D-HYDROFLEX

Demo # 4: Technical factsheet

Demo Title: Biodiversity Index Tool

Develop acoustic videos-based modelling and image processing algorithms to reduce the HPPs' impact on fish migratory species, minimizing their environmental impact and increasing their sustainability

Major Impact Factors:

- Increasing the HPP performance regarding hydropower production while lowering its environmental impact
- Using acoustic videos to detect and identify fish species, especially migratory species (eels, salmons, …)
- Providing information on the migration dynamic fish species
- Optimization of the fish protection measure

DEMO LEADER

EDF

"The Project will increase the knowledges of the dynamics of the fish migration by delivering numerical models that couple innovative sensors and digital models for the management of the hydropower production and the monitoring of plants' environmental impact." - Eric de-Oliveira, EDF

D-HYDROFLEX project has received funding from the European Union's HORIZON Research and Innovation Action under Grant agreement No 101122357

Funded by the European Union

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Technology Types:

- Acoustic videos/images
- Computer vision : automatic detection and fish species recognition
- Fish swimming analysis: solid deformable approach

Components:

- Eel Counter tool: a specific monitoring of the downstream migration of silver eels
- RecoFish Tool: acoustic videos analysis to detect and recognize fish species

Fields of Application:

- Fish protection: passage through the turbine during the downstream migration
- Definition of the fish protection measures
- Optimization of the HPP production

Expected Benefits:

- A sustainable hydroelectric production
- An operational monitoring tool of the fish migration
- Increasing the knowledges on the dynamics of the fish migration

Technology Readiness Level (TRL):

- Eel counter tool TR5→TRL7-8
- Recofish Tool TR5→TRL6

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