INTRODUCTION
Mission Statement

Established by the Tribes to advocate as the united voice of federally recognized American Indian and Alaska Native Tribes, NIHB seeks to reinforce Tribal sovereignty, strengthen Tribal health systems, secure resources, and build capacity to achieve the highest level of health and well-being for our People.
HOUSEKEEPING ITEMS

- Recorded and posted online
- Keep phones muted please
- Questions at dedicated times
- Survey
10th Annual Tribal Public Health Summit

- May 13-15 in Albuquerque
CLIMATE READY TRIBES

- HOST ENVIRONMENTAL HEALTH AND CLIMATE CHANGE TRACK AT SUMMIT (& SCHOLARSHIPS)
National Indian Health Board

Climate Change & Tribes: Exploring Current Impacts and Future Predictions for America’s First People

January 14, 2019

Imagine a world where one Arctic summer per decade is too warm to support the sea ice that helps maintain our global ecosystem and environment, directly impacting the people and animals of these far north communities. A world where coral reefs, once bustling with the rich diversity of sea life, have all but completely disappeared from the oceans. A world where mass global migration from tropical areas leads to a drastic
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CLIMATE READY TRIBES

LEARNING COMMUNITY

- Nearly 700 members
- Webinars (like this one!) and an in-person event at Tribal Public Health Summit
- NIHB is seeking webinar presenters!

Next webinar: Thursday, April 18 at 3:00 pm ET
“Enhancing Relationships between Tribal and State Governments”
CLIMATE READY TRIBES

• FUNDING & SUPPORT

Awardees Include

First cohort
- Blackfeet Nation
- Swinomish Indian Tribal Community
- Village of Wainwright

New cohort
- Kaw Nation (mini-award)
- Lummi Nation
- Pala Band of Mission Indians
- Sitka Tribe of Alaska
For thousands of years, American Indian and Alaska Native people lived in harmony with the land, taking what they needed for physical, cultural, and spiritual purposes.
DESPITE THIS TREMENDOUS RESPECT FOR THE ENVIRONMENT, TRIBES NOW FIND THIS BALANCE AND HARMONY IS SLIPPING AWAY DUE TO CLIMATE CHANGE.
AND TRIBES ARE OFTEN THE FIRST AND MOST SEVERELY AFFECTED BY ENVIRONMENTAL HARMs.
WHAT IS CLIMATE CHANGE?
WHAT IS CLIMATE CHANGE?

Solar radiation enters Earth’s atmosphere

Some solar radiation is reflected back into space

Greenhouse gases (increasing) act like a blanket

Solar radiation is trapped in Earth’s atmosphere
HOW DOES CLIMATE CHANGE AFFECT HEALTH?
How is Climate Change Affecting Health?

**Affecting Health Directly**
- Extreme Heat
- Air Pollution
- Extreme Weather

**Spreading Disease**
- Diseases Spread by Insects, Ticks, and Rodents
- Contaminated Water
- Contaminated Food

**Destroying & Disrupting Food Supplies**
- Hunger and Malnutrition

**Disrupting Well-Being**
- Mental Health Problems
Higher heat, increased humidity, longer and more frequent heat waves can lead to:

**dehydration and heatstroke**

**More Vulnerable:** Outdoor workers, student athletes, people in cities, people without air conditioning, people with chronic diseases, pregnant women, elders, and young children
AFFECTING HEALTH DIRECTLY
AIR POLLUTION

Increased wildfires, smog, pollen, and mold can lead to:

asthma and allergy attacks

More Vulnerable: People with heart and respiratory conditions such as heart disease, asthma, or chronic lung disease
Increased frequency and severity of heavy downpours, floods, droughts, and major storms can lead to:

**injury, illness, displacement, and death**

**More Vulnerable:** People who lack access to evacuation routes and people who can’t use stairs when elevators are out of service, people in wheelchairs, elders, low-income people, and people with disabilities, particularly if they are unable to access elevators and evacuation routes
SPREADING DISEASE

INSECTS, TICKS, AND RODENTS

Higher temperatures, changes in rain patterns, and disrupted ecosystems help spread:

diseases carried by insects, ticks, and rodents

More Vulnerable: People who spend more time outdoors in places where these insects and other disease-carriers live
Higher water temperatures, heavier downpours, rising sea levels, and more flooding help spread:

gastrointestinal illness, diseases from toxins in swimming areas and drinking water

More Vulnerable: Children, elders, people with weakened immune systems, people in remote or low-income communities with inadequate water systems, and people in communities that are dependent on fish and shellfish
Increasing temperatures, humidity, and extreme weather events help spread:

**ILLNESSES FROM BACTERIA AND TOXINS IN FOOD**

**More Vulnerable:** Infants, young children, elders, the poor, agricultural workers, and people with weakened immune systems.
Increasing temperatures, humidity, and extreme weather events can lead to:

undernutrition, vitamin deficiencies

More Vulnerable: Infants, young children, pregnant women, elders, and poor communities
Increased frequency and severity of extreme weather events can lead to:

**stress, depression, anxiety, PTSD, and suicidal thoughts**

**More Vulnerable:** Children, elders, pregnant and postpartum women, people with mental illnesses, low-income people, homeless people, first responders, and people who rely on the environment for their livelihood
TRIBES ARE MORE VULNERABLE

TRIBES ARE OFTEN THE FIRST AND MOST SEVERELY AFFECTED
TRIBES FACE EXISTING HEALTH DISPARITIES

- Higher rates of many diseases, including lower respiratory illness and diabetes
  - E.g. >50% of adults in some AI/AN communities are diagnosed with diabetes
- These diseases can make Tribes more vulnerable to other health effects
- Indian Health care system is underfunded – estimated less than 50% of need

Note: This flow chart and the flow charts on next slides show examples of how these risk factors make Tribal communities or Tribal members more vulnerable to the effects of climate change.
TRIBES FACE OTHER, GENERAL DISPARITIES

• Many Tribal communities face poverty and high jobless rates
  – Nearly ¼ of AI/AN families live below poverty line [1]
• Many Tribes are isolated in remote rural areas
• These factors increase vulnerability to harm and reducing options for alternate solutions
TRIBES FACE FOOD CHALLENGES

• Tribes may live in isolated areas with few grocery options available
  – Foods may have limited selection or be highly processed or expensive
• Traditional foods (such as gathered berries, hunted meat, or fished salmon or clams) may be the cheapest, healthiest options
  – Climate change nearly always harms traditional foods
• Traditional foods also have spiritual and cultural importance

Family has always eaten traditional foods
Climate change affects animal migration patterns and growing seasons
Traditional foods are not readily available and family is forced to buy food
Foods available at the grocery store are unhealthy and expensive
Family faces financial struggle, diabetes, and mental health challenges
“HUNTING AND SHARING FOOD IS NOT JUST A WAY TO MEET YOUR BASIC NEEDS, BUT IS PART OF THE FABRIC OF SOCIAL LIFE,” EXPLAINS DR. KIRMAYER, DIRECTOR OF MCGILL UNIVERSITY’S SOCIAL AND TRANSCULTURAL PSYCHIATRY UNIT, QUOTED IN A 2017 NEW YORK TIMES ARTICLE. [2]

“YOU CAN FIND ANOTHER WAY TO GET YOUR CALORIES, BUT IN SO DOING, YOU MAY BE LOSING COMPANIONSHIP, SOLIDARITY AND YOUR SENSE OF SELF.”
TRIBES FACE WATER CHALLENGES

• Water is sacred – the lifeblood of healthy land and people and key for Tribes to follow traditional practices which benefit their physical, mental, and spiritual health

• Tribes already face water disparities due to poor infrastructure, underfunding, and challenges with Tribal maintenance [3]

• Warmer temperatures can decrease water levels, change precipitation patterns, and impact the species that are used by Tribes for food or other needs

• Climate change can cause draught, flooding, storm surges, and mold – especially difficult to manage in under-resourced and low-income Tribal communities
TRIBES LIVE CLOSER TO THE LAND

• Many Tribal members live closer to the land
  – May spend more time outdoors for work, subsistence activities, or cultural or spiritual reasons
  – May participate in hunting, fishing, gathering
  – Recognize unity and connections between the environment and all living things (animals, plants, people)
TRIBES HAVE HOLISTIC DEFINITIONS OF HEALTH

• Physical health is not the only way Tribes define health
• Tribes may consider health to include things like:
  – Sense of place
  – Identity
  – Community
  – Connection to lands, cultures, languages, and traditions
• Climate change affects physical and non-physical health
Example of non-physical indigenous health indicators identified by Swinomish Indian Tribal Community (in northwest Washington state)
CLIMATE CHANGE HARMS General Wellbeing

- Climate change can harm or destroy:
  - Homes
  - Cultural sites
  - Sources of income/subsistence
  - Traditional ways of life
  *Many Tribal communities are underserved, low-resources and low-income, worsening these problems
- Tribes have already lost so much in the past centuries
ALASKA HAS SPECIAL CONSIDERATIONS

• 229 federally-recognized Tribes call Alaska home
• The Arctic is warming twice as fast as the rest of the planet
• Some communities have few opportunities for full-time employment and rely on subsistence foods
• 86% percent of Alaska Native villages are at risk of climate-related damage such as flooding and erosion
• 31 villages meet criteria for long-term relocation – taking away homelands where their ancestors have lived since time immemorial
• Alaska Native people traditionally store food in permafrost ice cellars buried in the ground, but warming can make this less safe or reliable [4]
• In communities with no roads in or out, changing weather patterns can upend traditional means of transport, leading to isolation and requiring alternate transportation which can lead to unintentional injury or death as well as mental harms such as loneliness, depression, stress, anxiety, suicidal ideation, substance abuse, and domestic violence [5]
Examples of Climate Change’s Impacts on Tribes Nationwide

**Pacific Northwest**
Climate-induced aquatic changes are altering the ecosystems that support wild salmon, an economic, cultural, and dietary cornerstone of tribes in this area.

**Great Lakes**
Decreased water levels and increased water temperature could mean the disappearance of some subsistence species and the spread of invasive species introduced by shipping.

**Alaska**
Coastal villages are subject to increased flooding and erosion due to ice shelf melting, and warmer temperatures may allow the introduction of new disease vectors.

**Southwest**
Rivers here are fed by spring thaw runoff. Changing trends in river flow threaten the agricultural and tourism industries and could force an increase in reliance on unsustainable natural resource extraction.

**Florida**
Rising average temperatures and the resulting soil changes, along with increased coastal flooding could threaten citrus and sugarcane operations that sustain the Seminole economy.

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QUESTIONS & DISCUSSION

PLEASE USE CHAT BOX, NOT Q&A BOX
THANK YOU!
SOURCES CITED


