Scoping the Market for Fish-friendly Hydropower Technologies: Recent developments, future expectations

FIThydro Market Conditions Brief

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Hydropower remains essential to achieve Europe's climate commitments. At the same time, the sector must innovate to decrease its negative impacts on Europe's rivers and freshwater fish. This FIThydro Brief, written by Ecologic Institute's Hugh McDonald and Gerardo AnzaldÃºa, assesses the current and future demand for fish-friendly hydropower in Europe. It concludes that EU and national policy and economic developments offer a chance to innovate and address rising social and environmental concerns about hydropower's negative impacts.

Key messages

- Hydropower currently produces 36% of EUâ□□s renewable electricity. The European Green Deal, which supports economic development and decarbonisation, ensures that hydropower will remain a relevant source in the energy mix.
- However, increasing social concern about hydropowerâ□□s negative environmental impacts on free-flowing rivers, river ecosystems and natural fish populations, is translating into social resistance, shortened hydropower concessions, and other legal restrictions.
- Researchers and developers are making progress on innovative solutions, methods, tools and devices to reduce the negative impacts of hydropower on fish.
- Green finance and historically low interest rates create favourable conditions for hydropower investment in Europe, especially new technology uptake and environmentally friendly upgrades to existing plants.
- The current political conditions combined with increasing social awareness and demands create a favourable landscape for the uptake of innovative fish-friendly technologies â□□ but these will have to be validated, easy to use, affordable and scalable.

Fish Friendly Innovative Technologies for Hydropower (FIThydro)

The FIThydro project was a four year Horizon2020 research and innovation action (2016-2020). It focussed on investigating and developing cost-effective environmental solutions and strategies to avoid individual fish damage and to support the development of self-sustainable fish populations in Europe's rivers. FIThydro brought together 26 partners from 10 countries, involving several of the leading companies in the renewable and hydropower energy sector in Europe, as well as 13 test cases in four European regions (Scandinavia, France/Belgium, the Alps and the Iberian Peninsula).

The FIThydro Market Conditions Brief represents one of the final outputs of the project.

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Table of contents

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