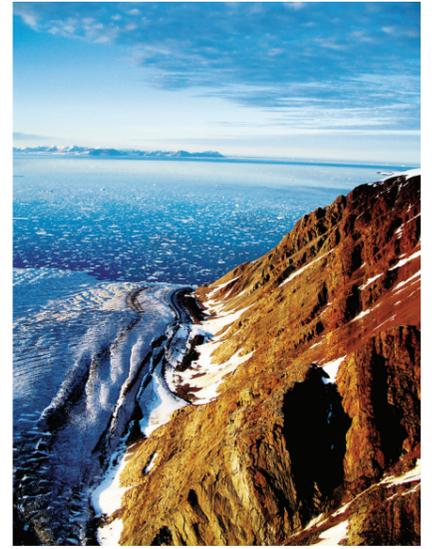


“If you’re in Brazil and the temperature goes from 30 to 34C, there’ll be some effect, but it’s still hot. In the Antarctic, it might go from -20 to -15C, but things are still frozen. In the Arctic, the temperature is moving across zero. That means huge changes. It means frozen ground turning to mud and snow and ice turning to water. It’s a fundamental phase shift that’s happening in the Arctic faster than anywhere else.”



- The present incarnation of International Polar Year will also be a celebration of its predecessors.
- The first Polar Year was from 1882/83. That event was concerned with establishing international protocols and cooperation for geographical and scientific surveys. Most importantly, the first IPY set a precedent for international scientific cooperation on a grand scale.
- The second polar year, from 1932/33, was very concerned with atmospheric science in particular. One of the milestones established in that year was the foundation of the first inland research station in Antarctica. At the time, 40 countries participated.
- The next collaborative effort on this scale was 1957, when the global scientific community band together for the International Geophysical Year. It’s the IGY that has had the most profound effect on recent polar research. In addition to the many scientific advances it provided—from the launch of the world’s first satellite to confirmation of the long-debated theory of plate tectonics—IGY became an example for many global scientific alliances since.

The Antarctic continent’s only inhabitants are penguins, seals and scientists, and no country is allowed to make a territorial claim to it.

The Arctic, on the other hand, is home to many different communities and nations. Canada is playing a large role in this area of IPY involvement.

“It seems that every other week, the CBC airs a documentary about climate change, and at some point each one has an excerpt from someone who has lived there long enough to notice variabilities out of the natural range,” says Colgan. “Coupled with the huge sense of awareness in the North, there is also a huge sense of helplessness. They’re the ones who are taking the brunt of it, and they have the least political or financial muscle, and the quietest voice. I think they’re looking for any way to reach out.”

“We’re interested in both the biological and human dimensions. The two biggest issues facing the Arctic are climate change and the health and wellness of northern communities.”

Canada’s North faces a huge number of social and political problems, stemming from isolation, past government policies, and of course climate change. Hik offers the example of the health-care system in the territories.

“There isn’t a single Inuit doctor working in the territories, for instance. Health care has huge turnover there,” he said. “We need to find ways to have a sustainable health-care system, and ways of training people from these regions.”

“For Nunavut, the top priority is training health-care professionals, tradespeople, and people in public administration so that they are working in their own communities.”

A lot of Canada’s IPY participants will be looking at issues like this with Northern peoples and governments, to try to find solutions and

alternatives.

“Our other priority is engaging the next generation of polar researchers,” says Hik. “We want to involve as many students as possible, and establish the capacity for future research by supporting and engaging students.”

One way that IPY Canada is reaching out to students is through the Canadian Youth Steering Committee (CYSP). Made up of mostly graduate students, the group’s mandate is to get high-school students across the country involved with IPY.

The CYSP is partnering with schools and existing organizations and projects in much the same way IPY organizers have done with researchers: they’re providing leadership and volunteers for a number of projects for students.

For instance, the CYSP is recruiting graduate students to lecture in high school classrooms as part of an organization called Let’s Talk Science.

“It’s an organization that for the last decade or so has been sending grad students into high schools to give talks. They find really motivated grad students, and teachers who want this in their classroom,” explains Colgan. “What we’re doing for them is trying to recruit a few dozen, perhaps a hundred, polar grad students for them, and hopefully create a sort of polar legacy within Let’s Talk Science.”

The CYSP has also partnered with groups like the National Geographic Society, and are working hard to get polar content introduced into the high school science curriculum.

Another project under way is a partnership with the Weather Channel to create 90-second science infomercials. Colgan’s group will provide the scientific information, and the Weather Channel is volunteering everything else, from production to airtime.

“We’re really excited about it. They have an interested producer who will get footage and stories from our grad students,” says Colgan. “We just have to bring the content.”

In many ways, IPY has never been more pertinent, as the two poles are pivotal to our understanding of climate change issues.

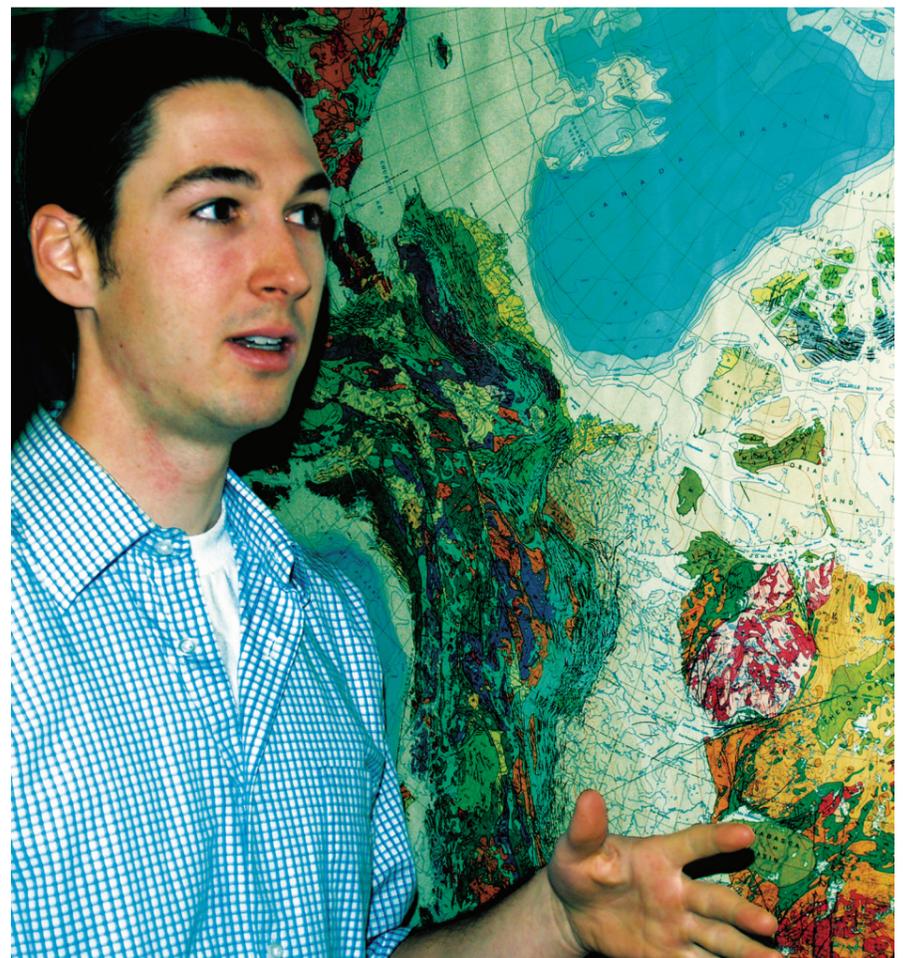
Physical and social scientists the world over are interested in studying the poles, and IPY is a valuable opportunity for them to collaborate and focus their research. IPY initiatives have also

opened up sources of funding, which is always a struggle.

“It’s so expensive to do research there, but it pays off super dividends,” Colgan says. “IPY will hopefully be a chance for an injection into the research profile and added funding for research.”

Hik is excited about what the next two years will hold.

“It’s going to be fun, a lot of fun. The U of A is well placed to be involved in this, and we’re looking forward to it.”



U of A Master’s student Liam Colgan is studying glaciology in Canada’s North.