Postdoctoral research position supporting the Canadian Open Alliance for Landscape Ecosystem Science on Climate Impacts and Ecosystem Services (COALESCES)

The CLIMB (Climate Land Impacts and Modelling the Biosphere) at Simon Fraser University and the Canadian Centre for Climate Modelling and Analysis, part of Environment and Climate Change Canada (ECCC), are seeking a Postdoctoral Fellow (PDF) for a fully funded five-year project.

Project description

Climate change is intensifying heat waves, droughts, floods, wildfires, and insect pest outbreaks in Canadian ecosystems, compromising vital ecosystem services such as carbon sequestration, water supply, timber and food production, and human well-being. There is an urgent demand, and current gap, for projections of climate impacts on Canadian ecosystem services over the 21st century. The central goal of COALESCES (Canadian Open Alliance for Landscape Ecosystem Science on Climate Impacts and Ecosystem Services) is to address this gap by advancing Canadian climate impact modelling capacity and knowledge mobilization among academic researchers, HQP, government, and public stakeholders. COALESCES will enhance the CLASSIC (Canadian Land Surface Scheme Including Biogeochemical Cycles) terrestrial biosphere model. To accomplish this goal, the COALESCES PDF will first advance CLASSIC by incorporating new forest disturbance processes and improved agricultural climate sensitivity to establish it as a climate impact model with the ability to capture multiple compounding stressors and unique specialisation in Canadian ecosystems. Second, the PDF, along with a part-time research technician, will develop shared computational infrastructure and training materials for the Digital Research Alliance of Canada's computing infrastructure in collaboration with the Collaborative Platform for CanESM (CP4C) and the emerging Can-Flux communities. Lastly, the COALESCES PDF will translate CLASSIC projections into high-resolution assessments and maps to support climate-resilient planning in partnership with climate services agencies.

Position description

The successful candidate will be based in Vancouver or Victoria, British Columbia and jointly supervised by Drs. Sian Kou-Giesbrecht (SFU) and Joe Melton (ECCC). Responsibilities include original scientific research and manuscript preparation focused on climate-sensitive forest disturbance (coupled wildfire/insect pest dynamics) and agricultural climate sensitivity modelling while assisting with coordination of ongoing developments in wildfire emissions, reforestation, sustainable forest management, and water routing and chemistry to establish CLASSIC as a climate impact model with unique specialisation in high-latitude ecosystems and the ability to capture multiple compounding stressors at high resolution within the pan-Canadian domain. In collaboration with ECCC, the PDF will develop knowledge transfer pathways to translate

CLASSIC projections into assessments and high-resolution maps of future C cycling, ecosystem services, and climate impacts to support climate-resilient planning in Canada. The PDF will additionally assist in liaising with collaborators and their graduate students, as well as coordination with the CP4C and Can-Flux communities. The PDF will develop professional skills such as collaboration, communication, and leadership by co-leading and co-organizing annual collaborator workshops, through research visits to work closely with ECCC and government and university collaborators and their graduate students, and by representing CLASSIC community advancements at national and international scientific conferences. The PDF will have high exposure and visibility within the research community as a result.

Salary

The gross salary starts at $70,000/year, includes annual salary increments, plus benefits and extended benefits (see https://www.sfu.ca/postdoctoral-fellows.html). The position is available for the duration of the project with the initial hiring for one year with follow-up years contingent on acceptable performance.

Qualifications

While previous experience with land surface or terrestrial ecosystem models is highly desirable, more so the applicant should have the ability to rapidly gain an understanding of physical and biogeochemical processes from the existing scientific literature, and be able to develop mathematical parameterizations for implementation in a modelling framework. Applicants must have a PhD in a field related to terrestrial physics or ecosystem processes; peer-reviewed publications; and enthusiasm and drive for both independent and team-based research. As a significant component of this project will be interfacing with our collaborators and collaborative networks, the ideal candidate will have exceptional oral and written communication and collaboration skills.

Application Instructions

Applications must include: 1) a cover letter detailing their interest, availability, and relevant experience, 2) a current curriculum vitae, and 3) the contact information of at least two referees.

Email your application materials and any questions to Sian Kou-Giesbrecht (sian_kou-giesbrecht@sfu.ca) and Joe Melton (joe.melton@ec.gc.ca). Review of applications will begin May 8th, 2026 and continue until the position is filled.

Receipt of your application will be confirmed by email but only applicants selected for an interview will be contacted. Once contacted for an interview, please let us know if you require an accommodation, and we will endeavour to make arrangements.

Simon Fraser University and ECCC are committed to fostering diversity within their communities as a source of excellence, cultural enrichment, and social strength. We welcome those who

would contribute to the further diversification of our research community including, but not limited to: women; visible minorities; First Nations, Inuit and Métis peoples; persons with disabilities; and persons of any sexual orientation, gender identity and/or expression. We understand that career paths vary. Legitimate career interruptions will in no way prejudice the assessment process and their impact will be carefully considered. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. We are committed to creating an inclusive, communal, and accountable workplace.

Host institutions

Simon Fraser University (SFU) is a leading research university, advancing an inclusive and sustainable future. The School of Resource and Environmental Management (REM) is part of SFU's Faculty of Environment. It is an applied graduate and undergraduate school in which both social and natural scientists apply inter- and trans-disciplinary approaches to research in resource and environmental management. REM's mission is to inspire leadership and improve decision-making in environmental management through internationally recognized research, education, professional practice, and community engagement to support a socially just and ecologically sustainable world.

ECCC is the lead federal department for a wide range of environmental issues and is relied upon to provide science-based environmental information and services so that Canadians may make informed decisions relating to their health and safety. ECCC is tasked with implementing the National Adaptation Strategy, the Net-Zero Emissions Accountability Act, Canada’s Paris Agreement commitments, and contributing to the United Nations’ 2030 Agenda Sustainable Development Goals.