

Tribes, Climate Change, and Health

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**TRIBAL CLIMATE
HEALTH PROJECT**



- National, federally-funded capacity building program led by the Pala Band of Mission Indians
- Training
- Resources
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tribalclimatehealth.org/resources-clearinghouse/

TRIBAL CLIMATE HEALTH PROJECT

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Resources Clearinghouse

This clearinghouse houses hundreds of resources related to climate change and health, including resources specific to tribal impacts. Please use the filters on the right to navigate and explore the resources. Resources will continue to be added. To suggest additional resources to be included in this clearinghouse, please [complete this form](#).

If you would like view resources on the map, please visit [this page](#).

Featured Resource

The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment

THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH

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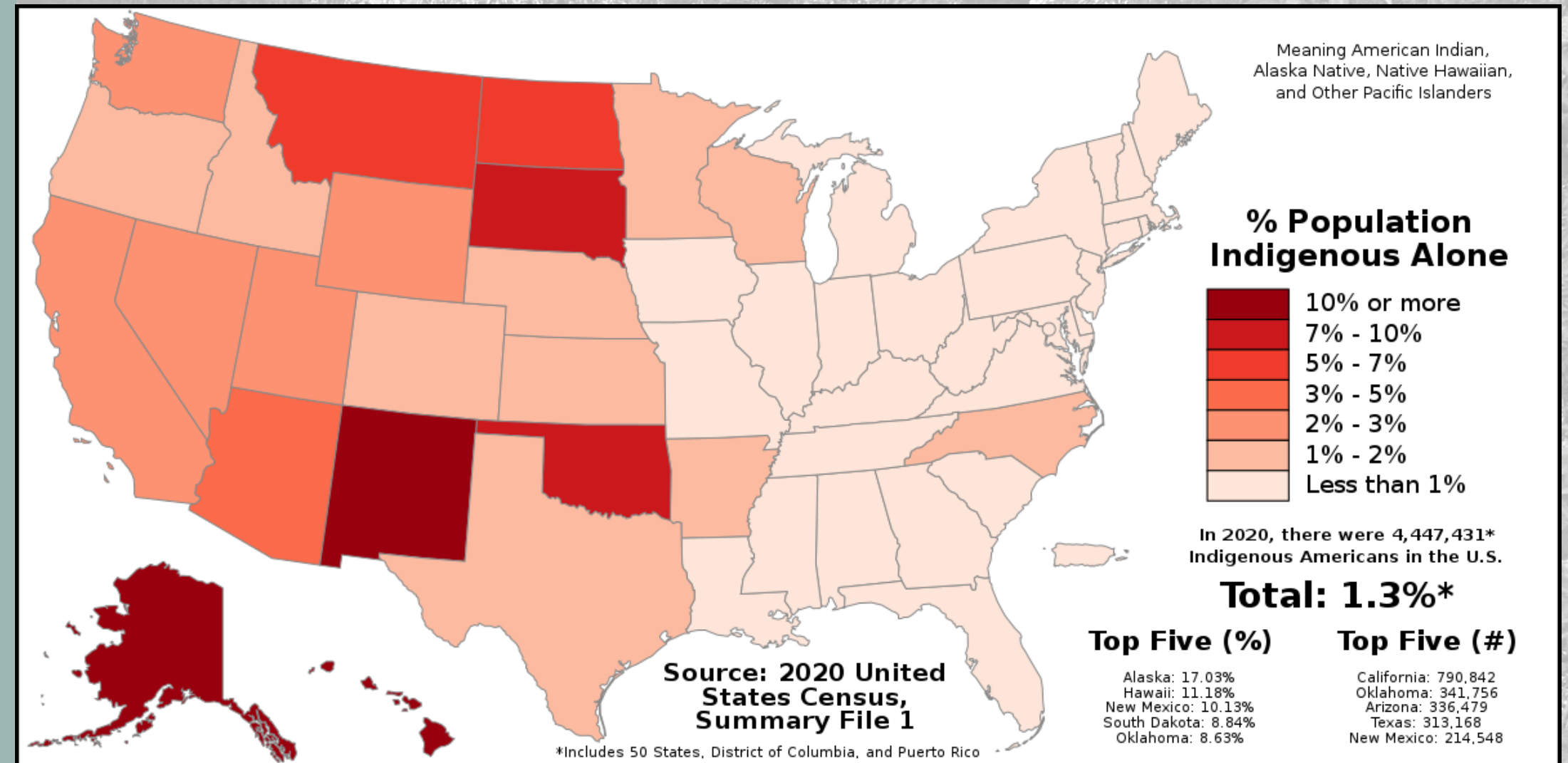
- + Topics Covered
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Tribes in the United States

- 574 federally-recognized Tribes
- 5.7 million American Indian and Alaska Native (AIAN) people in the US
- ~2% of the US population



Tribes in the United States

- 55 million acres
- 14 states with more than 100,000 AIAN residents
- Median age: 31
- Reservation poverty rate: 36%
- Uninsured: 26.9%



Tribes and Health

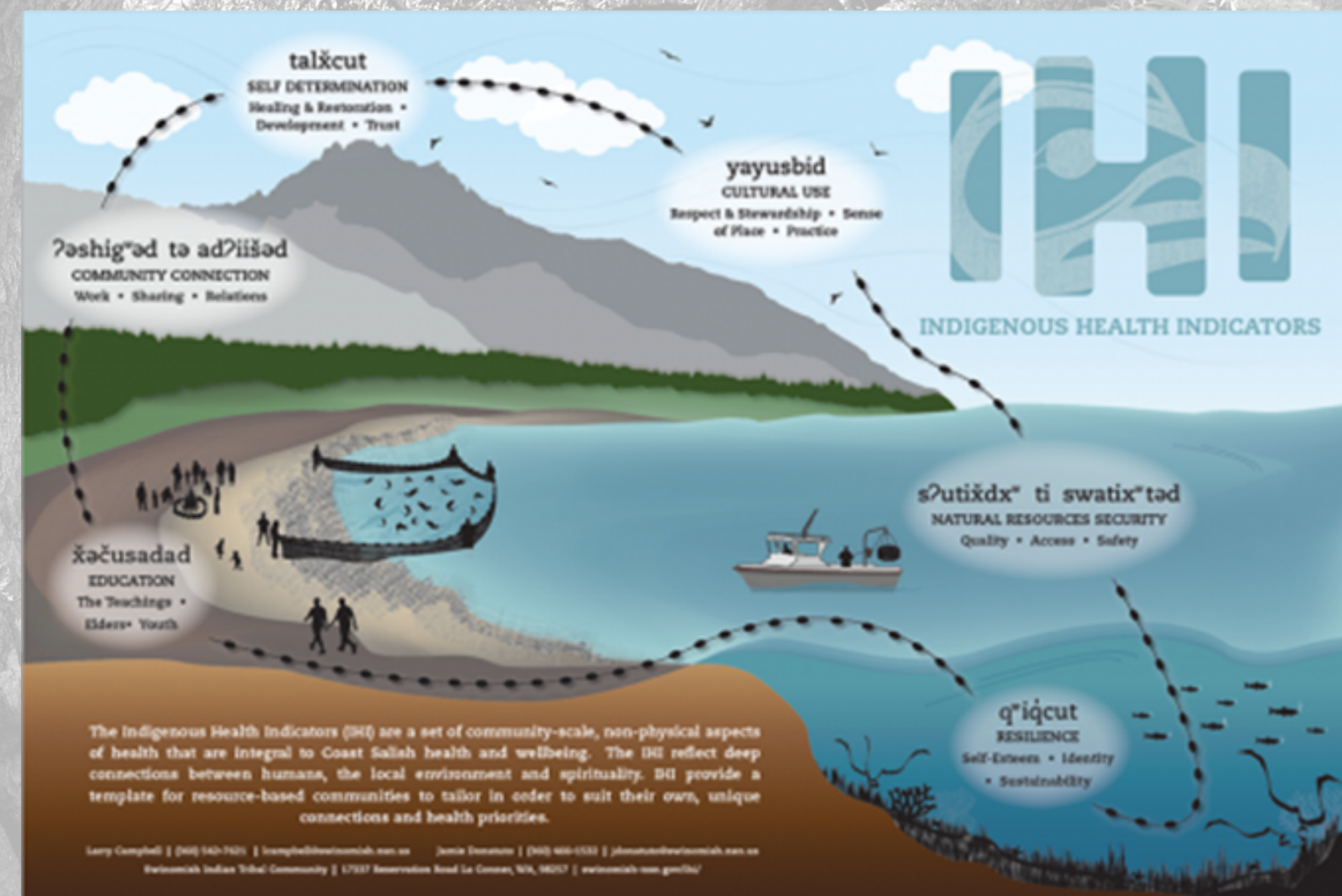
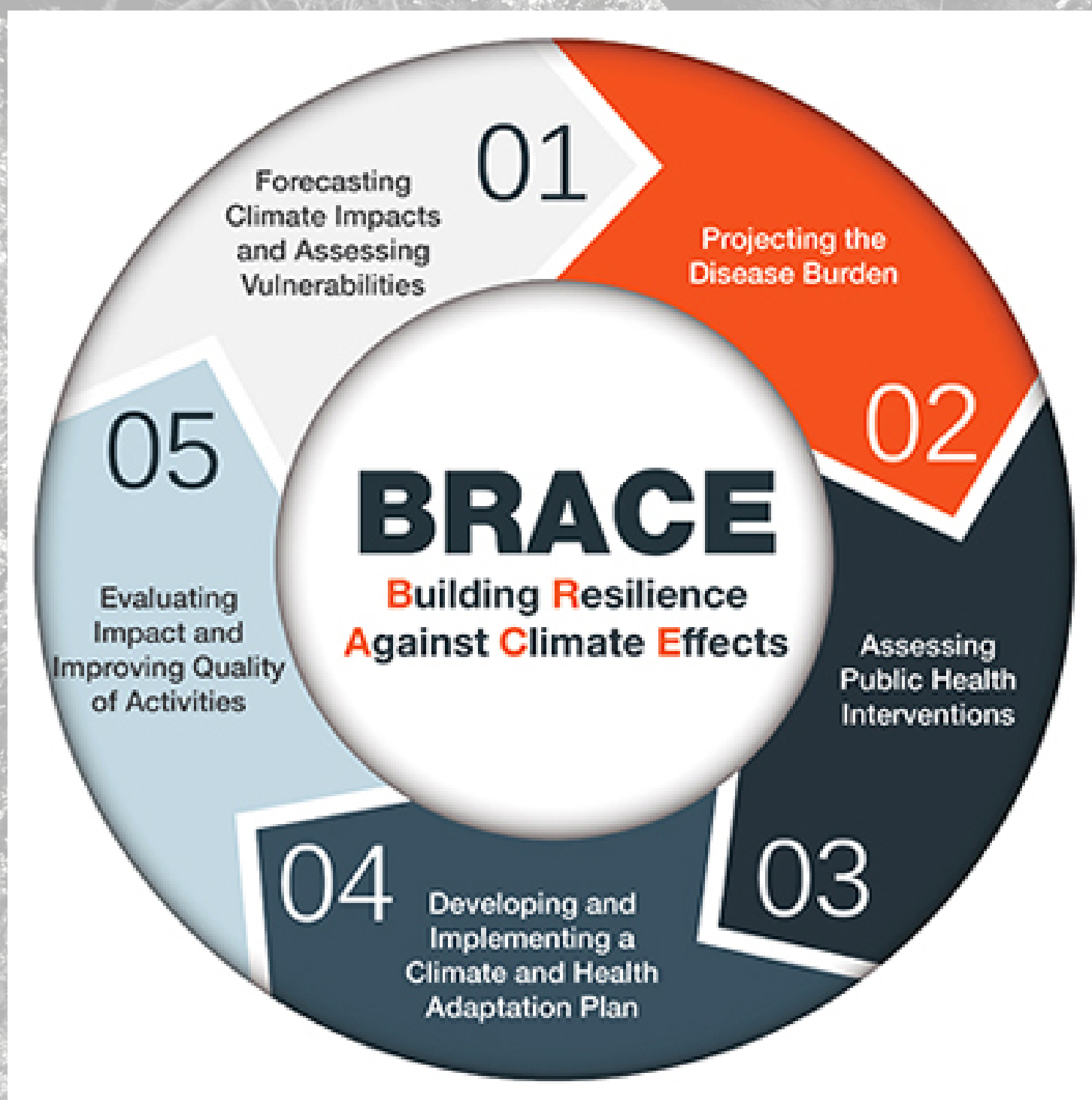
Tribes define health more broadly/holistically than just the absence of medical disease.

“Nobody can be in good health if he does not have all the time fresh air, sunshine and good water.”

Flying Hawk (Chief) 1854 – 1931,
Oglala Lakota

“Our environment was rich in the wealth of natural resources, providing all our needs, allowing us to live healthy happy lives!”

Puyallup Tribe

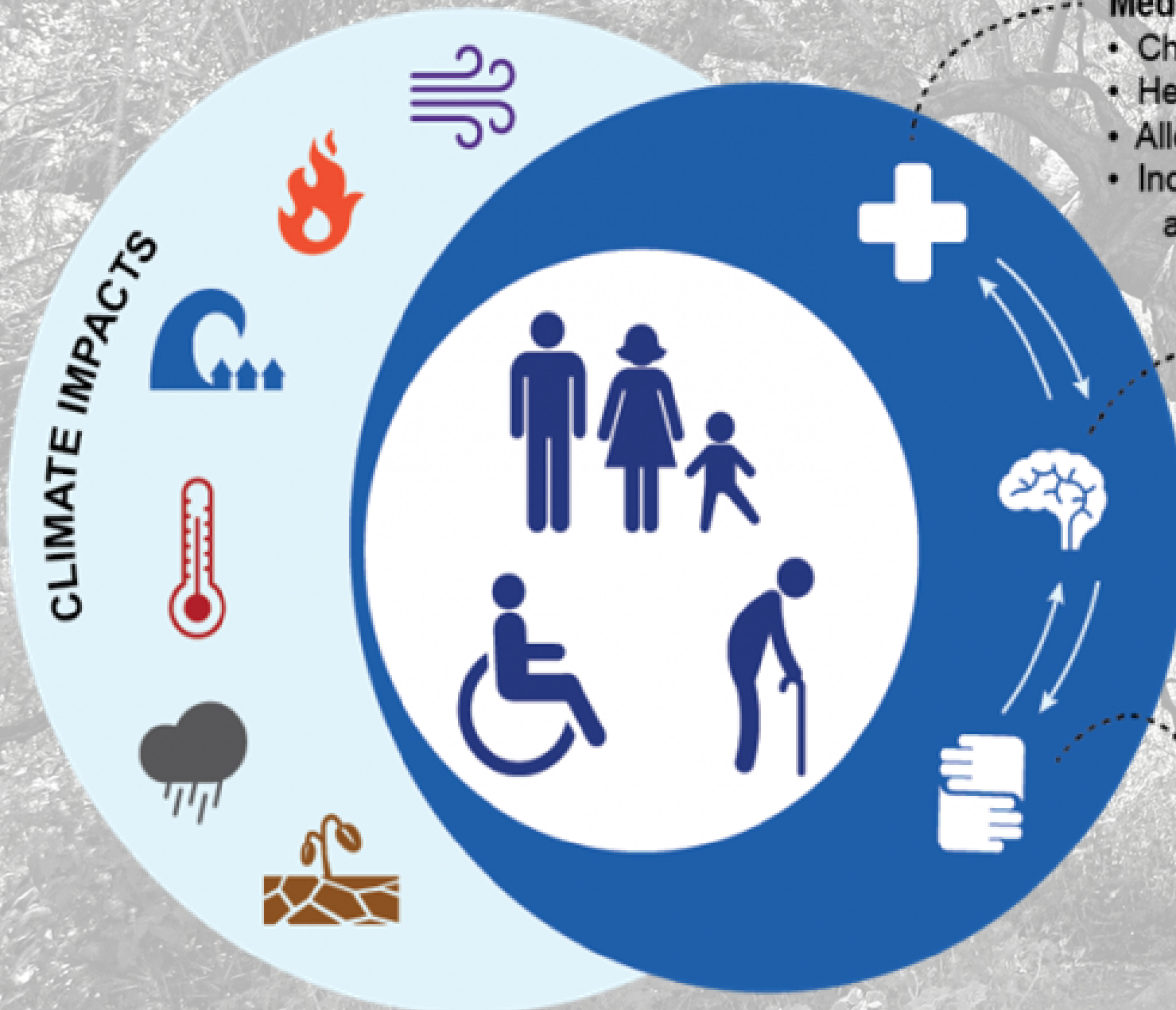


swinomish-nsn.gov/story/index.html

cdc.gov/climateandhealth/BRACE.htm

Tribes and Health

Tribal health is already at risk.



Medical and Physical Health

- Changes in fitness and activity level
- Heat-related illness
- Allergies
- Increased exposure to waterborne and vector-borne illness

Mental Health

- Stress, anxiety, depression, grief, sense of loss
- Strains on social relationships
- Substance abuse
- Post-traumatic stress disorder

Community Health

- Increased interpersonal aggression
- Increased violence and crime
- Increased social instability
- Decreased community cohesion

| | Climate Driver | Exposure | Health Outcome | Impact |
|---|---|--|---|---|
| Extreme Heat | More frequent, severe, prolonged heat events | Elevated temperatures | Heat-related death and illness | Rising temperatures will lead to an increase in heat-related deaths and illnesses. |
| Outdoor Air Quality | Increasing temperatures and changing precipitation patterns | Worsened air quality (ozone, particulate matter, and higher pollen counts) | Premature death, acute and chronic cardiovascular and respiratory illnesses | Rising temperatures and wildfires and decreasing precipitation will lead to increases in ozone and particulate matter, elevating the risks of cardiovascular and respiratory illnesses and death. |
| Flooding | Rising sea level and more frequent or intense extreme precipitation, hurricanes, and storm surge events | Contaminated water, debris, and disruptions to essential infrastructure | Drowning, injuries, mental health consequences, gastrointestinal and other illness | Increased coastal and inland flooding exposes populations to a range of negative health impacts before, during, and after events. |
| Vector-Borne Infection (Lyme Disease) | Changes in temperature extremes and seasonal weather patterns | Earlier and geographically expanded tick activity | Lyme disease | Ticks will show earlier seasonal activity and a generally northward range expansion, increasing risk of human exposure to Lyme disease-causing bacteria. |
| Water-Related Infection (Vibrio vulnificus) | Rising sea surface temperature, changes in precipitation and runoff affecting coastal salinity | Recreational water or shellfish contaminated with Vibrio vulnificus | Vibrio vulnificus induced diarrhea & intestinal illness, wound and blood-stream infections, death | Increases in water temperatures will alter timing and location of Vibrio vulnificus growth, increasing exposure and risk of water-borne illness. |
| Food-Related Infection (Salmonella) | Increases in temperature, humidity, and season length | Increased growth of pathogens, seasonal shifts in incidence of Salmonella exposure | Salmonella infection, gastrointestinal outbreaks | Rising temperatures increase Salmonella prevalence in food; longer seasons and warming winters increase risk of exposure and infection. |
| Mental Health and Well-Being | Climate change impacts, especially extreme weather | Level of exposure to traumatic events, like disasters | Distress, grief, behavioral health disorders, social impacts, resilience | Changes in exposure to climate- or weather-related disasters cause or exacerbate stress and mental health consequences, with greater risk for certain populations. |

Tribes and Health

Tribes are disproportionately vulnerable AND uniquely resilient.

“Climate change threatens Indigenous peoples’ livelihoods and economies, including agriculture, hunting and gathering, fishing, forestry, energy, recreation, and tourism enterprises. Indigenous peoples’ economies rely on, but face institutional barriers to, their self-determined management of water, land, other natural resources, and infrastructure that will be impacted increasingly by changes in climate.”

Key Finding, Fourth National Climate Assessment

Household and Community Infrastructure

Many Indigenous communities struggle with poor economic conditions that limit their ability to provide adequate household and local infrastructure. For example, an estimated 12% of households lack a safe water supply or wastewater disposal.

Regional Systems Infrastructure

Many Indigenous communities are located in areas that lack robust and redundant regional systems for transportation, communication, water, and power, increasing their vulnerability to system damages and outages that disrupt businesses and incur high costs to repair.



Essential Services

Many Indigenous communities currently lack adequate public services like disaster response, policing, and health services that rely on infrastructure and support local businesses and economies. Climate disruptions to community and regional infrastructure act as additional strains on these services.

Tribes and Climate Change

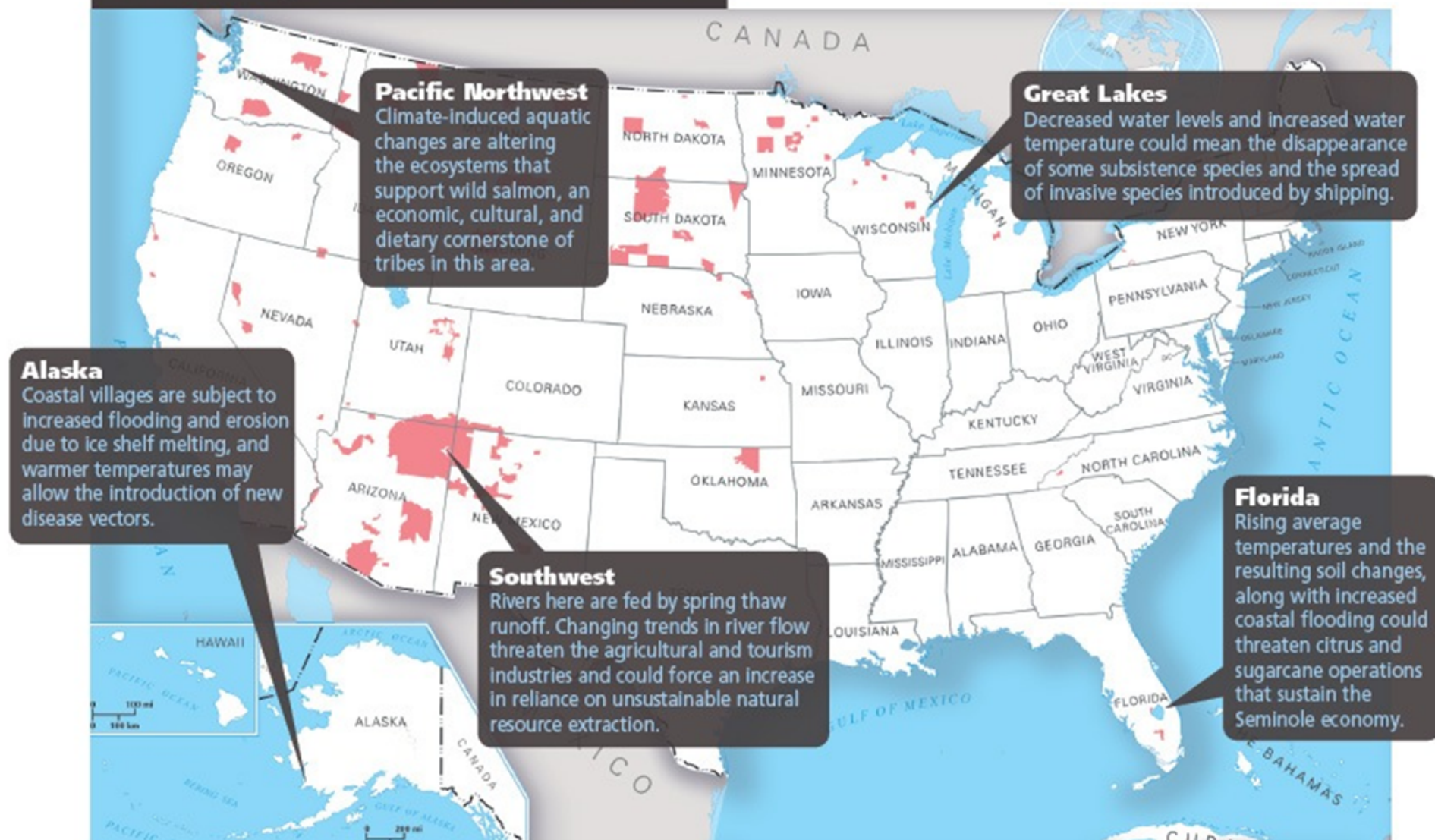
Each Tribal community is unique.

- Climate change exacerbates disproportionate health outcomes
- Water and food insecurity
- Displacement/relocating may mean loss of culture, community, sovereignty, and rights
- Loss of ecological health can mean loss of livelihoods
- Underfunded public health services
- Adaptation involves navigation of complex federal laws, treaty rights, and true engagement, consultation, and consent

Tribes and Climate Change

Climate change affects Tribes in different ways in different places.

Climate Change Affects Tribes Nationwide



Tribal lands are indicated in pink. Sources: map—www.nationalatlas.gov; climate change effect predictions—Hanna JM. 2007. Native communities and climate change: protecting tribal resources as part of national climate policy. Boulder, CO: Natural Resources Law Center / NWF. 2007. Overview of recent research: effects of global warming on the Great Lakes [fact sheet]. Ann Arbor, MI: National Wildlife Federation.

Tribes, Climate Change, and Health

Tribal health is physical, emotional, cultural, social, and spiritual.

Bishop Paiute Tribe:

Drought and beetle infestations have caused an increase in tree mortality, affecting culturally important foods (pine nuts and acorns) and increasing wildfire danger.

Middletown Rancheria of

Pomo Indians: Warmer water temperatures promote fish die-offs and toxic blue-green algal blooms in lakes and streams, which are unsafe for animals and humans, affecting cultural practices.

Navajo Nation:

Drought and heat are affecting water availability for traditional farming and herding practices, endangering cultural traditions and causing physical and mental health challenges.

Tribes, Climate Change, and Health

What can we do?

- Learn about the Tribes in your region
- Remember that each Tribe is unique
- Remember that each Tribal individual is unique
- Respect traditional knowledge and practices
- Learn about traditional foods and practices
- Remember that the environment, culture, and people are intricately intertwined
- Consider working for a Tribal health clinic

Thank you!

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