



INTERNATIONAL POLAR YEAR

People

People have lived in the Arctic for many millennia, developing skills, strategies, and community knowledge to survive polar conditions. They succeeded by learning to use local foods from land and ocean, by learning to move safely across land, ice, and ocean, by circum-Arctic trade, and by perpetuating their knowledge through language and culture. In recent centuries resource exploitation and political activities imposed from outside the polar regions have changed the livelihoods and well-being of polar residents in good and bad ways. Climate change and renewed exploitation present urgent challenges to Arctic people.

Health

Arctic people face many of the same health issues as people living elsewhere: infectious diseases such as hepatitis or HIV/AIDS; chronic diseases such as diabetes or cancer; and behaviour problems such as injury or substance abuse. However, Arctic indigenous people face substantial additional challenges. Indigenous residents may have higher risk factors or susceptibilities for global diseases. Global contaminants such as mercury or persistent organic pollutants accumulate in the Arctic and in Arctic biota, so much so that Arctic women often face an unenviable choice between traditional foods with high risk factors for offspring and foods imported from foreign sources. Arctic residents who depend on traditional foods also face increased risk as infectious diseases such as trichinellosis expand in polar food sources. Climate change accelerates and exacerbates these trends and invasions. These unique factors contribute to health challenges and deficiencies for many Arctic residents.

Community Well-Being

In addition to health, education, and material well-being, Arctic communities adapt and survive based on close interactions with the natural world and shared senses of an ability to guide their own destinies and of belonging to viable local cultures. Humans in the Arctic have always relied on a broad range of natural resources and many communities retain strong hunting and gathering traditions. Other Arctic communities manage millions of reindeer over millions of square kilometres. These connections to natural resources, ancient in origin yet essential for food, income, and cultural identity, represent sustainable ecosystem management based on generations of accumulated experience. A hunter's understanding of sea ice and a herder's awareness of snow conditions represent community knowledge of inestimable value for resiliency in the face of change. Migrations have influenced Arctic community systems, but environmental change, energy and mineral resource developments, state policies, and new economic opportunities and barriers will alter patterns of geographic



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and social mobility, particularly for women and youth. Arctic communities understand the increasing impact of externally-driven environmental, social, economic and political change but recognise their community knowledge as essential to survival of their cultures.

Understanding the Arctic Environment

This IPY benefits from a growing effort by Arctic communities to monitor their own environment with the intent to generate questions, examine data, identify trends, and draw conclusions in direct collaboration with 'western' scientists. These community monitoring programmes, often crossing regional and national boundaries, focus on many factors related to natural resources, community well-being, and climate change: in-migration of species; changes in location, abundance, and quality of fish; changes in weather and ice patterns; impacts of development activities on environmental quality; presence of contaminants in traditional foods; and occurrence of diseases in wildlife and humans and effectiveness of intervention strategies. These investigations, and the parallel development of effective and appropriate means of sharing information, build local competence and circum-

Arctic cooperation and integrate with regional and global scientific activities.

Role in the Global Economy

With or without permission and cooperation from Arctic residents, the sub-Arctic world has declared the Arctic open for commerce. Global energy, transportation, and mining industries all demand growth in the Arctic based on reduced sea ice and rising commodity prices. Polar natural resources, including fish, forests, and wilderness, face increasing pressure as their value to the rest of the world increases. Tourism, including recreational hunting, could also increase, and thereby increase competition for scarce local resources such as water, wilderness, or wildlife. Climate change, by altering polar environments, by increasing ocean access, and by decreasing resources and habitability elsewhere on the planet, will accelerate and exacerbate these Arctic changes. Arctic residents look to traditional knowledge, education, technology, and their global neighbours for help in answering difficult questions. Can Arctic communities sustain local goods and services in the face of competition from imported goods and services? How will polar residents work with local and national governments to influence and determine pat-

terns of development and settlement, or plans for resettlement? How will traditional cultures adapt to new economic systems and social pressures? Who will determine the environmental values and protections for Arctic ecosystems? IPY research will help residents understand and address these issues.

Neighbors

In a world of pervasive media and global commerce, people in polar and non-polar communities increasingly recognise themselves as neighbours with shared concerns about local impacts of global changes. From the Arctic, we learn how outside forces, starting from whaling, fur hunting, and mining 400 years ago, have often influenced society and how oil and gas developments have an impact today. We hear memories of culture and language suppression, and an assessment of decision-making and governance options for Arctic people. As neighbours, we can share experiences of families, jobs, schools, and health care. We can also share our unique perspectives of local cultures confronting substantial and rapid climate and social change.

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People at the Poles Activity: What Makes a Community?

A definition of a community: a group of interacting people in a common location, sharing cultural, ethnic and moral traditions.

Preparations:

- Plan class discussions related to the questions below.
- Through your school or community, identify and contact a 'sister' school in a different location.

Explore your community:

1. How would you describe your community?
2. What is life like where you live?
3. How does the physical environment of WHERE you live affect HOW you live?
4. What are some of the changes occurring in your community?
5. What issues are you experiencing in your community?
6. How is life different for you than for your parents or grandparents at the same age?
7. What kind of community would you like your children or grandchildren to live in?

Learn about another community:

- If you live in a non-Arctic community, connect with an Arctic community to learn how they describe their community.
- If you live in an Arctic community, connect with a non-Arctic community to learn how they describe their community.

Share your ideas and discoveries with other classrooms or communities:

- Post video, audio, presentations, or photos from your class discussion online. Share links to your on-line materials.
- Compare your answers and ideas with information from other communities:
 - What similarities do you find? What differences do you find?
 - How did this activity help you understand your community and connect to other communities?

To learn more: Explore the 'What is a Community' and 'Local Traditional Knowledge Collection Kit' activities in the Polar Science resource book (side-box). Explore a virtual community such as Taking IT Global.

Find these and other educational materials in: Kaiser, 2010, Polar Science and Global Climate, An International Resource for Education and Outreach, ISBN 978 1 84959 593 3, www.pearson.co.uk.



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