SWEDISH CENTRE FOR SUSTAINABLE HYDROPOWER

Produktionspotential av reglerkraft och fiskpopulationer i framtidens älvar (**PORTFOLIO**)

Hydropower R&D days

Workshop, 11 March 2026

***Passage solutions for salmonids and other fish species**: Stress-testing today's environmental measures for an uncertain future*

Is today's knowledge and practice sufficient to guide the design of fish passage solutions that ensure long-term sustainable fish populations and maintain ecological function in future regulated rivers?

The purpose of the workshop is, through structured interaction between the audience and an expert panel, to critically examine whether today's knowledge, policy instruments and practical measures in regulated watercourses are sufficient and fit for purpose to achieve long-term functioning ecological systems under future uncertainties, particularly those linked to climate change, adaptive management and the goal conflict between environmental considerations and hydropower production.

Experts: Daniel Nyqvist (the Swedish University of Agriculture Sciences), Lovisa Lind Eirell (the Environmental Court, Östersund), David Aldvén (Vattenfall R&D), Anna Hagelin (the County Administrative Board of Västra Götaland), Olle Calles (Karlstad University)

Chair: Johan Watz (Karlstad University)

Statements to consider:

1. Current scientific knowledge of fish passages is sufficient to design effective fishways for most species
2. Fish passages that demonstrate high passage efficiency at the individual level will undoubtedly produce positive effects at the population level
3. Fish passage solutions implemented today will function as intended in 50 years even though climate change will alter flow regimes
4. All ecologically effective environmental measures in regulated rivers require some reduction in electricity production
5. Emphasis on fish passages has come at the expense of measures addressing flow and habitat restoration
6. Environmental measures are frequently implemented without sufficient monitoring, leaving uncertainty about its function
7. Lack of scientific knowledge is more often used to delay decision-making than to advance adaptive, learning-based management
8. The National Plan for Hydropower Permit Reviews (NAP) will be completed by 2045
9. By enhancing the planning of environmental measures, AI will help to resolve the fundamental conflict between ecological protection and electricity production
10. Current ecological status classification under the Water Framework Directive is adequate to support the long-term conservation of biodiversity