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## Postdoctoral Scientist: Salmon Population Risk Assessment

*PCIC is seeking to hire a postdoctoral position in salmon population risk assessment.*

### **Pacific Climate Impacts Consortium (PCIC)**

The Pacific Climate Impacts Consortium (PCIC) was created to assess climate impacts in the Pacific and Yukon Region of Canada. The goals of the Consortium are to foster collaborative research, to strengthen the capacity to address regional climate change and variability, and to provide the scientific basis for policy development. PCIC is a regional climate service centre at the University of Victoria that provides practical information on the physical impacts of climate variability and change. Through collaboration with climate researchers and regional stakeholders, PCIC produces knowledge and tools in support of long-term planning. [www.pacificclimate.org](http://www.pacificclimate.org)

### **Challenge**

The changing climate in British Columbia (BC) is expected to affect various hydrological factors (e.g. flow levels, timing and temperature) pertinent to salmon growth, survival, and habitat connectivity. Therefore, in order to ensure the future protection and restoration of wild Pacific salmon and other BC fish stocks, it is necessary to understand how ongoing and future effects of climate change on the freshwater environment may affect salmonid habitats at regional and watershed scales. As part of a collaboration between PCIC and scientists from the Department of Fisheries and Oceans (DFO), the advertised postdoctoral position will contribute as part of a team to determine the climate-mediated vulnerability of salmon life history events that control their productivity in space and time. Work will involve an interdisciplinary effort to combine hydrologic modelling with salmon habitat risk/vulnerability assessment. The project is funded through the British Columbia Salmon Restoration and Innovation Fund (BCSRIF) (<https://www.dfo-mpo.gc.ca/fisheries-peches/initiatives/fish-fund-bc-fonds-peche-cb/index-eng.html>).

### **Nature of Work**

The Postdoctoral Scientist will undertake risk assessment and related research under climate change scenarios to characterize spatio-temporal risk levels at two life history stages (i.e. adult migration and egg-alevin incubation) for salmon conservation units in select BC drainages. This work will employ outputs of climate change projections of hydrological and thermal regimes to assess potential limits on the ability of salmon populations of wild- and hatchery-origin to sustain production or respond to restoration efforts among diverse BC watersheds. He/she will work at PCIC under the supervision of the Lead for the Hydrologic Impacts theme and will collaborate very closely with DFO scientists. PCIC offers a positive, supportive and collegial work environment that promotes collaboration and excellence. As a user and stakeholder driven organization, PCIC requires that candidates be flexible in order to adapt their research objectives to changing organizational and stakeholder priorities and needs.

### **Objectives**

The objectives of the position are to conduct research that seeks to accomplish the following:

- Explore, adopt or adapt methods that use coarse-scale process-based modelling approaches and/or finer-scale, GIS and regression-based statistical models to assess salmon life-stage vulnerabilities.
- Develop a region-wide, watershed sensitivity assessment for salmon.
- Map the relative risk that climate, hydrological and thermal regime changes pose for BC salmon.

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## Knowledge, Skills & Abilities

### Knowledge and Experience

- PhD in fisheries or aquatic sciences
- Experience with fluvial habitat or environmental flow assessments is desirable
- Experience in the development of risk assessment models is desirable

### Skill

- Excellent data analysis and visualization skills
- Excellent quantitative and statistical analysis skills
- Excellent communications skills

### Ability

- Work in a self-directed manner and within a team environment
- Ability to acquire, manipulate and analyze large spatiotemporal data sets
- Ability to find creative solutions to complex, open-ended problems
- A high level of productivity for peer-reviewed publications is expected
- Operate with a professional demeanor while representing PCIC outside the organization

### Employment period

3-year term commitment.

### Weekly working hours

Full time (37.5 hours per week)

### Pay rate

Commensurate with education and experience.

**Additional information:** Address enquiries to Markus Schnorbus at [climate@uvic.ca](mailto:climate@uvic.ca).

**Application:** Please send your application including a cover letter, CV, and three professional references to Markus Schnorbus, [climate@uvic.ca](mailto:climate@uvic.ca), with “**ATTN: Postdoctoral Scientist**” in the subject line. Please indicate whether you are legally able to work in Canada.

Review of applicants will start **immediately** and continue until suitable candidates are found.