Another Climate Report: Responsibility, A Quick Guide and Accountability

September 23, 2021
Alaska Tribal Resilience Learning Network

Sign up or join:
- One-on-one calls - respond to tribal specific needs
- Monthly Learning Network Calls
- Tribal Resilience E- bulletin
- Learning Network Information Sessions

Website: akcasc.org/aktrln
Overview of Session

• To share the overall purpose of climate reports and the Quick Guide
• To provide information on how the climate reports can be used in Adaptation Planning
• To elevate the individual and collective responsibility to respond and accountability of leadership to act
Key Messages from our Elders - 2014

• What are you going to do about it?!
• We got to all work together
• Must bring younger generation along

....Responsibility
Reflected in our Values
Welcome

John Walsh

Princess Daazhrai Johnson

Who does the reports?

Why are they done?

How can you use them?

What are they saying about the Arctic and Alaska?
Another climate report, so what?
A new regional, national or international synthesis report on climate change seems to come out every few months. What makes them different, how are they used, who coordinates the science & expert contributions?

State of the Climate
In Bulletin of the American Meteorological Society (BAMS)
- American Meteorological Society
- Annually since 1996
- Global, emphasis on US
- Engaged professionals
- Review of past year’s temperatures, snow, ice, oceans, greenhouse gases & clouds

Arctic Report Card
Similar to State of the Climate Arctic chapter, but more detailed
- NOAA
- Annually since 2006
- Arctic
- Broad audience
- Near real time climate summary of temperatures, snow, ice, oceans, vegetation & special topics

IPCC
Intergovernmental Panel on Climate Change
- United Nations
- Every 5-7 years since 1990
- Global
- World governments
- Emphasis on projections & major policy recommendations for governments; also a bibliography of changes, causes, literature review & research summary

AMAP
Arctic Monitoring and Assessment Programme, contributes to IPCC Arctic chapter
- Arctic Council
- Every few years since 2005
- Arctic
- Policy & decision makers
- Changes, focus on contaminants, stakeholder adaptation & mitigation recommendations for sectors like Arctic shipping, subsistence, etc.

National Climate Assessment
Required by Congress: Global Change Research Act of 1990
- US federal government
- Every 4 years since 2000
- United States
- Policy, decision makers & public
- Changes, causes, projections, adaptation & mitigation recommendations for sectors like agriculture, forestry, etc.


Heather McFarland, IARC/UAF
International “Global” Reports


AR3 (2001)
AR4 (2007)
AR5 (2014)
AR6 (2021-22)

State of the Climate Report

Yearly since 2006

Graphic by Megan Pittas, IARC
Notable features of the IPCC reports

• Working Group reports are dense and long (3949 pages for Climate Change 2021) *but* there are more digestible subsets: Policymakers Summary, Regional Fact Sheets

• Terminology has specific meanings that may not be obvious
  example: scenario (greenhouse gas emissions, aerosols)

• Scales for likelihood and confidence
## IPCC’s scale of likelihood

<table>
<thead>
<tr>
<th>Term</th>
<th>Likelihood of the outcome</th>
</tr>
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<tbody>
<tr>
<td>Virtually certain</td>
<td>&gt;99% probability</td>
</tr>
<tr>
<td>Extremely likely</td>
<td>&gt;95% probability</td>
</tr>
<tr>
<td>Very likely</td>
<td>&gt;90% probability</td>
</tr>
<tr>
<td>Likely</td>
<td>&gt;66% probability</td>
</tr>
<tr>
<td>More likely than not</td>
<td>&gt;50% probability</td>
</tr>
<tr>
<td>About as likely as not</td>
<td>33 to 66% probability</td>
</tr>
<tr>
<td>Unlikely</td>
<td>&lt;33% probability</td>
</tr>
<tr>
<td>Extremely unlikely</td>
<td>&lt;5% probability</td>
</tr>
<tr>
<td>Exceptionally unlikely</td>
<td>&lt;1% probability</td>
</tr>
</tbody>
</table>
IPCC’s five confidence levels are a combination of (1) strength of evidence and (2) scientific agreement.
Arctic

- It is very likely that the Arctic has warmed at more than twice the global rate over the past 50 years, and it is virtually certain that surface warming in the Arctic will continue to be more pronounced than the global average warming over the 21st century.

- Extreme heat events have increased around the Arctic since 1979, and minimum temperatures have increased at about three times the global rate.

- The fire weather season is projected to lengthen (medium confidence) together with encroachment of fire regimes into tundra regions (high confidence).

- Permafrost warming and thawing have been widespread in the Arctic since the 1980s, and there is high confidence in future permafrost warming, decreasing permafrost extent with increased risk of hazardous impacts, including carbon release.

- Reductions in spring snow cover extent have occurred across the Northern Hemisphere since at least 1978 (very high confidence), and it is virtually certain that this reduction will continue with further warming, despite a likely increase in winter snow amount in the far northern continental regions and central Arctic.

- The observed increase in relative sea level rise is virtually certain to continue in Arctic (other than Northeastern Canada and west coast of Greenland) contributing to more frequent and severe coastal flooding and shoreline retreat along sandy coasts.

- Current Arctic sea ice cover (both annual and late summer) is at its lowest level since at least 1850 (high confidence) and is projected to reach practically ice-free conditions at its summer minimum at least once before 2050 under all scenarios.
STATE OF THE CLIMATE IN 2019

- Yearly since 1996, in Bulletin of the American Meteorological Society (with support from NOAA)
- Global in coverage
- Intended for a broad audience
- Includes changes in temperature, precipitation, snow, sea ice, sea level, ocean salinity, greenhouse gases
STATE OF THE CLIMATE IN 2019

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“The Arctic” section is based heavily on the Arctic Report Card
Key Message 4: Indigenous Peoples

The subsistence activities, culture, health, and infrastructure of Alaska’s Indigenous peoples and communities are subject to a variety of impacts, many of which are expected to increase in the future. Flexible, community-driven adaptation strategies would lessen these impacts by ensuring that climate risks are considered in the full context of the existing sociocultural systems.
Projected precipitation changes by season, 2071-2100 minus 1971-2000
[U.S. National Climate Assessment, 2013]
Arctic Reports

1995
Arctic Environment Report (1998)

2000
Arctic Climate Impact Assessment (2005)

2005
Snow, Water, Ice and Permafrost in the Arctic SWIPA (2011)

2010
SWIPA Update (2017)

2015
SWIPA Update (2021)

2020
Ecosystems Report (2023)

2025
Societal Impacts (2023)

Yearly since 1996
Chapter 3: The Changing Arctic: Indigenous Perspectives

Lead Authors: Henry Huntington, Shari Fox

Contributing Authors: Fikret Berkes, Igor Krupnik

Case Study Authors

**Kotzebue:** Alex Whiting

**The Aleutian and Pribilof Islands Region, Alaska:** Michael Zacharof, Greg McGlashan, Michael Brubaker, Victoria Gofman

**The Yukon Territory:** Cindy Dickson

**Denendeh:** Chris Paci, Shirley Tsetta, Chief Sam Gargan, Chief Roy Fabian, Chief Jerry Paulette, Vice-Chief Michael Cazon, Sub-Chief Diane Giroux, Pete King, Maurice Boucher, Louie Able, Jean Norin, Agatha Laboucan, Philip Cheezie, Joseph Poitras, Flora Abraham, Bella T’selie, Jim Pierrot, Paul Cotchilley, George Lafferty, James Rabesca, Eddie Camille, John Edwards, John Carmichael, Woody Elias, Alison de Palham, Laura Pitkanen, Leo Norwegian

**Nunavut:** Shari Fox

**Qaanaaq, Greenland:** Uusaqqak Qujaukitsoq, Nuka Møller

**Saami:** Tero Mustonen, Mika Nieminen, Hanna Eklund

**Climate Change and the Saami:** Elina Helander

**Kola:** Tero Mustonen, Sergey Zavalko, Jyrki Terva, Alexey Cherenkov
Chapter 2: Stakeholder perspectives

Lead authors: Henry Huntington
Laura Eerkes-Medrano

20 “Community perspectives”

A. Alaska coastal North Slope (Ulgunik)
B. Conservation and tradition (Kuskokwim River)
C. Inuit subsistence hunting (Ulukhaktok, NWT)
D. Community health (Ulukhaktok, NWT)
E. Russian Association of Indigenous Peoples of the North (RAIPON)

S. Arctic oil and gas (Johnny Lennie, Inuvialuit beneficiary)
T. Pevek and Chaun-Chukotka
What are the main “climate messages” for the Arctic and Alaska in these reports?

Key message #1: Climate change is occurring most rapidly in the Arctic, and this will continue.

Arctic climate warming is already accelerating with the average annual temperature increasing at rates 2 to 3 times the global average. The extent of warming depends on future emissions.

This will in general result in:

- increased precipitation, falling as rain rather than snow,
- increased events of rain-on-snow,
- diminished snow cover, season and depth,
- thawing permafrost,
- sea-level rise (up to 0.5 m locally).
Freezing rain events are expected to increase in the Arctic

from Forbes et al. (2016)
Key message #2:

The future carbon emission scenario matters for the Arctic

Arctic sea ice and terrestrial snow cover continue to decline under moderate and high emission scenarios, but stabilize under an aggressive mitigation scenario

From AMAP (2021 Arctic Climate Update)
Probability of a sea-ice-free Arctic is nearly 10 times greater with a global warming of 2°C vs. 1.5°C (Paris Agreement target)

From AMAP’s 2021 Arctic Climate Update
1-meter soil temperatures: reds = areas above freezing

[Images of maps showing temperature changes from 2000-09 to 2090-99 for low and high emission scenarios]

[from S, Marchenko, UAF/GI Permafrost Laboratory]
How can indigenous perspectives be better integrated into these assessments?

How can these reports be made more useful to Alaska’s communities?

-- engagement from the start

-- key points of contact at both ends

-- sustained alliances
Imminent opportunities

1) AMAP Societal Implications report (2023)
   lead authors: Sarah Trainor, sarah.trainor@alaska.edu
   Vera Hausner, vera.hausner@uit.no

2) National Climate Assessment (2023), Alaska chapter
   lead author: Henry Huntington, henryphuntington@gmail.com
THE STATUS OF TRIBES AND CLIMATE CHANGE REPORT

AUGUST 2021

Written by the STACC Working Group
Convened by the Institute for Tribal Environmental Professionals
Status of Tribes and Climate Change Report (STACC)

http://nau.edu/stacc2021
"The Status of Tribes and Climate Change Report (STACC) seeks to uplift and honor the voices of Indigenous peoples across the U.S. to increase understanding of Tribal lifeways, cultures, and worldviews, the climate change impacts Tribes are experiencing, the solutions they are implementing, and ways that all of us can support Tribes in adapting to our changing world."
Key Messages in Two Broad Themes

• Respect and uphold Tribal Sovereignty and Self-Determination
• Integrate holistic responses in line with Tribal Values
Understanding Tribal Sovereignty

• Indigenous peoples are not stakeholders, but self-governing and sovereign societies

• Terms / Concepts Explained:
  • Tribal Sovereignty
  • Self-Determination
  • Federal Trust Responsibility
  • Consultation
    • Government-to-government consultation must occur from the beginning stages of all decision-making that could potentially impact tribes
Impacts and Solutions by Topic

- Ecosystems and Biodiversity
  - Air
  - Water
    - Drinking Water Infrastructure
- Health and Wellbeing - includes Food Security
- Economic Development: Renewables, Sustainable Economies, & Carbon Offsets
- Energy and A Just Transition
- Cultural Resources
- Emergency Management
- Protection-In-Place & Community-Led Relocation
- Solid Waste
- Emerging Topics
34 Narratives – Sharing Experience

- Southeast Alaska Tribal Ocean Research (SEATOR) formed by 15 Tribes
- Better understand how species of shellfish can be gathered with less risk of exposure to toxins

Kotlik’s experience to assess long-term risks to current community and habitability of two community recommended relocation sites

SEATOR partners at the 2019 annual SEATOR Workshop

Home affected by permafrost and erosion and that is a first priority to move away from the riverbank. However, it cannot be moved due to an unstable foundation.
Clarifying and Quick Reference Chapters

- Notes on Terminology
  - Clarifies and provides guidance
  - Validates use on Indigenous terms
- Worldviews, Knowledges and Social Impacts
- Emerging Issues
- Conclusions, Key Messages and Recommendations
- Funding Resources
  - Identifies major themes with funding
How Can These Reports Be Used?

- Outreach events
  - Meetings, trainings, gatherings
- Funding opportunity - proposal writing
- Advocacy and responding to policy and regulatory proposals or changes
- Adaptation planning and Vulnerability Assessments
  - Mainstreaming climate in existing plans
  - Use in developing plans/assessment

NOTE: Ask for support when clarification or explanation is needed
Moving water carves a path

Inspire    Empower    Be persistent

“Transformative policy passes when the public demands government actions that are more aligned with our culture and values.”

~Nikayla Jefferson, Sunrise Movement

*excerpt from Required Reading: Climate Justice Adaptation and Investing in Indigenous Power
OUR YOUTH TAKING A STAND TO FIGHT FOR STRONG CLIMATE POLICIES TO ENSURE THE SURVIVAL OF FUTURE GENERATIONS

ALASKA FEDERATION OF NATIVES
2020 ANNUAL CONVENTION
RESOLUTION 20-56

TITLE: DECLARATION FOR CLIMATE CHANGE STATE OF EMERGENCY IN ALASKA

WHEREAS: The Alaska Federation of Natives (AFN) is the largest statewide Native organization in Alaska and its membership includes 103 federally recognized tribes, 95 village corporations, 17 regional corporations and 82 regional nonprofit and tribal consortia that contract and compact to run federal and state programs; and

WHEREAS: the mission of AFN is to enhance and promote the cultural, economic, and political voice of the entire Alaska Native community; and

WHEREAS: The First Alkiks Institute Elders and Youth Conference is the largest statewide convening of Alaska Native Elders and youth representing our diverse Alaska Native cultures and language groups in order to enhance and perpetuate the unique spirits and identities of our people; and

WHEREAS: The purpose of the Elders and Youth Conference is to connect Elders and youth for cultural knowledge transmission, strengthen statewide relationships, amplify the power of participants as leaders today, and advance solutions such as these resolutions to challenges faced by our Native peoples and our communities; and

WHEREAS: We the Indigenous youth and future leaders of Alaska are concerned for the survival of our future generations, ways of life, traditional lands, scarce ecosystems, emotional, spiritual, and mental well-being due to Climate Change; and

WHEREAS: Our Indigenous lands and waters are warming at twice the rate as the rest of the world. Many communities across the state face hardships directly correlated with Climate Change, such as the extreme warming temperatures which melt the permafrost, causing mass erosion, resulting in the relocation of entire communities along with decreasing the health of our animals and plant relatives. These impacts have disrupted Indigenous seasonal hunting and gathering traditions; and

WHEREAS: In recent years we have lost community members due to unpredictable and unstable weather conditions, have seen the die-off and clean-up of fields, salmon, migratory birds, shellfish, whales, polar bears, and recognize that these are also our relatives; and
“You know, a lot of times you’d see contractors based in Fairbanks or Anchorage,” Bifelt said. “And it’s always kind of challenging, because they come in, they bring in a lot of their own labor and it was always kind of tough for me to see that.”

ANRI focuses on hiring locals for their installation projects. In a recent project in the village of Hughes, Bifelt said the only people not from the community were himself and his electrical administrator.
Self-determination and Sustainability

In the aftermath of our fight against the Dakota Access Pipeline (#NoDAPL), we renewed and deepened our commitment to self-determination through institution building and renewable energy development. This effort, which had been a priority for the Tribe for many years, is now being realized through the creation of the SAGE Development Authority. In this effort, we will justly transition from fossil fuel dependence and exploitation to self-determination and sustainability.

SAGE is an acronym that means “Strategic Advancement Goals for the Environment”.
Resources


Forthcoming DOI Tribal Climate Listening Sessions

- **Youth Issues**
  - October 13th, 7-9 PM AKT
- **Adaptation, Mitigation, & Relocation in lower 48**
  - October 28th, 4-8 PM AKT
- **Relocation, Managed Retreat, Protect-in-Place Issues in AK**
  - November TBD, at Alaska BIA Providers Conference
- **AK TRLN Info Session & Network Call for new AK BIA Tribal Award Recipients**
  - October 20th, 11AM AST
Dogidihnh, Thank You

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