Bringing Research to LIFE

In Brief

A perfect pair

Fikret Berkes, Canada Research Chair in Community-Based Resource Management, is the co-chair of a newly established International Development Research Chair (IDRC) in Community-Based Resource Management. The partnership is one of only eight announced by the International Development Research Centre and the Canada Research Chairs Program.

The new program, launched in December 2007, received 104 applications for joint research between Canada Research Chairs and their counterparts at universities in the developing world. From that, after a rigorous peer-review process, eight teams were selected to receive up to $1 million each over five years, each to address a key development challenge.

Berkes has been partnered with Alpina Begossi at State University of Campinas Brazil. Together they will develop community-based adaptive management (a feedback system for learning-by-doing) to increase food security and improve livelihoods of fisher communities in Paraty (Rio de Janeiro State).

They will begin by developing a knowledge base of the area's ecology, drawing on local people's knowledge of their resources. Working with communities, the researchers will launch a system for managing livelihood resources that could serve as a model for other parts of Brazil and perhaps elsewhere. By doing this the team hopes to incorporate local groups into the management process, and to build local capacity to engage stakeholders in governance processes.

"The partnership between IDRC and the Canada Research Chairs Program is a distinctly Canadian international initiative that brings the power of science and technology to bear on problems in the developing world, while creating unique research opportunities for Canadians," IDRC president David Malone said.

Chasing what others run from

BY SEAN MOORE

Submitted Photo

John Hanesiak, environment and geography, will speak about storm chasing on April 16.

It's not the tornadoes, those, for the most part, can be seen; it's the lightning, that's what percolates worry through a storm chaser.

For a storm chaser like John Hanesiak in the department of environment and geography, the chase begins on paper and computer screens, on maps and charts. He examines wind patterns, moisture levels, and atmospheric instabilities and characteristics to determine if and where a storm could be triggered.

"The day prior is when things really start. It sort of tells you, on the larger scale, where things seem to be lining up. Sometimes the weather models can give you much more lead time on larger scales. It will give you a general idea of whether you should head East, South, North or West. And if you can get there in time, that's great. So then the next morning you analyze things in more detail – for example, where exactly in south-western Saskatchewan should we go? So that's a challenge."

On April 16, Hanesiak will give a free public lecture at the next *Bringing Research to Life* speaker series (details below). His talk is titled A Day in the Life of a Storm Chaser.

"One of the more difficult parts is trying to decide where things will start going at any given time. Much of the excitement is trying to figure out where they will initiate, and then, when they start, trying to quickly figure out which ones will be the most severe. Then you go to those ones."

As many picnickers will contend, meteorologists get things wrong. Although they get much right too, but memories seem to disregard these events. Still, weather predictions will never be 100 per cent accurate; there are just too many unknowns in the equations.

Roll the film to June 22, 2007. About 40 kilometers west of Winnipeg the atmosphere around the town of Elie was cooking something up, but it wasn't a perfect recipe, by textbook standards, for a major storm to occur. For example, the wind shear wasn't quite perfect and there was a "cap".

Wind shear is the measure of wind speed and directional changes with altitude. It gives storm clouds a tilt and this tilt ensures that a storm can continually suck up warm, fueling air ahead of its downward flowing shafts of cool air and precipitate. If a storm has no tilt its downpour will occupy the same space as its updraft, so the downpour will tamp the rising air and the storm will ultimately snuff itself out. And a cap, which acts independently of wind shear, also affects storm development. It's a layer of warm air about a kilometer above ground that prevents surface air from rising freely into a major storm

"There was shear, but it wasn't terribly strong. Not enough to make you suspect it was going to produce an F5 tornado, yet it did. Although the cap was strong, it eroded late in the day. So it's those types of things that can throw you off," Hanesiak said.

"Then there is the opposite where everything is in place, and it happened in 2006. We were in Iowa and I think every chaser in the States was probably there. It was a perfect storm scenario. The Storm Prediction Center in the US even issued a 'high risk' of severe storms, something that is not often seen. Everything was lined up perfectly and then nothing happened. Nothing. There wasn't one storm. The problem? That darn cap did it again."

The goal of all this storm chasing is to figure out how to better predict storms with a more specific location as to where their brunt will be felt. The challenge is that every storm is different.

To learn more, come to A Day in the Life of a Storm Chaser, a free presentation held on Thursday, April 16 at 7 p.m. in the Robert B. Schultz lecture theatre in St. John's College. For more information, call 204-474-9020.

Upcoming

Creative Works Grants Program

Deadline to apply is May 1, 2009

To provide support for high quality creative works at the University of Manitoba. The program is administered by the Office of Research Services on behalf of the University.

For further information and access to the general guidelines and application form visit:

http://umanitoba.ca/research/ors/internalfunding_deadlines_forms.html

What affects your mental health?

In its ongoing effort to bring research into your life, the Office of the Vice-President (Research) and the Canadian Institutes of Health Research are hosting the third Café Scientifique on April 20.

CIHR Café Scientifique is a free event that brings together experts and non-researchers in a relaxed atmosphere to talk about research and the questions it raises. The next Café will focus on mental health issues.

The panelists include: Harvey Max Chochinov, Canada Research Chair in Palliative Care and distinguished professor in psychiatry, and director of Manitoba Palliative Care Research Unit at CancerCare Manitoba; Patricia Martens, CIHR/PHAC Applied Public Health Chair, director of the Manitoba Centre for Health Policy, and associate professor of community health sciences; and Jitender Sareen, associate professor of psychiatry.

The discussion's facilitator will be John Arnett, professor of clinical health psychology.

The panelists will provide insights into their research in the areas of mental health services, suicide prevention, and the psychological aspects of life-threatening and life-limiting illnesses.

Mental illness affects a large portion of our population, from young to old. These individuals are generally high users of health care services. What strategies might work best to address these issues? Certain populations are more at risk for mental illnesses. What preventive measures can be taken to assist these people?

On April 20, at 7 p.m., come to McNally Robinson in Polo Park (1485 Portage Ave.) and join the discussion.

Some Fast Facts on Mental Health

•20% of Canadians will personally experience a mental illness in their lifetime.

•About 8% of adults will experience major depression at some time in their lives.

•Suicide accounts for 24% of all deaths among 15-24 year olds and 16% among 25-44 year olds.

•Mental health issues are caused by a complex interplay of genetic, biological, personality and environmental factors.

• Mental illnesses can be treated effectively.

Sources: The Report on Mental Illness in Canada, October 2002 and EBIC 1998 (Health Canada 2002), Stephens et al., 2001

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