with direct anthropogenic affects (agriculture, hydroelectric power generation, pollution)
- Effects of global change on water ressources and aquatic ecosystems
- Watershed management
  (Integrated water management, assessment of yield/effort, prioritization of measures)

Action Field «Chemicals and their Effects»

- Risk assessment of chemicals
- Ecotoxicological evaluation of water and aquatic ecosystems
- Identification of critical regions and situations
- Identification of critical chemicals, products and applications
- Exertion of influence on public authorities, politics and industry

Cross-Cutting Projects

- **Tool for examining current and future problems regarding water resources and aquatic ecosystems**
- **Collaboration of different disciplines at Eawag**
- **Involvement of relevant players outside of Eawag (parties involved, consumers, experts, politics)**
- **Limited to 3-4 years**

Eawag in Numbers (Human Resources)

- **Employees:**
  300 scientists including 100 PhD students,
  75 technical and administrative employees,
  25 trainees

- **Disciplinary origin of the scientists :**
  70% natural sciences, 25% engineering,
  5% social sciences

- **Countries of origin:**
  65% Switzerland, 25% European Union, 10% other

Eawag in Numbers (Budget and Output)

- **Annual Budget:**
  45 Million SFr funds from federal government,
  10 Million SFr third-party funds

- **Output (annual average):**
  140 publications in peer-reviewed journals,
  25 PhD theses,
  9 certificated trainees,
  50 employees teach at ETH Zurich and other universities,
  Organisation of 8-10 courses and symposiums

Eawag Locations

Main Building
in Dübendorf near Zürich

Limnological Research Center
in Kastanienbaum near Lucerne

SWAT 2005 Conference

- **Local Organizers**

  Karim Abbaspour
  Karin Ghilardi
  Jing Yang
  Rosi Siber
  Jürgen Schuol
  Raghavan Srinivasan

- **Scientific Committee**

- **Conference**

  Applications (research, scenario studies, policy advice)
  Systems analysis, calibration, optimization
  Problems
  New features, future directions