

Seizing the opportunity: from damage-centred management to **integrating beavers** into nature conservation programs **for maximizing ecosystem services**



Beaver reintroduction in Switzerland has been **very successful**: the species is now well established in lowland areas of the country.

From being classified as «**threatened and nationally protected**», the species has evolved to being regarded as a «**conflictual animal, requiring management**».

Scientific evidence supports the **ecological advantages** of beavers and provides a robust foundation to advocate for a **paradigm shift** – beavers should not be seen merely as destructive rodents but as **key agents in the restoration of blue-green ecosystems**. In Switzerland, this shift is underway.

We identified **4 areas of action** in which we evaluated **existing tools** and **those still to be developed** to integrate beavers into national nature conservation programs. Those are **agricultural and urban areas, forests** and **hydraulic engineering project**.

Agriculture



In Switzerland, current **compensation tools for farmers** affected by beaver activity **lack long-term sustainability** due to strict legal constraints.

>>> Developing **agri-environmental schemes (AES) tailored to beavers** could offer a solution.

>>> Pilot projects already show that alternative subsidies can foster coexistence between agriculture and nature.

Beavers help advance environmental goals within agriculture

Urban areas



Beaver ponds attract people and **showcase dynamic biodiversity**. Urban blue and green spaces **improve air flow** and **cool the microclimate** – an effect vital for **climate change adaptation**.

>>> In urban hydraulic engineering projects, integrating beavers can help to create natural, species-rich wetlands and attractive recreational areas.

Beavers help improving quality of life by bringing back nature into the city

*Even in a very densely populated country like Switzerland, **space can be provided for rivers and beavers** – unlocking the full range of ecosystem services they provide. Recognizing their role brings **ecological, social, and economic benefits**: their natural engineering is often more effective than technical interventions, and it comes at «no cost».*



A beaver territory next to Switzerland's busiest railway line: the forest road was raised by one meter because of flooding. The beaver-shaped forest was designated a 50-year forest reserve, with full compensation for the owners.

Forest



Switzerland already designates **wet and flooded forests** as «**priority habitats**» that need to be promoted and recognizes **beavers as key ecosystem engineers** in their formation.

>>> A **mapping tool** (Dennis et al., 2024) can predict the distribution of beaver-created wetlands, and **special funding** supports the establishment of **forest reserves shaped by beaver** activity.

A lab to promote beaver acceptance

Hydraulic engineering project



River restoration often relies on mechanization and resource-intensive methods, but **nature-based solutions (NBS)** are **gaining attention**.

>>> Beavers help **restoring natural river dynamics**, boost **biodiversity**, improve **water quality**, support **carbon storage**, and increase waterbody **resilience**.
>>> They should be **key partners** in all **hydraulic engineering projects**.

Beavers restore water ecosystems in an efficient way and make them more resilient (and almost «for free» !)

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundesamt für Umwelt BAFU

The project was funded by the Federal Office for the Environment FOEN



This poster is the synthesis of a national research project. Several of its modules are presented during the 10th IBS :

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More information about the project and reports on this QR-Code

