

## **Executive Summary**

### **D2.2 Working basis of solutions, models, tools and devices and identification of their application range on a regional and overall level to attain self-sustained fish populations**

Deliverable 2.2 aims to report on the solutions, methods, tools and devices (SMTDs) used in the FIThydro project. The report is based on the analysis and the experience of the presently available SMTDs tested and applied in 14 FIThydroTest Cases and in lab investigations. The outcome with respect to SMTDs considers both a regional and a more overall focus. The deliverable consists of three parts: First a description of the SMTDs, second, a presentation of the work done and the results reached so far at the test cases, and third, a summary and a discussion including the identified knowledge gaps.

The Test Cases and the objectives investigated at each site were presented in deliverable 2.1, (submitted in October 2018). The activities at the Test Cases could be classified into 5 topics: Upstream and downstream migration, hydropeaking, turbine mortality and hydromorphology and habitat suitability. The progress of the activities at the various Test Cases differs from site to site and therefore the results available in spring 2019 are presented in this deliverable.

Finally, the deliverable closes with a summary and a discussion on the investigated 5 topics, namely: upstream migration, downstream migration, mortality through turbines, hydropeaking, habitat and hydromorphology. The surveys in D2.1 and the findings of D2.2 allowed to extract the appropriateness, constraints and limitation of the mitigation measures at Test Cases and in the laboratories; to deduce the range of application, accuracy and limitation of existing on-site monitoring tools and methods; and finally to identify the knowledge gaps and needs.

Full deliverable [download](#)

