June | Francis Zwiers, Climate Scientist, Pacific Climate Impacts Consortium

What do you do?

I'm a climate scientist who studies the causes of observed changes in the climate system. I also lead an organization, the Pacific Climate Impacts Consortium, which provides information on climate and climate change to stakeholders in BC, including municipal governments, Provincial government ministries, crown corporations and the private sector.

Why is it important?

The way our society functions, and the way in which the ecosystems that we depend upon function, is heavily influenced by climate. For example, the way our houses are built and transportation systems work, the way storm water is managed in our towns and cities, the amount of water that is available for hydro-electric generation, industrial and domestic use, agricultural production, and to maintain health river ecosystems… are all things that are strongly influenced by climate. It is therefore important for us to know how and why the climate is changing, how it will change in the future, and what the impacts will be so that we, as a society, can take action to reduce those impacts.

What does your research involve?

It involves a lot of careful analysis of observed climate and weather data, detailed comparison of changes seen in those observations with changes that are predicted by climate models, and experimentation with climate models. So the key tools are statistics, climate models, and an understanding of the "physics" of the climate system.

Did you ever want to be something else?

It was only when I was in the second year of my undergraduate degree that I started to get some inkling of what I really wanted to be. That was when I was first introduced to statistics and, more importantly, to the idea that statistics could be used to design experiments and carefully tease information out of data on real world problems.

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What do you like most about your work?

I like that I'm doing something that matters in which I can apply my knowledge of statistics to real world problems. I work with really fascinating people, and I learn from them constantly.

What are three achievements/findings/other things in your life you are proudest of?

One is a book that I wrote with a colleague, Hans von Storch, on the use of statistics in climate research; since its publication in 1999, it has became a standard reference that is used by climate scientists all over the world.

A second is the application of methods for the analysis of extremes (so called extreme value theory) to the analysis of climate model output and for determining whether there is a link between observed changes in extremes and human influence on the climate system. The idea that you could use climate models to study extremes has become widely accepted as a result of our work, and recently, I was part of the first team in the world to demonstrate that observed changes the intensity of precipitation extremes are likely linked to human induced increases in greenhouse gases.

A third is the successes that I have had in helping my younger colleagues advance their careers in climate science, and seeing them make their own marks on the science. I have benefited enormously throughout my career from the mentorship that I have received (and continue to receive) from others, and it is really satisfying to realize that I've also been able to give some help to others that has made a difference, as well as to be the recipient of help and advice.

What was your first summer job?

I worked as a helper in a small factory in Blenheim, Ontario, that custom made welding equipment for the auto industry in Detroit and Windsor.

What 5 favourite artists/groups/pieces of music do to you listen to on your ipod?

I listen to all kinds of music, ranging from the Beatles to Beethoven, including Quebec artists such as Isabelle Boulay and Jim Corcoran.

What's your favourite colour?

Red

What are your favourite things to do when you aren't working?

One of the things I like to do is landscape and wildlife photography – particularly birds, which make challenging subjects. I also like hiking, camping and canoeing.

If you could meet one famous person for coffee who would it be?

I think it would be wonderful to be able to have a coffee with any one of "The Elders", a group of leaders that were convened by Nelson Mandela in 2007 on his 89th birthday. The Elders include Gro Harlem Bruntland, Graça Machel, Kofi Annan, Ela Bhatt, Jimmy Carter, Li Zhaoxing, Mary Robinson and Muhammad Yunus.

Why are you here at UVic?

UVic has the largest concentration of people working on climate issues in Canada.

What 5 words would you use to describe yourself?

Friendly, engaged, quirky, a bit of a nerd, curious.

What advice do you have for a young person wanting to pursue a career in your field?

My advice would be to make sure that you do work that you enjoy, and that in doing that work, you communicate to others both what you know, and what you don't know. More and more, the users of climate science need to understand not just its main results, but also the uncertainties in those results, and they need our help in understanding how to constructively use both kinds of information in their decision making processes.

To learn more about Francis Zwiers visit **http://pacificclimate.org/** and **http://communications.uvic.ca/releases/release.php?display=release&id=1165**