

Postdoctoral Fellowship: Hydrothermal impacts of water release on fish of the Nechako River, (B.C., Canada).

Project Description

As part of a research partnership established between Rio Tinto and four universities (Institut National de la Recherche Scientifique, École de Technologie Supérieure, University of British Columbia, and University of Victoria/Pacific Climate Impacts Consortium), a two-year postdoctoral fellowship is offered. The Nechako River is a relatively large impounded system in British Columbia. Rio Tinto currently manages water releases from the Kemano reservoir during the summer period to achieve set thermal targets downstream during the up-river migration of adult Pacific salmon. Juvenile and adult fish survival from several key fish species including sockeye salmon, chinook salmon, coho salmon and white sturgeon may benefit from the water release management strategies. Climate change is also affecting the hydrology and thermal characteristics of the river, which will also have effects on fish. As part of the research team, the postdoctoral fellow will work with hydrologist and climate modellers in collating several hydrothermal model scenarios, and with fish biologists/physiologists to obtain species and life stage specific thermal tolerance criteria. The ultimate goal will be to develop quantitative spatial models exploring how species- and life-stage thermal habitat will be affected by water release and climate change scenarios.

Planned start date

Summer 2021

Researchers involved in the project:

André St-Hilaire (INRS, Principal Investigator)

Richard Arsenault (ETS)

Colin Brauner (UBC)

Scott Hinch (UBC)

Francis Zwiers (UVIC/PCIC)

Scholarship

56000\$/year

Required profile

Undergraduate degree in science or engineering, with M.Sc. and Ph.D. in one of the following fields: Ecological/fish habitat modelling, hydrological modelling, fish ecology/physiology. Strong abilities in computing, statistics and programming are assets, as well as field and laboratory experience. Experience in the analysis/interpretation of hydroclimatic model outputs and climate change scenarios is an asset. Fluency in English is required. Fluency in French is an asset.

To apply

Please send the following to Professor André St-Hilaire (andre.st-hilaire@ete.inrs.ca):

- Cover letter
- CV
- Two recent publications

Location:

The project is managed at INRS (Québec City). However, the postdoctoral fellow could be located in Québec City, Montreal, Vancouver or Victoria. Some travelling for relatively short periods (less than three weeks) may be required. Initially, teleworking might have to be performed until public health restrictions are lifted.