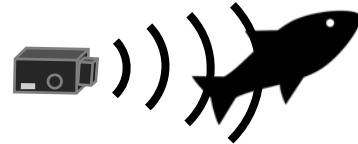


# High tech fish echo sounders – important tools for fish management or useless expensive toys?

## **Background**

The use of various advanced fish echo sounders for fish management purposes are increasing. However, echo sounder data quality have recently been questioned. Thus, before echo sounders can be fully implemented for fish management purposes, there is a great need of evaluation of their operational limits and calibration of their data output, as well as recommendations on in-situ placement and operation.



## **Schematic project outline**

Two Simsonar and possibly one Aris echo sounder will be deployed in River Vindelälven and River Byskeälven during the salmon migration period of 2018. In River Vindelälven, one Simsonar and one Aris echo sounder will be placed in parallel (collaboration with Vattenfall AB), adjacent to the outlet of Stornorrfor's fishway at which a VAKI fish counter is installed, allowing for analyses using the VAKI data as baseline. In River Byskeälven, a Simsonar will be placed just upstream a VAKI-counter at Fällfors. Byskeälven FVOF (fiskevårdsområdesförening) will be responsible for running the Simsonar in field at Byskeälven and to deliver data to the project. A data set from 2017 from River Byskeälven are already available for use in the suggested project. Once the echo sounders are retrieved from the rivers, data is analyzed in the form of number of fish passages and fish length per date and time. Passages per equipment (echo sounders and VAKI) can then be compared to answer questions such as:

- Do VAKI and echo sounders render similar number of passages?
- If not, are there patterns in the discrepancy and what factors are involved (e.g. counter placement, water flow, time of season etc.)?
- ...and ultimately, are echo sounders a useful tool in fish management?

## **Timeline**

May- June: deployment of equipment. October – December: data retrieval, data analyses and report writing.

## **Requirements**

Driver's license

## **Extent**

Preferably 60 credits, but 30 credits might also work.

## **Contact**

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