

GLOBAL WARMING: IS IT REAL? HOW WILL IT AFFECT US? WHAT CAN WE DO ABOUT IT?

WHAT NATIVE PEOPLE ACROSS THE ARCTIC ARE OBSERVING

- More persistent clouds
- More warm weather
- Warmer winters
- More extreme weather
- Less snow
- Snow melting earlier
- Less sea ice in winter
- Thinner sea ice in winter
- Later ice freeze-up
- Earlier ice break-up
- Lower water levels in lakes and rivers
- Treeline moving north
- Willows and shrubs getting larger

WHAT ALASKA SCIENTISTS HAVE DOCUMENTED

AVERAGE YEARLY TEMPERATURES ARE RISING IN ALASKA, AND RISING MORE IN SPRING AND WINTER

From 1949 – 2004 average *yearly* temperatures

- rose in Barrow by 4°F
- rose in Kotzebue by 2°F
- rose in Nome by 2°F
- rose in Bettles by 4°F

From 1949 – 2004 average *spring* temperatures

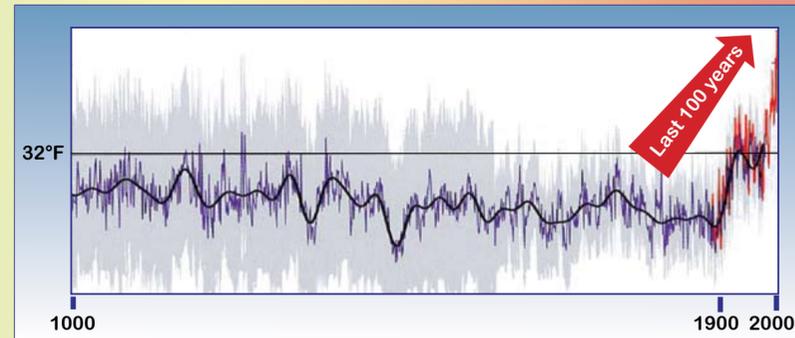
- rose in Barrow by 7°F
- rose in Kotzebue by 4°F
- rose in Nome by 6°F
- rose in Bettles by 5°F

Spring snow-ending dates for Barrow:

1950: approx. June 18
2000: approx. May 22

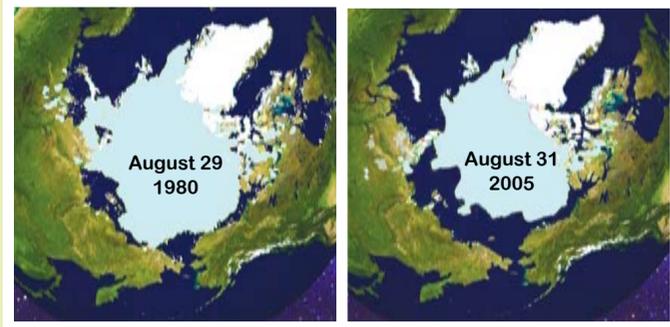
ENTIRE NORTHERN HEMISPHERE HAS WARMED IN THE LAST 100 YEARS

By drilling ice cores in glaciers and the Greenland Ice Cap scientists can determine temperatures for the last 1,000 years, and compare them with today's temperatures. There has been a dramatic increase in the last 100 years.



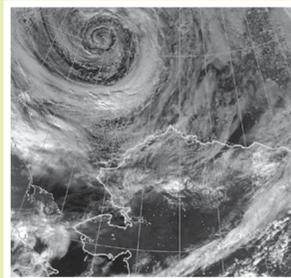
ARCTIC ICE PACK IS SHRINKING

The polar ice cap in the Arctic is shrinking. The red below shows how much of Greenland's ice cap has melted.



ALASKA STORM PATTERNS CHANGING AND INCREASING IN SEVERITY

More storms are originating in Russia's northern seas, rather than coming up from the Pacific Ocean. These storms are often more severe, and Alaska's coastline is less protected because of the shrinking ice pack.



IN THE NEXT 100 YEARS WE CAN EXPECT:

- Warmer winters & wetter summers
- More extreme weather events
- Less sea ice
- More wildfires
- Melting permafrost
- Earlier break-ups & later freeze-ups
- Rising sea levels

Graphics modified from a 2006 presentation to the Caribou Working group by John Walsh, International Arctic Research center, University of Alaska Fairbanks

IT'S NOT TOO LATE TO MAKE A DIFFERENCE!

WATCH THE MOVIE 'AN INCONVENIENT TRUTH'

Watch it and share it with others. Ask teachers to share it with students. Ask your IRA or City to make it available in your village. Go to www.climatecrisis.net to learn more.

SWITCH TO FLORESCENT LIGHT BULBS

You'll save 60% off your light bill. To mail-order contact www.energyfederation.org or call 1-800-379-4121. Also, purchase energy efficient appliances.

INSULATE AND WEATHERIZE YOUR HOME AND WINDOWS

Properly insulating your walls and ceilings can save 25% of your yearly heat bill. Caulking and weather-stripping can save you more. Go to www.energysave.org for more information on how to better insulate your home.

UNPLUG ELECTRONICS WHEN NOT IN USE

Unplugging your TV, DVD player, stereo and computer when you're not using them saves more energy than just turning them off.

TURN DOWN THE HEAT AT HOME

Wear a sweater when you're home, and keep it cooler when you're asleep or away from home.

SPEAK UP! MAKE SURE YOUR VOICE IS HEARD!

Write, call or email—but make sure local, state & US politicians hear you! Your concerns about global warming are urgent. They can do something about it if we make them!

CONTACT INFO:

Senator Lisa Murkowski
alaskaoffice@murkowski.senate.gov
Tel 1-877-829-6030

Senator Ted Stevens
www.stevens.senate.gov/contact.cfm
Tel (202) 224-3004

Governor Sarah Palin
www.gov.state.ak.us/govmailSP.php
Tel 907-465-3500

OUR FUTURE AT RISK

ALL QUOTES BY CALEB PUNGOWIYI

"We will continue to be Inupiaqs and Yupiks in the years to come but when we are unable to harvest Bowhead whales, it will be a sad chapter in our cultural history."

Photo by Marlene Ahkinga, Diomedes



Photo from USFWS



THIN & SHRINKING ICE

Polar bears, seals, walrus, whales and the people who hunt them all depend on sea ice. Thin ice can't hold a whale for butchering. Hunters can't travel safely on thin ice. A shrinking ice pack will alter marine mammal migration routes. Less ice means less protection from storms.

"I keep expecting things to return to normal but normal isn't normal anymore."

Photo from Caleb Pungowiyi



"Eskimos and seal oil – there is no separation between the two."



From AK Center for Environment

RISING SEA LEVELS

Look what happens to Barrow if the sea level rises by 12 feet—everything in red goes underwater. As polar ice caps and glaciers melt, sea level will rise, putting Alaskan coastal villages at extreme risk.

"Ice is a supporter of life."

A CHANGING LANDSCAPE

Mud slides, changing tree-line, and more shrubs come with thawing permafrost. We can also expect more insects and diseases affecting trees, shrubs and plants.

Photo from USFWS Selawik NWR



Photo from USFWS



INCREASED WILDFIRES

Global warming is causing an increase in the number, size and severity of wildfires. Lichens—the most important food source for caribou—are very slow to recover after a fire.

Warmer winters will likely lead to more freezing rain in winter which can encase the caribou herd's winter feed in ice.



Photo by Geoff Carroll

"There are some things you can't measure in dollars & cents: when hunters come home empty handed—when people have to buy food to eat instead of harvested food—when hunters spend days waiting for caribou who do not show up."



Photo from USFWS

DELAYED FREEZE-UP & EARLY BREAK-UP

The timing of a subsistence activities like ice-fishing will be altered or eliminated.

Salmon spawning and health of all fish will be impacted by increased ocean temperatures and siltation from melting glaciers.



Photo from John Walsh, UAF

MELTING PERMAFROST

As frozen ground thaws many existing buildings, roads, pipelines, airports and industrial facilities will likely be de-stabilized, posing potential threats to the environment and wildlife.

Structures will require expensive rebuilding and maintenance.

"Some of our traditions will vanish from changing climate. Some of our words will be lost when the activity associated with them does not exist anymore. No doubt there will be extreme hardship in some of our communities, but as Inupiaq, Yupik, Athabascan, and other indigenous people, we will continue to maintain our identity and our cultures."

—Caleb Pungowiyi