



UNIVERSITY OF SASKATCHEWAN

Global Water Futures

GWF.USASK.CA

PhD Student Opportunity: Changing agro-climatic conditions

The University of Saskatchewan, as part of the recently announced Global Water Futures (GWF, the 143 million grant from Canada First Research Excellence Fund) program, is seeking a highly motivated and organized individual for a PhD student position to investigate how agro-climatic indices and patterns of growing season precipitation will change under future climatic conditions. The 4-km continental scale WRF regional climate simulation will be the major tool to examine how agro-climatic conditions will differ under future climate, what constraints or opportunities will these changes present to agriculture. The student will also examine the changes of variables which are more directly related agro-climatic conditions, such as heat stress, frost free period, heat unit accumulation, start and end of growing season, the change in precipitation phase from snow-rain impact on growing conditions and the water balance. Most the required meteorology and surface variables can be derived directly or indirectly from the WRF output. The WRF model's continental scale domain coverage will allow the examination of regional differences across the Pan-Canadian domain.

Eligibility:

The required academic background of the student: major in Atmospheric Science, Environmental Science or Mechanical, Civil, or Environmental Engineering, or equivalent; a strong background in meteorology, climatology, and/or physics. Experience with numerical modeling of atmospheric processes is a plus.

The required skills include: 1) Ability to gather, understand, and critically analyze data from all relevant sources. 2) Programming skills, such as Fortran, Matlab, R, Python, Perl, and Shell script, etc. 3) Experience with large spatial datasets (preferably using GrADS) on multiple computer platforms (Unix/Linux, Windows). 4) Highly motivated and self-directed in advancing complex projects.

How to Apply:

Interested applicants should contact Dr. Yanping Li (yanping.li@usask.ca) with a cover letter explaining their motivation, complete CV, and contact details for three academic references. Informal inquiries are welcome.