

Looking to the Future Collaborative Antarctic Science with Global Impacts

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Antarctica is stunning in its vast whiteness. It remains a continent encased in ice and long just an empty space on maps. Filling in this blank space has been a collaborative international effort. Over sixty years ago in 1958 nations came together as international collaboration blossomed in the International Geophysical Year (IGY). Two lasting impacts of the IGY are the discovery that the Antarctic ice sheet was over two miles thick and the concept that Antarctica should be a continent dedicated to science. The Scientific Committee for Antarctic Research became the hub for fostering collaboration in the challenging Antarctic environment where collaboration is essential.

In 2002, just as Larsen B ice shelf broke up catastrophically, the international community recognized the essential need to address the emerging evidence for change in the polar regions using the framework of collaboration fostered by the IGY. A small group of scientists launched the concept of the International Polar Year 2007-9 (IPY). Over 65,000 scientists collaborated and succeeded in reaching places that had not been visited for over 50 years. Using new technologies and leveraging shared logistical assets, scientists discovered everything from subglacial water networks that run uphill to glacial isostatic uplift at rates over 40 mm/year. These discoveries were only possible due to the collaborative framework of the IPY.

The Antarctic Ice Sheet is changing at rates greater than IGY scientists could have imagined. The rapidly changing ice has pushed the driving motivation for Antarctic science beyond simple awe and discovery to science that is critical for coastal residents around the globe. Suddenly change in Antarctica matters. The challenge for SCAR and the global science community will be to build truly inclusive teams to improve our understanding of how fast the ice sheet will change and how much sea level will rise. Antarctic science has an opportunity to move beyond the image of the frosty bearded explorer to embracing international teams where data is openly shared and leaders reflect the diverse population of the cities that will be impacted by the future Antarctic change.