

Researchers feel cold shoulder as polar year program comes to close

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Murres on ice at Coat's Island in Nunavut, a remote island that provides a critical breeding ground for the seabirds. (J. Provencher)

Last year, William Montevecchi's team of researchers fitted with tracking devices some 200 seabirds living off the Atlantic coast of Newfoundland and Nunavut, birds the scientists consider bellwethers for changes to Arctic ecosystems.

But funding cuts are expected to slash his staff of about 25 researchers by three-quarters, so the Memorial University of Newfoundland ocean sciences professor is not sure how many of those birds, or devices, his researchers will see again.

"We're grateful to have had the chance to do the research, but when the plug gets pulled it will be difficult," said Montevecchi.

The plug, in this case, is the official finish, at the end of March, of International Polar Year (IPY), a two-year global program to track the effects of global warming on the Arctic and Antarctic. In addition to climate change, the research has been looking at the unique biodiversity and physical geography of the regions and the health and culture of northern peoples.

Montevecchi was one of more than 50,000 scientists worldwide working on 228 projects in what was the first comprehensive survey of the two polar regions in 50 years.

In Canada, the federal government has said it considers the Arctic critical to Canada's future, as it makes up a huge part of Canada's land mass and coastline, and scientists view it as an early-warning system of sorts to ecological changes that might occur elsewhere. And yet our knowledge of it is scattered at best.

\$150 million in funding

At the start of IPY the government committed \$150 million to spend over six years on projects related to both health and the environment, but the bulk of this funding was to be spent during the first two years, when most of the fieldwork was to be complete.

For Canadian researchers like Montevecchi, IPY has been a boon, a chance to take smaller research projects and expand them, or start new studies altogether, in an effort to piece together the impact of rising global temperatures on the remote but critical region.

But it's also been a double-edged sword: it's given them a taste of what they could accomplish and a hunger to

do more, but no sense of where their next meal might come.

Dalhousie University atmospheric scientist James Drummond, who heads the Polar Environment Atmospheric Research Laboratory (PEARL), said what happens after IPY is anybody's guess.

"We are presently negotiating with various government groups to see whether there is any chance of continuing the laboratory or whether it will have to be shut down," said Drummond in an email.

Drummond's group, which is made up of about 50 researchers from eight universities, has started to monitor the Arctic atmosphere, touching on everything from climate change, air quality to the health of the ozone layer.

"The situation at the moment is that there is no research funding program in Canada that has funding for this type of work, so we will have to create one of our own or die," he said.

IPY support represented a disproportionately big chunk of funding for many of these projects in comparison to traditional grant sources such as the NSERC, said Monteverchi.

That has Antoni Lewkowicz, a University of Ottawa geography professor who heads Canada's contribution to an international permafrost study, suggesting some new funding bodies geared to the North.

"There are a number of proposals out there for long-term work, but Canadian financial support for these efforts is far from certain," said Lewkowicz.

Fieldwork wrapping up in March

Environment Canada is part of 20 major research projects, with its scientists heading up five studies. Each of these projects is receiving funding until 2011, said agency spokesperson Dorothy Stewart-Paul, but most of the field work is ending in 2009.

The Environment Canada-led Oasis project, for example, which looks at the depletion of ozone and mercury over the Arctic, will be conducting its last big campaign on the ocean by Barrow, Alaska, in March 2009.

The remaining funds will support "closing data gaps, data management and analysis, publication of results, outreach activities with northern communities and technology transfer," said Stewart-Paul in an email statement.

But she pointed out that not every project will have completed its field work this year: one study looking at the atmospheric transport of man-made pollutants to the Arctic will continue to conduct sampling at its Yukon station until spring 2010.

Some research projects may not be practical to run after IPY because of cost, particularly the Circumpolar Flaw Lead study, which conducts work aboard the Arctic icebreaker Amundsen with a four-year budget of \$40 million, making it the most expensive of the research programs.

Lead investigator David Barber is realistic about future funding, writing in an email that he doesn't see any way to get additional funding, "as the project was (and is) very expensive."

As a result he says his group is looking to work on partnerships with some of the 27 partner countries that contributed to the study, which looks at melting sea ice, in the hopes of continuing some of the research.

Uncertain future means harsh choices

What's concerning for many of the scientists who spoke with CBC is not so much the lack of funding, but the uncertain message coming from the government.

Indian and Northern Affairs Canada, the ministry that handles the IPY funding, did not respond to a request for information on the future and status of the funding.

In a speech from the throne in 2007, the Conservative government called for the establishment of an Arctic research station, but since then, no announcements have been forthcoming, though it's possible more information might be part of Tuesday's budget, particularly after two government-funded studies last year did look at the issue of what a High Arctic research station might look like.

A study produced by the government's Canadian Polar Commission called for a 25-year plan and \$25 million to set up a pan-northern network of about 12 major research stations from Labrador to the Yukon. And the government-funded think-tank Council of Canadian Academies published a report in November calling for a High Arctic research station to focus on environmental science and stewardship and climate change, in addition to sustainable resource development and promoting healthy and sustainable communities, leaving some hope that future research might have a home base.

Until then, however, it's up to research leaders to make harsh choices. Montevecchi expects his budget will be down to 25 per cent of the previous year's level.

Lewkowicz, who was able to support the fieldwork of eight graduate students the past years, says next year he may have one or two.

Drummond said he has trained people to continue his project's work who, he said, "will drift off to do other things if there is no immediate continuation of the various programs."

Montevecchi said all of the researchers knew when they received the funding that it would end, so no one is surprised. But he said one of the first questions he and others asked when the program was announced was whether there was any chance some of the work might continue.

"That's my greatest hope, that we can find a way to keep these projects going," he said. "This is the kind of research that it helps to have a time frame of a decade or more."

But so far, he and others are still waiting for that answer.

"There's been no information, and the absence of information makes me think it's over. It's really dead," he said.