

MOTHER EARTH

NATIONAL MUSEUM OF THE AMERICAN INDIAN 7.7.07

TRANSCRIPTS

DR. NANCY MAYNARD

Impacts of Climate Change and Global Warming on Native Peoples and Native Homelands

It is important to understand the impacts of climate change on Indian people and their homelands because:

- Tribal lands and Indian reservations are present in all of the major ecosystems across the U.S., including the unique environments in Alaska and the islands of the Pacific and Caribbean regions.
 - Tribal lands in U.S. = 56 million acres (3% of U.S. lands)
 - Alaska Native lands = 44 million acres

[image: map]
- There are important tribal rights to lands beyond reservation boundaries
 - Rights to fish, hunt, gather
 - Historical and cultural special areas
- There are still legal difficulties in enforcing water rights and resource management, and many tribal land holdings and reservations are located on already environmentally-stressed lands.

Native Peoples

Native Peoples = 1% U.S. population

The U.S. has legal responsibility to protect Native homelands, sacred sites, and natural and cultural resources.

How is climate change affecting Native peoples and Native homelands?

Impacts in Alaska and the northern parts of the U.S.

The Arctic region's climate is changing very rapidly—widespread melting of glaciers, sea ice, and shortened snow season.

Significant warming is already being experienced by Native peoples in some regions in the North. Here are some examples:

- Reductions in sea ice will drastically shrink marine habitat for polar bears, ice-inhabiting seals, and some seabirds with some species pushed toward extinction. For Native Alaskans there will be serious loss of subsistence food and animals central to their culture.

[photo: bear]
- Changes in sea ice conditions with melting ice, making hunting on the ice more dangerous and reducing availability of marine mammals for subsistence foods.

[photo: dogs touching ice]
- Changes in snow create problems for migratory animals to find food under snow and to migrate along top of frozen snow—forcing changes in migration patterns of herds.

[photo: reindeer/caribou]

- Melting of permafrost is/will disrupt buildings, transportation, oil and gas facilities.
[photo: sagging houses]
- Coastal communities face severe coastal erosion as rising sea level and reduction in sea ice allow higher waves and storm surges to reach the shore and destroy land and buildings.
[image/photo: Shishmaref, AK]

Impacts in Continental U.S.

Native peoples in other parts of the U.S. are also already experiencing impacts, with major economic and cultural implications. Here are a few examples:

- Increased temperature and drought in the southwest U.S. An increase of 5-9 degrees Fahrenheit will cause:
 - Decrease in precipitation with significant loss of water for drinking, growing crops, grazing animals, water availability for ceremonies, medicinal and ceremonial plants.
 - Human health impacts from:
 - heat stress—more extreme hot days
 - increased dust and air quality problems
 - Increased cyclonic activity
 - Sea level rise
 - Changes in water temperature and loss of fish as subsistence food
[photo: fish]
 - Shifts and disappearance of forest species (e.g., maple trees are expected to disappear from New England states by end of century, and, therefore, no maple syrup production)
 - increase of flooding from storm surge
[photos: flooding]
 - Increased fires
[photos: fires; Black Hills]

Some good impacts:

- Warmer climate has lengthened the growing season for agriculture and forestry, producing higher yields in some cases.
- Disappearance of permafrost in some areas has reduced construction problems in the north.

Working with Mother Earth for Solutions

Strategies that Native peoples used in earlier times to adapt to environmental changes, such as:

- moving from place to place from one food source to another or
 - to find alternative sources of food and water or
 - to intersect with the annual migrations of wildlife
- are no longer possible due to private land ownership/urban development adjacent.

But, we can work with Mother Earth to mitigate effects. Some examples:

- Share successful tribal strategies already in place. Example: Menominee Forest, a sustainably managed forest by the Menominee Tribe—traditional ways of logging and tree species.
[photo: Menominee Forest/Reservation]
- Listening to elders' wisdom and knowledge about historical solutions to changes over the years.
- Applying ancient strategies used for survival in the past. Example: Zia grid gardens.
[photo]
- Increase partnerships between Native climate change action groups (like Dan Wildcat and Haskell Indian Nations University) and agencies like NASA and other universities) for

cooperative research and students programs.

[photo: students]

- Tribal College Students. Create more future leaders of Native people through support of tribal colleges and universities. Example: More support for cooperative programs with agencies like NASA, NSF for internships, and use of technologies such as remote sensing.
- Increase use of combined indigenous knowledge and science for better stewardship and understanding of changes to our Planet Earth.

[photo: Indigenous science from the Sami]