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# Factsheet 0

## Summary and content



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*This factsheet summarises the purpose and procedure of the nationally standardised outcome evaluation for restoration projects. It also explains the structure and content of the practice documentation.*

## 0.1 Summary

**What is an outcome evaluation?** An outcome evaluation is used to investigate whether a restoration project which has been implemented shows the desired effects, i.e. whether the defined objectives have been met and the resources have been effectively deployed.

**What does the practice documentation offer?** From 2020, a standard framework is specified for the outcome evaluation of river restoration projects throughout Switzerland, comprising two elements – the STANDARD and the EXTENDED outcome evaluation. This practice documentation explains the procedure in detail and provides 10 indicator sets for field surveys. For lakeshore restoration projects, a standardised procedure is planned for the future.

**Why is a nationally standardised outcome evaluation needed?** In the future, thanks to standardised surveys, it will be possible to compare experiences from different projects and contexts. Moving from project-specific individual observations to a cross-project overview permits an improved, more generalised understanding of the processes involved and of the factors inhibiting or promoting the effectiveness of restoration projects. Findings from the outcome evaluation are to be translated into specific recommendations for action. As a result, future restoration projects should be even more cost-effective and make a substantial contribution to the preservation and promotion of indigenous biodiversity.

**What is the procedure for the STANDARD outcome evaluation?** The STANDARD outcome evaluation is designed to assess typical goals of restoration measures on the basis of a large number of projects. The canton determines which projects from the forthcoming Programme Agreement (PA) are to be included in the outcome evaluation. For these projects – possibly in collaboration with the consultancies responsible for outcome evaluation and the FOEN – it selects the most appropriate indicator sets. Various indicator sets are available, depending on the size of the project. The consultancies responsible conduct the outcome evaluations in accordance with the practice documentation – once before and once or twice after the implementation of measures, depending on the project size.

**What is the procedure for the EXTENDED outcome evaluation?** In parallel with the STANDARD outcome evaluation, further projects are selected by the canton, in collaboration with the FOEN, for the EXTENDED outcome evaluation. This is designed to answer specific practice-related questions on the basis of a smaller number of projects. Between 2020 and 2024, six indicator sets from the STANDARD outcome evaluation are to be determined for a sufficiently large sample of small watercourses restored 4–12 years earlier. In comparison with channelised control reaches, it can be determined to what extent the observed effects depend on factors such as restored length, shading, or the availability of refugia (for recolonisation).

**How is financing arranged?** For each PA period, an outcome evaluation budget is calculated through negotiations between the federal and cantonal authorities. This consists of a STANDARD and an EXTENDED budget. The STANDARD budget is determined using a fixed calculation formula on the basis of federal contributions under the current and the forthcoming PA, with a federal subsidy rate of 60%. The EXTENDED budget is negotiated with each canton prior to the new PA period. Compared to the STANDARD budget, it relies more on cantons' readiness to participate; in return, federal subsidy rates are higher (80%).

**What happens to the data collected?** Data from the STANDARD and EXTENDED outcome evaluations is submitted to the FOEN by the individual restoration project managers, using standardised entry forms. Centralised data storage is currently under development. Cross-project data analysis is performed centrally. In addition to data from the outcome evaluation, information on project characteristics from the implementation evaluation is taken into consideration, as well as other explanatory variables from existing geodata (e.g. agricultural land use or number of barriers in the catchment). The results are widely disseminated, and recommendations for action are formulated for future projects. The findings from the STANDARD and EXTENDED outcome evaluations facilitate learning from experience and continuous optimisation of project planning and implementation, thus ensuring effective deployment of resources. The collaborative learning process provides good examples, motivation and arguments supporting the case for restoration.

## 0.2 Structure and content of the practice documentation

The practice documentation sets out the procedure for the STANDARD and EXTENDED outcome evaluations. This documentation is conceived as a collection – i.e. the various factsheets and indicator set technical sheets form independent units (Table 0.1). This structure means that factsheets and technical sheets can be individually updated in the course of the learning process on the basis of experience and methodological refinements. The factsheets are designed to be comprehensible as far as possible in an interdisciplinary context. The technical sheets contain disciplinary explanations so as to ensure the reproducibility of surveys conducted by specialised consultancies.

**Table 0.1:** Structure and main content of the practice documentation and target readership for individual parts. Ct = canton, Cs = consultancy for outcome evaluation.

Where	What (title, main content)	Who
FS 0	<b>Summary:</b> Purpose and procedure of the nationally standardised outcome evaluation, and an overview of the structure and content of the practice documentation.	Ct/Cs
FS 1	<b>Restoration outcome evaluation – the key points in brief:</b> Goals of standardisation of outcome evaluation across Switzerland. Profile of STANDARD/EXTENDED outcome evaluations.	Ct/Cs
FS 2	<b>STANDARD outcome evaluation – procedure and organisation:</b> 10 indicator sets for assessment of goals. From project selection to field survey in five steps.	Ct/Cs
FS 3	<b>EXTENDED outcome evaluation 2020-2024:</b> Focus on small watercourses. Determination of six indicator sets from the STANDARD outcome evaluation. Five-step procedure.	Ct/Cs
FS 4	<b>Learning for future projects:</b> Collaborative learning opportunities. From centralised data analysis to development of recommendations for action in three steps.	Ct/Cs
FS 5	<b>Data management:</b> Principles for the capture, quality control, submission and storage of data collected in the course of outcome evaluation.	Ct
FS 6	<b>Financing:</b> Calculation of the outcome evaluation budget with two components (STANDARD and EXTENDED). Financing rates.	Ct
FS 7	<b>Development of the framework:</b> Background information on the development of the framework in the research project at Eawag.	Ct/Cs
FS 8	<b>From framework to field survey:</b> General information on field surveys and explanation of the structure of the indicator set technical sheets.	Ct/Cs
Set 1	<b>Habitat diversity:</b> Six indicators used to describe habitat structure and diversity. Prescribed for all projects undertaking an outcome evaluation.	Cs
Set 2	<b>Dynamics:</b> Three indicators used to characterise temporal changes in river bank and bed structures. Optional for large projects and individual projects.	Cs
Set 3	<b>Connectivity:</b> Two indicators used to describe connectivity between river and surrounding area. Optional for large projects and individual projects.	Cs
Set 4	<b>Temperature:</b> An indicator used to describe the spatiotemporal variability of water temperature. Optional for medium-sized or larger projects.	Cs
Set 5	<b>Macrophytes:</b> An indicator used to describe the species composition, cover and diversity of aquatic plants. Optional for all project sizes.	Cs
Set 6	<b>Macroinvertebrates:</b> An indicator used to describe the composition and diversity of the macroinvertebrate community. Optional for all project sizes.	Cs
Set 7	<b>Fish:</b> Three indicators used to describe the composition of the fish community. Optional for all project sizes.	Cs
Set 8	<b>Riparian vegetation:</b> Three indicators used to assess the composition and dynamics of riparian vegetation. Optional for all project sizes.	Cs
Set 9	<b>Avifauna:</b> An indicator used to assess the number and abundance of selected bird species (target species). Optional for large projects and individual projects.	Cs
Set 10	<b>Society:</b> An indicator used to assess acceptance of the project by the stakeholders involved in the planning. Optional for all project sizes.	Cs
	<b>Glossary:</b> Definitions of a selection of key terms.	Ct/Cs
	<b>References:</b> List of all sources cited in the practice documentation. References are not provided for individual factsheets or technical sheets.	Ct/Cs

### List of modifications

Relevant changes are marked in green.

Date (mm/yy)	Version	Change	Responsibility
4/2020	1.02	Correction of spelling errors, minor terminological modifications	Eawag