

## An overview over upstream fish passages past barriers in Norway

Sebastian F. Stranzl<sup>1</sup>, Ulrich Pulg<sup>1</sup>, Martin Enqvist<sup>1</sup>, Martine Bjørnhaug<sup>2</sup>

Email corresponding author: sest@norceresearch.no

ABSTRACT: The presentation provides an overview of the 2020 status of fish passages over barriers in Norway, using data from Miljødirektoratet's database. We examine the quality of the data and compare it with physical measurements in selected passages, focusing on their functionality, target species, and selectivity for species or size classes. In addition, we assess safe downstream passage where information is available.

The results reveal that most passages were built for salmon, even in water bodies where other species are abundant. Furthermore, a large percentage has reached the end of its lifespan and requires significant rehabilitation to ensure fish migration in Norwegian waterways in the future.

Furthermore, we demonstrate that fish passages can be evaluated quickly based on simple parameters. Finally, we present the latest fish passes constructed according to best practice guidelines for upstream and downstream migration. We focus on their performance, initial experiences during construction, and their effects on fish migration, as far as they are monitored.