

Indigenous Health and Climate Change



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The Medical Society Consortium on
CLIMATE & HEALTH



Indigenous Health and Climate Change

The Medical Society Consortium on Climate & Health
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Overview

- Introduction
- Indigenous health and climate change
- Doctoral research



Nganyundi miimiga baabaga barrmarrany





Nganyundi miimiga baabaga barmarrany



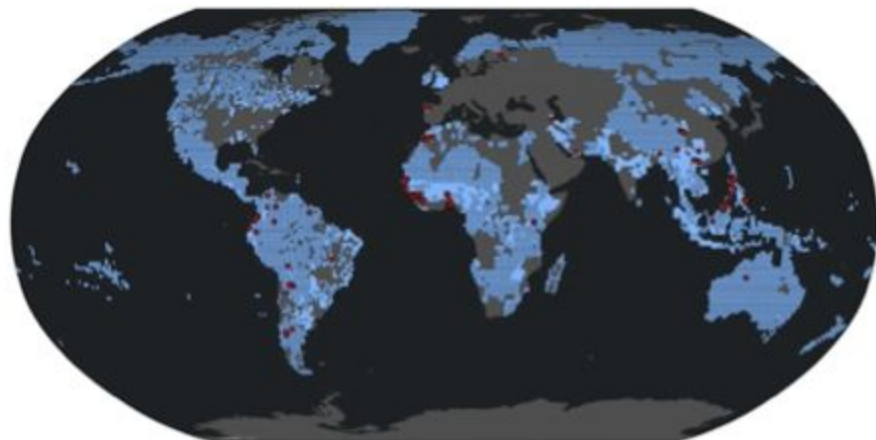




- The life expectancy gap between Indigenous and non-Indigenous males is **8.6** years, for females it's **7.8** years
- The rate of disease burden among Indigenous Australians is more than double that of non-Indigenous Australians, at **2.3**
- For Indigenous Australians, leading causes of avoidable deaths include:
 - coronary heart disease **21%**
 - diabetes **12%**
 - suicide and self-inflicted injuries **11%**
 - chronic obstructive pulmonary disease **8.8%**
 - cancer **8%**
- The age-standardised death rate is consistently higher for Indigenous Australians than non-Indigenous Australians for:
 - coronary heart disease; **26%** of the gap in avoidable mortality
 - diabetes; **18%** of the gap
 - chronic obstructive pulmonary disease; **13%** of the gap



- There are **250** Indigenous nations and languages, with **800** dialects
- Aboriginal and Torres Strait Islander peoples represent **3.8%** of the total population
- Our Elders make up **5.4%** of the total Indigenous population
- The median age is **24**
- In 2016, the total area of land in the Indigenous estate was **57%**, comprising of **4.38 million km²**

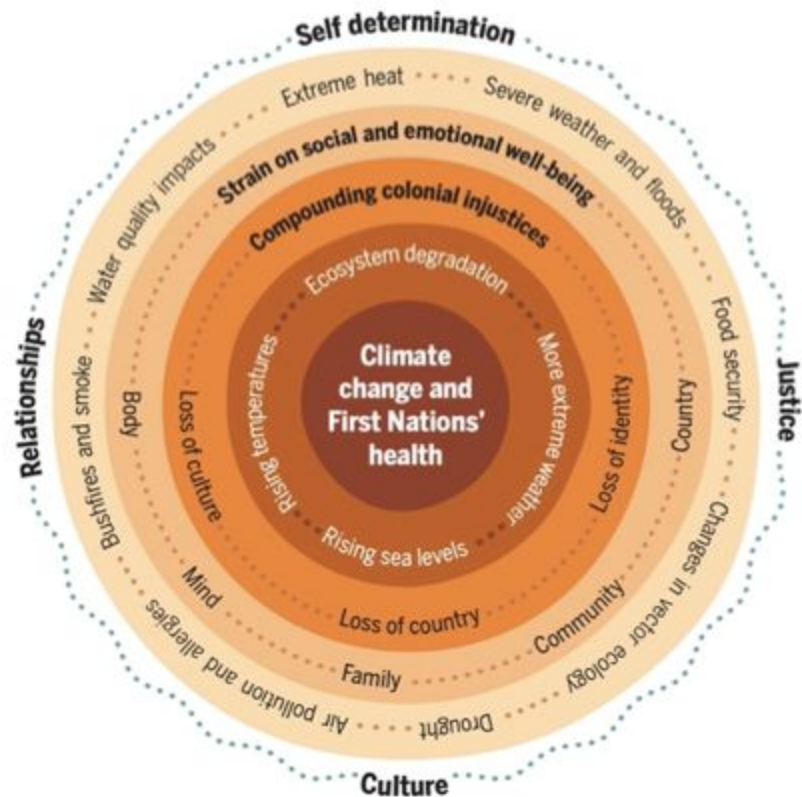


The extent of Indigenous peoples' and local communities' lands overlaid with potential ICCAs, scaled up to 1-degree grid cells to obscure boundaries

- Indigenous peoples' and local communities' lands
- Potential ICCAs
- Known ICCAs

- Indigenous peoples represent **6.2%** of the global population, at **476 million** people
- Indigenous languages consist of **57%** of the world's total languages
- In 2021, the total area of land in the global Indigenous estate was **32%**, comprising of **43 million km²**
- **81%** of these lands, or **35.4 million km²**, remain in good to moderate ecological condition, accounting for **39%** of the Earth's most ecologically intact lands
- Globally, Indigenous peoples protect and steward an estimated **80-95%** of the Earth's remaining biodiversity





Severe weather and floods

- Injuries and fatalities, loss of homes, indoor mold

Drought

- Water access, dust storms, bushfire risk

Extreme heat

- Heat-related illness and death, cardiovascular failure

Bushfires

- Injuries and fatalities, loss of homes, cardiovascular and respiratory issues

Air quality

- Asthma and allergies, cardiovascular and respiratory issues

Changes in vector ecology

- Ross River virus, Japanese encephalitis virus, Dengue fever, tuberculosis, melioidosis

Food safety and security

- Malnutrition, food insecurity, higher food prices, foodborne illnesses



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Sustainable Sovereignty:

Looking at relationship between the health of
wajaarr (Country) and *waarru-biin* (people),
and its contribution towards environmental,
climate, and health solutions.





Purpose of the study

- Reposition Country as health
- Building an evidence-base for my Countries & communities
- Advocating for First Nations Knowledges within the environmental, climate, and health spaces



Mid-North Coast of New South Wales

- Gumbaynggirr
- Dunghutti
- Bundjalung

Southeast-Queensland

- Wakka Wakka
- Kabi Kabi
- Jinibara





Knowledge Holder walking through
Gumbaynggirr wajaarr to make
cultural tools



Elder sitting on Dunghutti Country



Ranger holding a Bunya nut on
Wakka Wakka Country





Phase 1:
Conceptual Framework

What is the relationship between the health of Country and community?

Phase 2:
Measurement Approach

What are the indicators of the health of Country and community?

Phase 3:
Policy Application

How can environmental, climate, and health solutions preface this relationship, and Indigenous peoples' rights?



Ways of relating

- Country = Country
- People = Country
- Country = People
- People = People



Principles

- Relationship to Country
- Looking after Country
- Ancestors and Old People
- Passing on Knowledge

Practices

- Language
- Fire

Indicators

- Infinite

Policy Application

- Environment
- Climate
- Health

Indigenous ways of relating = ontology

Indigenous ways of thinking = epistemology

Indigenous ways of doing = axiology

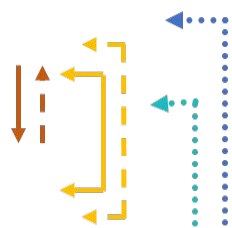
Paradigm



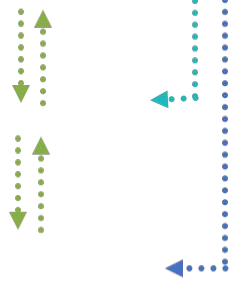


- contributes to
 -- exacerbated by
 ... improves
 ECH environment, climate, health

	Climate crises		
	Air quality: bushfires	Extreme heat	Food insecurity
Impact on People	Asthma	Cardiovascular failure	Diabetes
Impact on Country	Scorched Country	Dry, diminished waterways	Unbalanced ecosystem

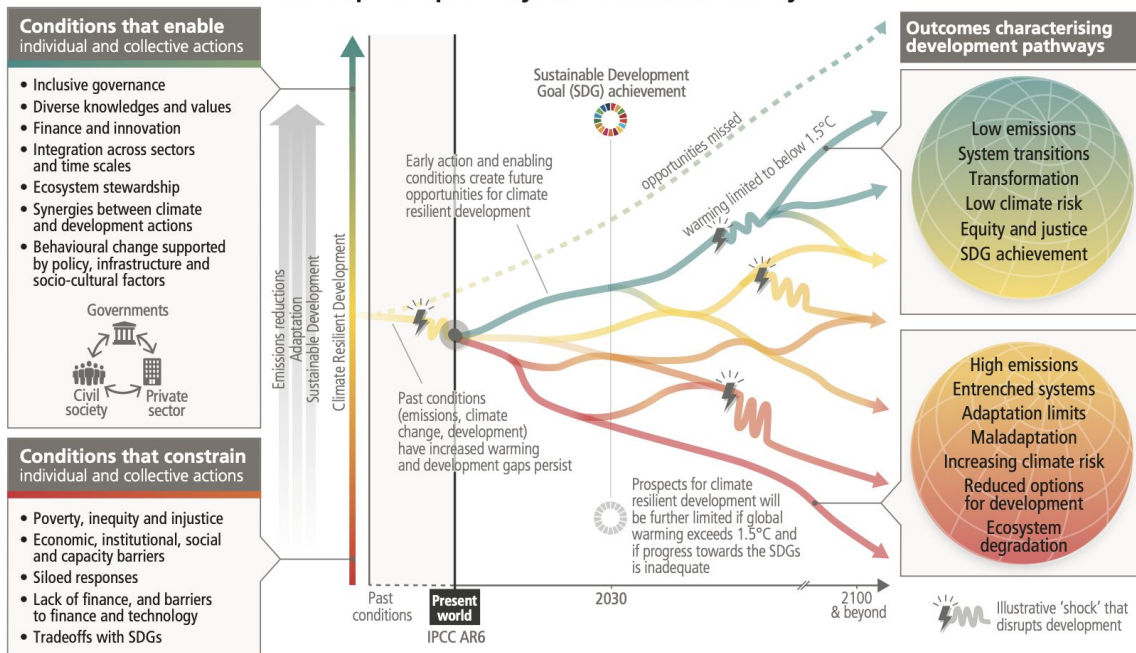


Indigenous cultural practices	Cultural burning	Restoring the identity of Country: planting the right trees	Restoring and reshaping food economies
ECH impact	Reduced air pollution	Shade and cooling	Increased and equitable access to nutritious foods
Broader ECH impact	Reduced emissions, increased carbon sequestration, increased biodiversity	Increased carbon sequestration, increased biodiversity	Reduced emissions, increased biodiversity



There is a rapidly narrowing window of opportunity to enable climate resilient development

Multiple interacting choices and actions can shift development pathways towards sustainability





Country = Country

Country = People

People = Country

People = People

Environment

Climate

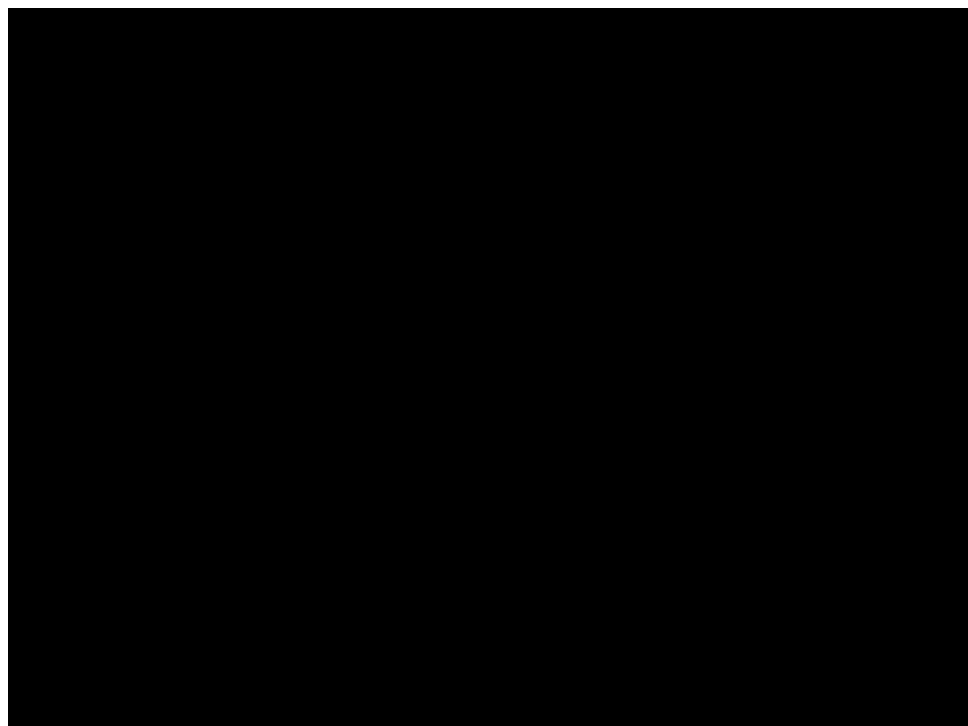
Health





Key take aways for the broader health community:

- The climate crisis is a health crisis, but fundamentally it's a **human and land rights crisis**
- **Preface** Indigenous human and land rights as **solutions** to the climate crises
- **Advocate** for our rights
- Work **with** us – **hear** our stories and help **reshape the future** that recenters our relationship to Country





Josie Rose, *'Heal Country, Heal Climate'*, oil on canvas, 2021.

Darrundang

Thank you

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CLIMATE CHANGE & INDIGENOUS YOUTH HEALTH

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Faculty/Presenter Disclosure

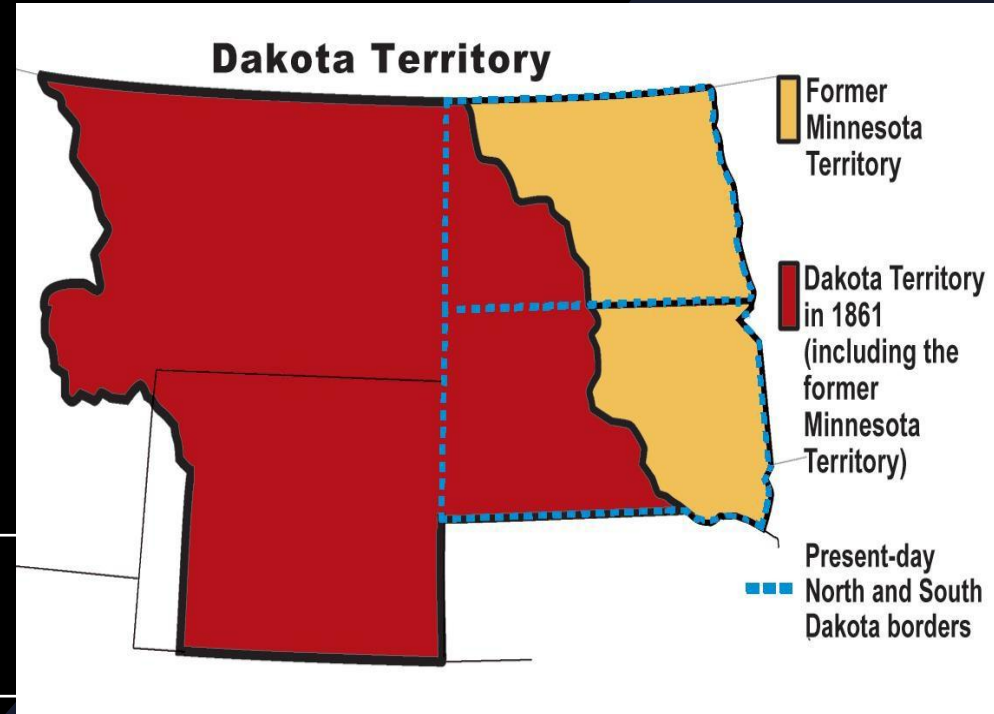
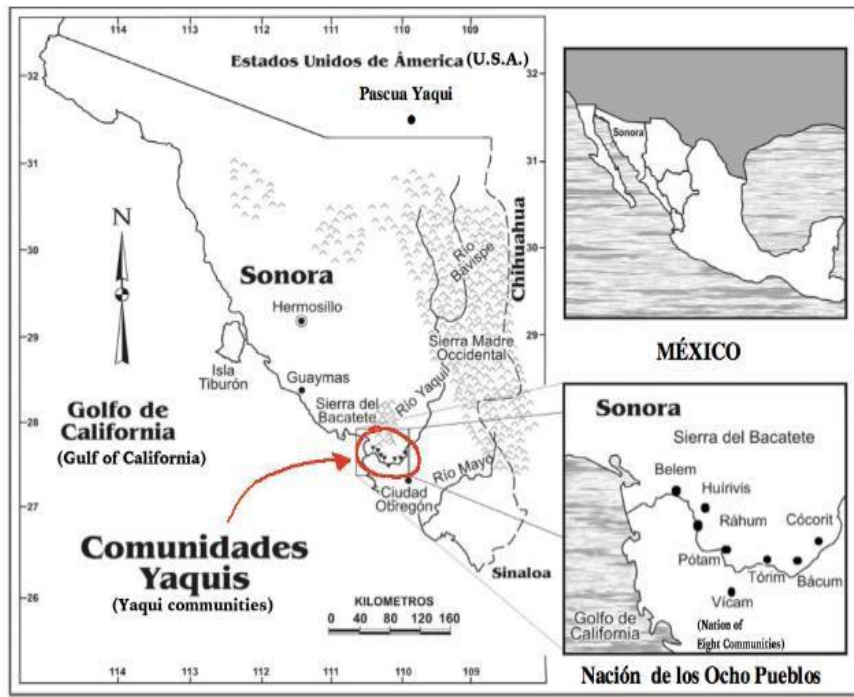
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First, a little about me!

HUNKPATI DAKOTA
AND YAQUI NATIONS



LANDS OF THE YAQUI & DAKOTA NATIONS



- **In 2019, the ILO estimated that there 476.6 million Indigenous persons in the world, 6.2 % of the total global population.**
- **The United Nations also estimates that 80% of the world's remaining biological diversity is on the lands of Indigenous Peoples.**



Ensuring the Climate Resiliency of Indigenous Peoples' Food Systems: Global Survey Results

Disseminated and compiled by the International Indian Treaty Council

Total Surveys Received: 118

28 Countries from 7 Regions

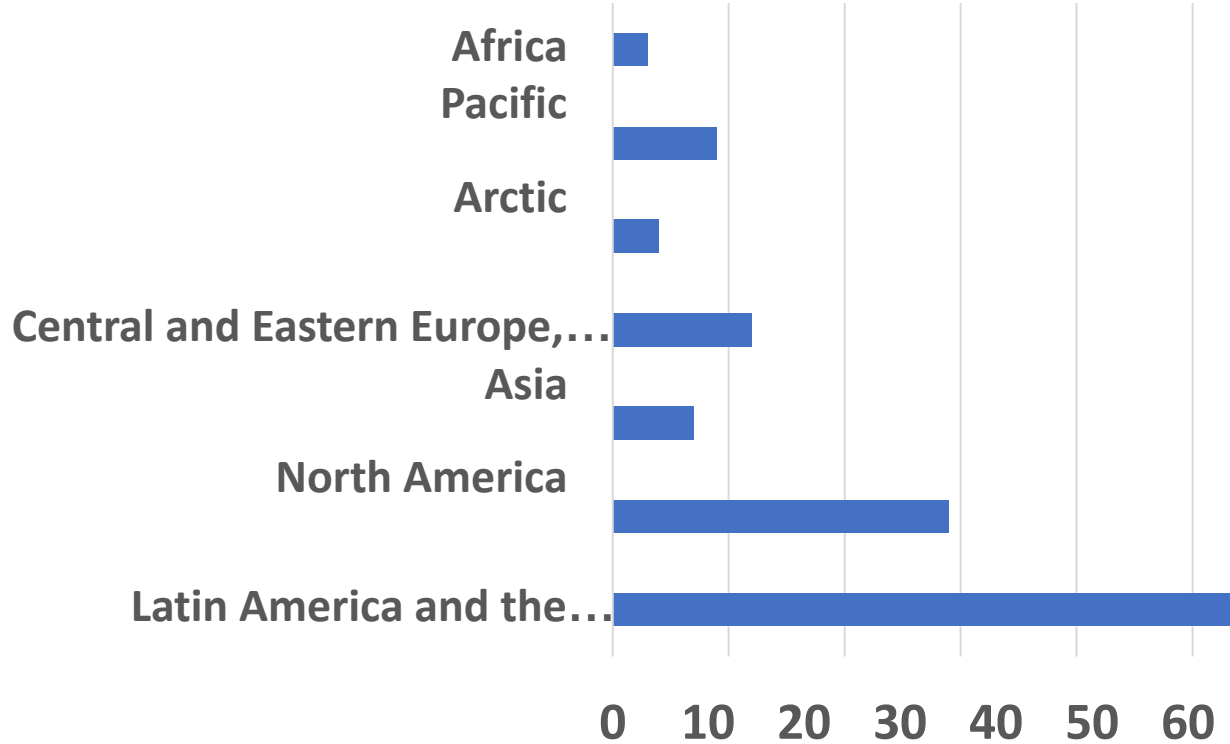
Languages: Russian, English, Spanish, French, Portuguese

Indigenous Peoples/Nations represented: 134

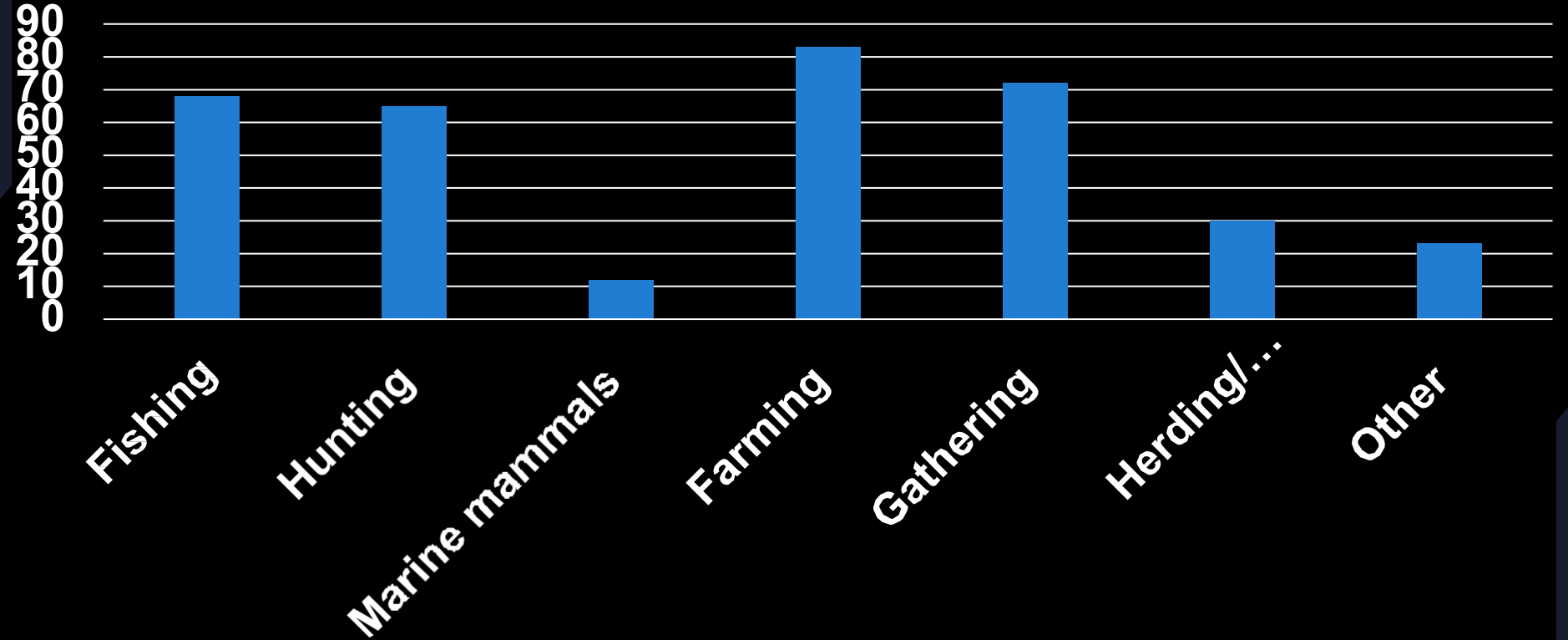
Indigenous Individuals reported to be represented: 3,648,663



Surveys by Region



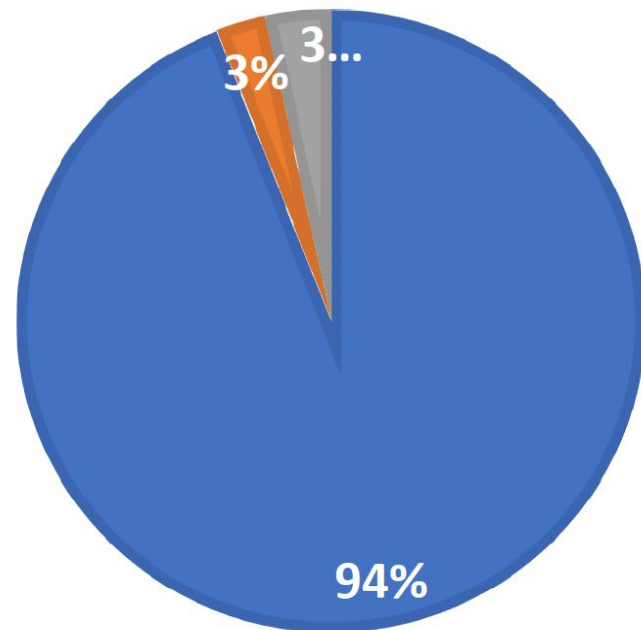
What is the traditional means of subsistence for your community/ tribe/ nation/ peoples?



HAS YOUR COMMUNITY/TRIBE/NATION/PEOPLES EXPERIENCED ONE OR MORE CLIMATE CRISIS SITUATIONS THAT HAVE IMPACTED YOUR FOOD SYSTEMS AND TRADITIONAL LIVELIHOODS (PRODUCTION, DISTRIBUTION, MARKETING/TRADE, PREPARATION)?

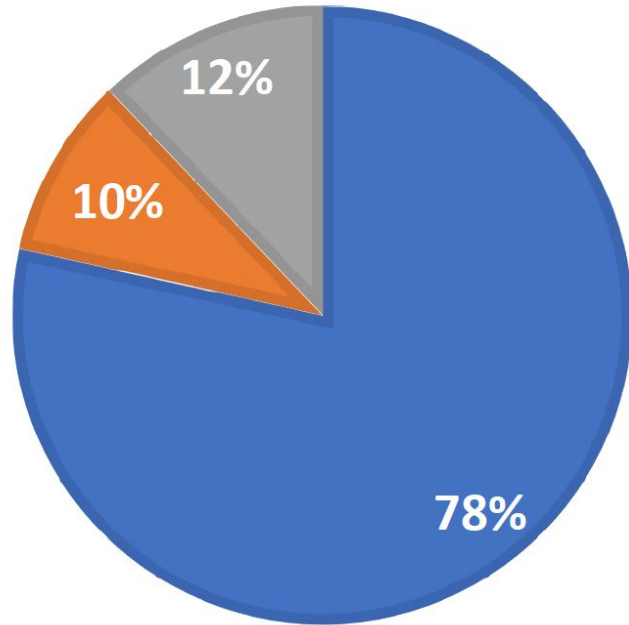


■ Yes ■ No ■ Don't Know



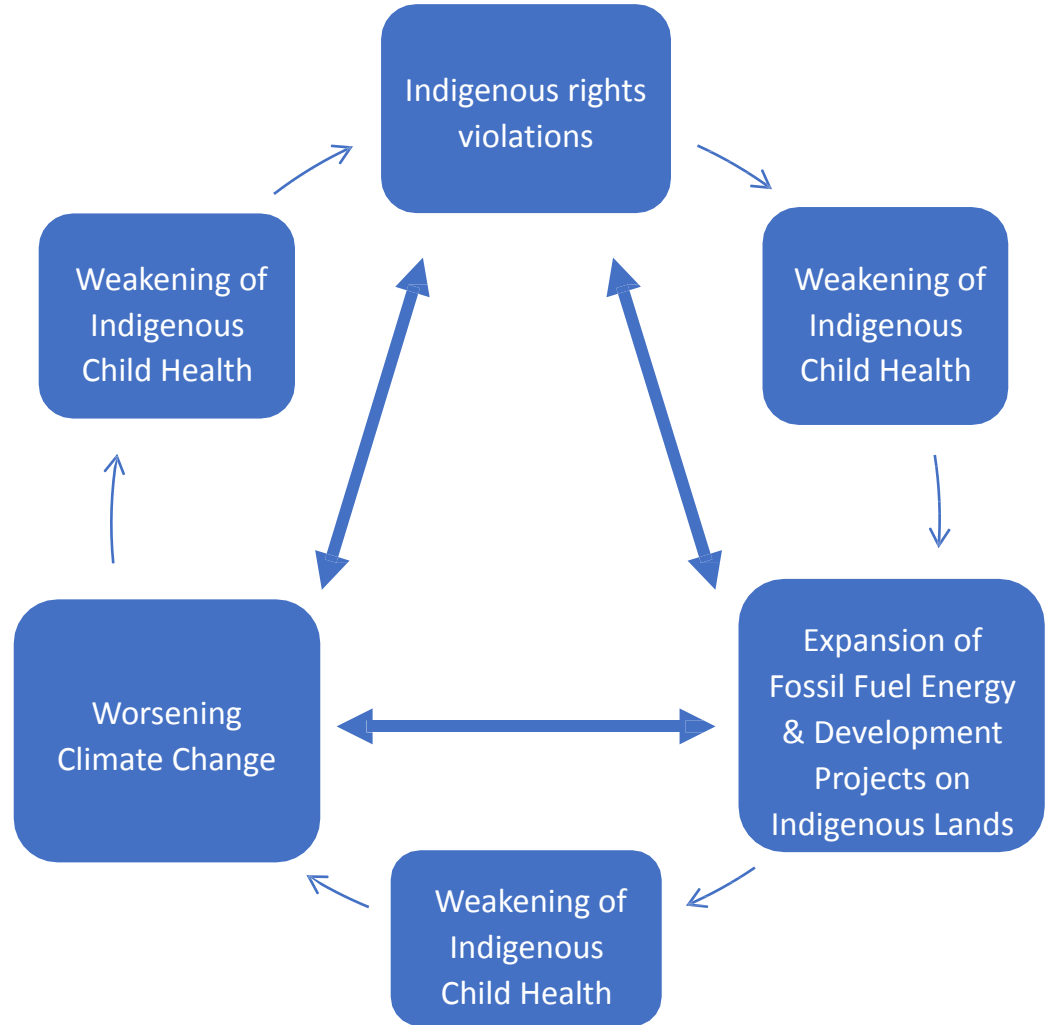
HAVE YOUR FOOD SYSTEMS AND FOOD RELATED PRACTICES BEEN IMPACTED BY HUMAN RIGHTS VIOLATIONS THAT YOUR COMMUNITY/TRIBE/NATION/PEOPLES HAVE EXPERIENCED?

■ Yes ■ No ■ Don't Know

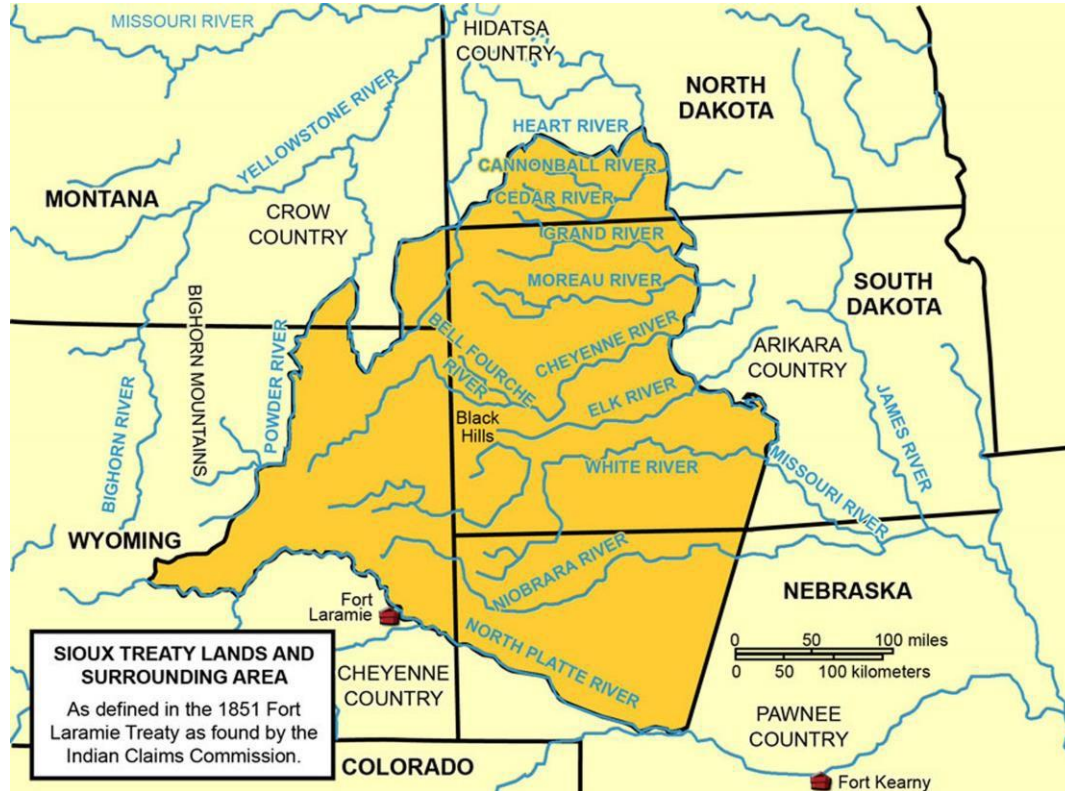


Aqueduct from Oviachi dam diverting Rio Yaqui fresh water from Yaqui farmers and communities to large-scale growers in Ciudad Obregon, Sonora Mexico

A Cycle of Harm



Example of the Cycle: Oceti Sakowin



Treaty Rights

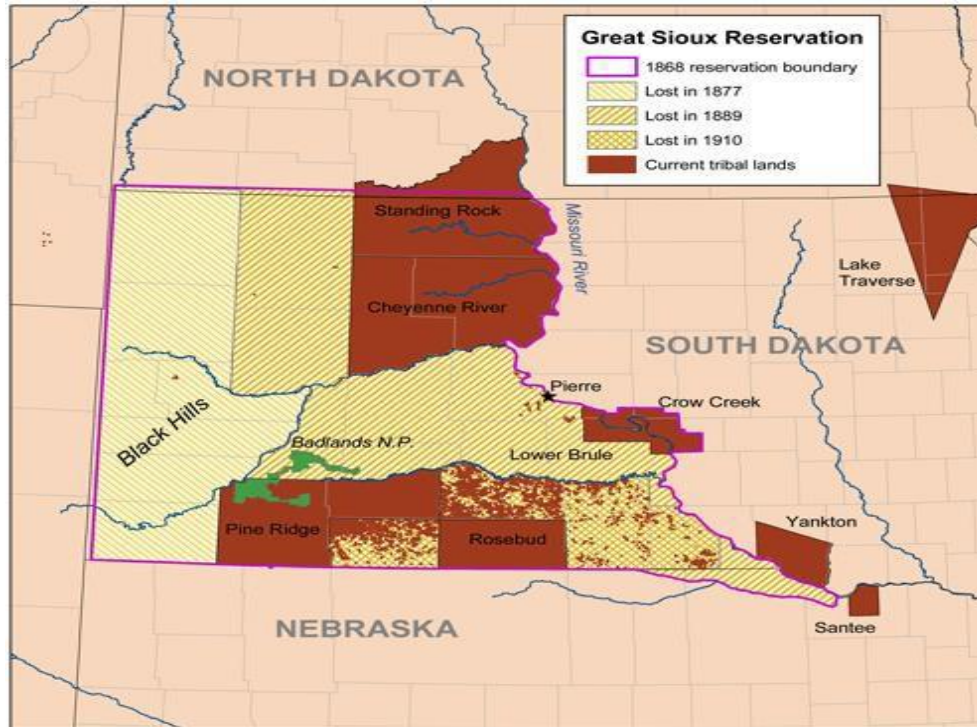


FORT LARAMIE TREATY, APRIL 29, 1868

ARTICLE 16. The United States hereby agrees and stipulates that the country north of the North Platte River and east of the summits of the Big Horn Mountains shall be held and considered to be unceded Indian territory, and also stipulates and agrees that no white person or persons shall be permitted to settle upon or occupy any portion of the same; or **without the consent of the Indians first had and obtained**, to pass through the same;

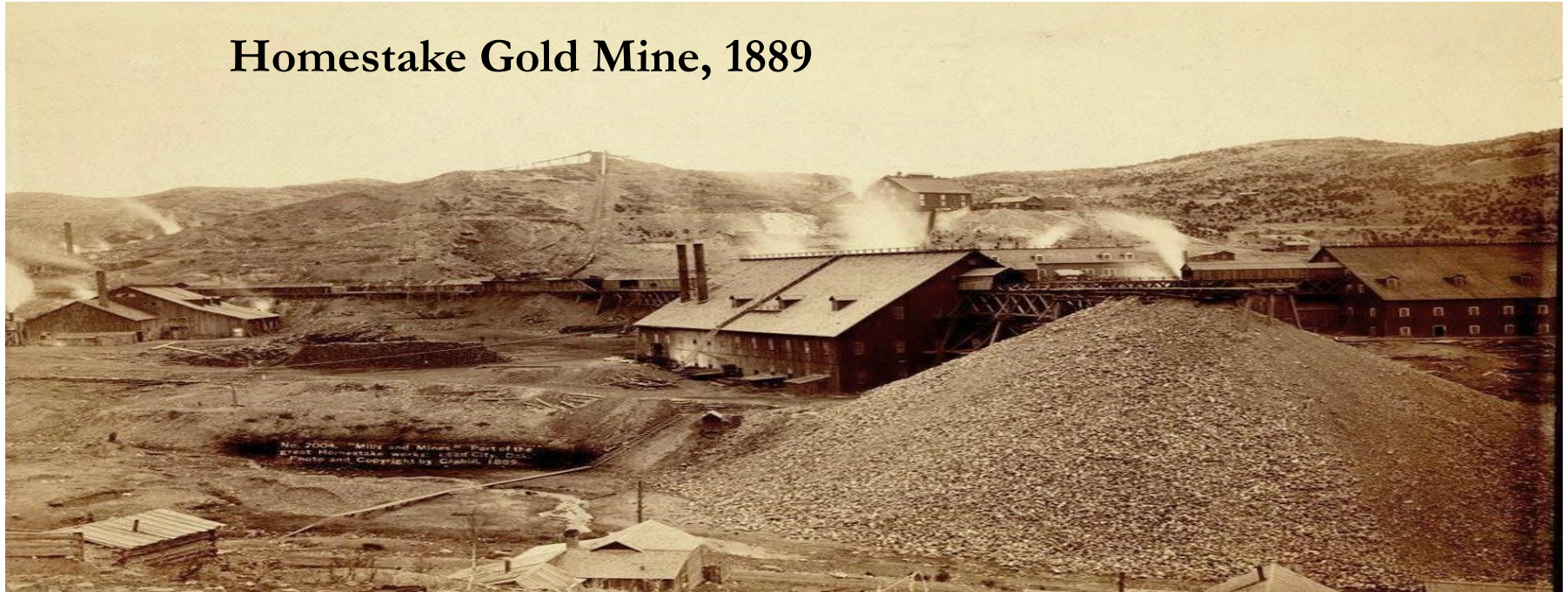
--- TREATY WITH THE SIOUX -- BRULÉ, OGLALA, MINICONJOU, YANKTONAI, HUNKPAPA, BLACKFEET, CUTHEAD, TWO KETTLE, SANS ARCS, AND SANTEE-- AND ARAPAHO 15 Stat., 635. Ratified, Feb. 16, 1869. Proclaimed, Feb. 24, 1869

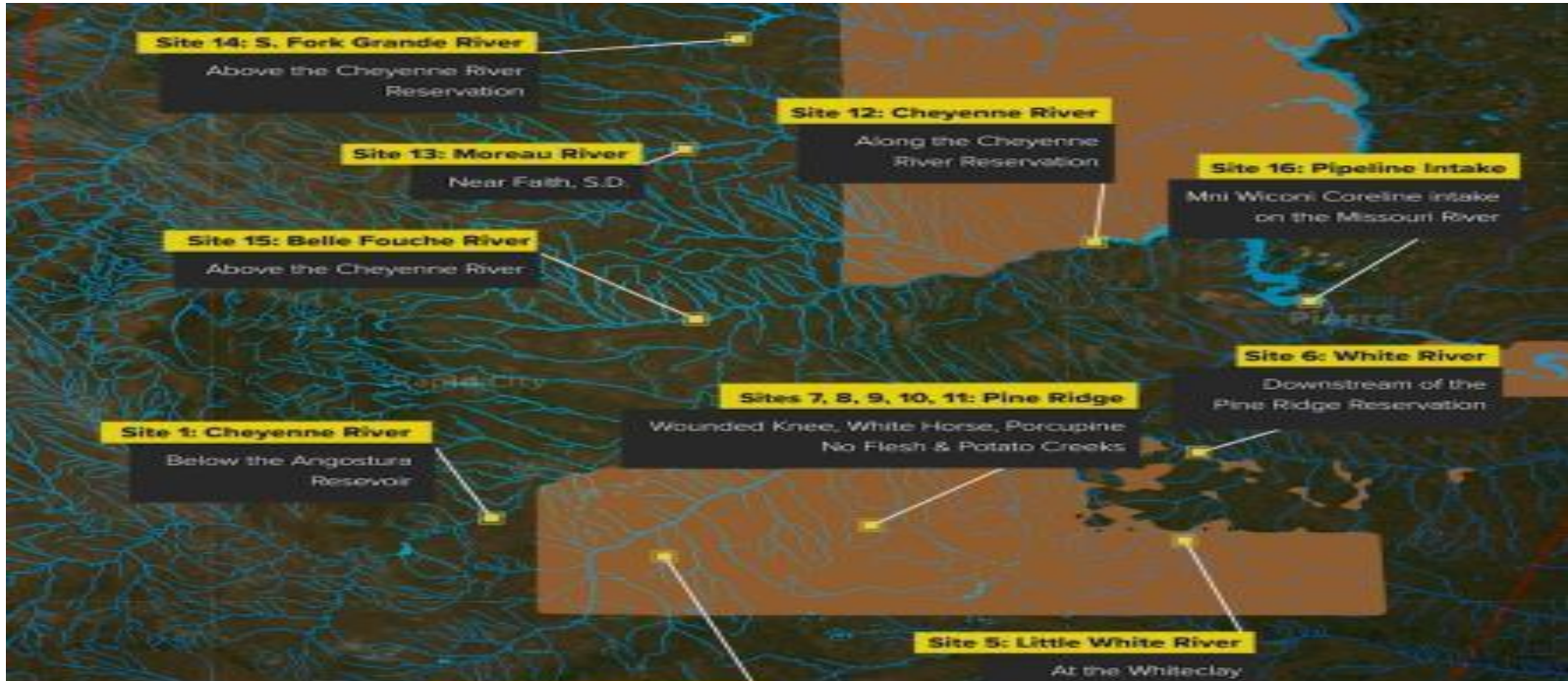
Violation of Treaty Rights: Loss of Land



Development on our Land: The Homestake Gold Mine operated in the Black Hills from 1886 – 2002, the largest and deepest gold mine in North America

Homestake Gold Mine, 1889





Continued environmental desecration of Treaty Lands via energy and resource development



***“Law enforcement officials,
private security firms and the
North Dakota National Guard
have used unjustified force to
deal with opponents of the
Dakota Access pipeline”***

-- Maina Kiai, UN Special
Rapporteur on the rights to freedom
of peaceful assembly and
association, UN Press Release
December 15, 2016

Health Impacts of Mining on Indigenous Girls

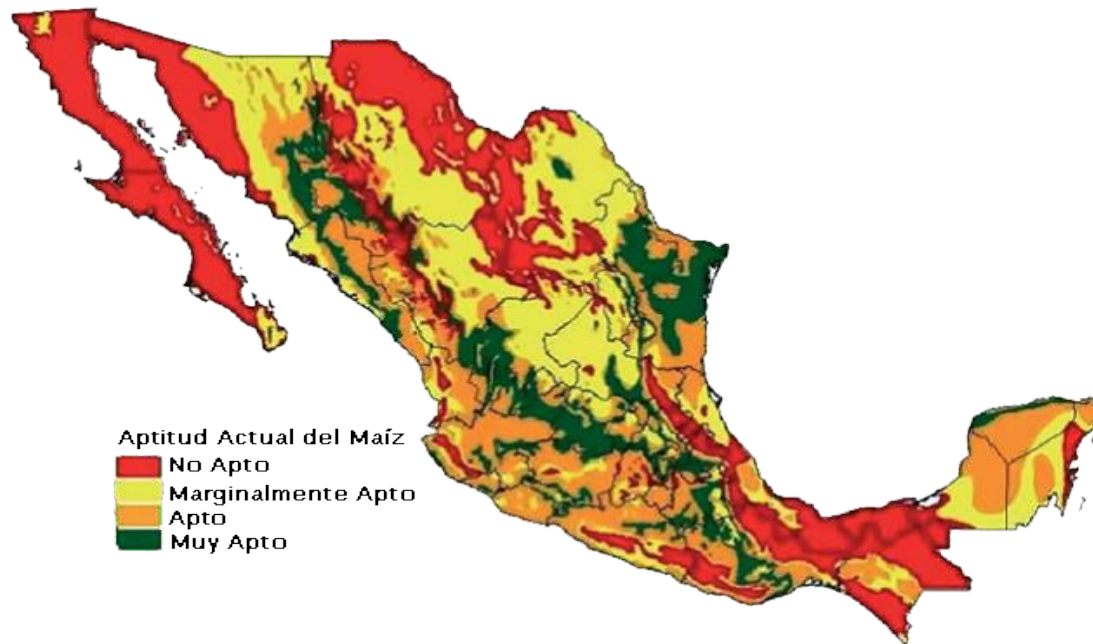


“Eleven women and girls who were raped, gang-raped or violently molested in the Papua New Guinea Highlands have reached an out-of-court settlement with [Canadian mining company Barrick Gold], having refused to accept the “insulting” compensation paid to 120 fellow victims...The Porgera community says security guards and mobile police at the mine have raped more than 200 women and girls over the past two decades...**” -**

- Sydney Morning Herald, April

4, 2015

Mexico: Changing weather patterns including dramatic decreases in summer rainfall are directly impacting the growing capacity of traditionally important crops such as corn in many regions



Violation of our Rights: U.S. Policy of Buffalo Extermination

- “Let them kill, skin, and sell, until the buffalo is exterminated. **It is the only way to bring a lasting peace and allow civilization to advance.**” – U.S. General Phil Sheridan, 1875



Date	Number of Bison
< 1800	60 million
1830	40 million
1840	35,650,000
1870	5,500,000
1880	395,000
1889	541
1900	300
1944-47	5,000
2016	400,000

Buffalo Role in Preventing, Mitigating & Adapting to Climate Change



- Buffalo support Native grasses which **prevent soil erosion**
- Lower “**carbon footprint**” than cows
- Envisioned basis for Tribal Nations’ food sovereignty, **health**, & cultural survival

In October 2015, 100,000 cattle died in an early blizzard in South Dakota.

No buffalo deaths were reported!

A Story: Indigenous Rights, Food Systems, CC & Health Disparities

Traditional foods & systems protect against developing T2DM in AI communities

Colonization attacked traditional food systems & replaced them with commodity foods -> nutrition food deserts & higher GDM + T2DM

Climate change has gone hand in hand with colonization (e.g. mass killing of buffalo, mining + drilling on Indigenous lands) and exacerbates the food insecurity & health impacts like T2DM via draughts, pollution, soil degradation.

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Leading Causes of Death, 1999-2009 Regardless of sex, AI/ANs were more likely to die of diabetes, chronic liver disease, accidents, and suicide than whites.

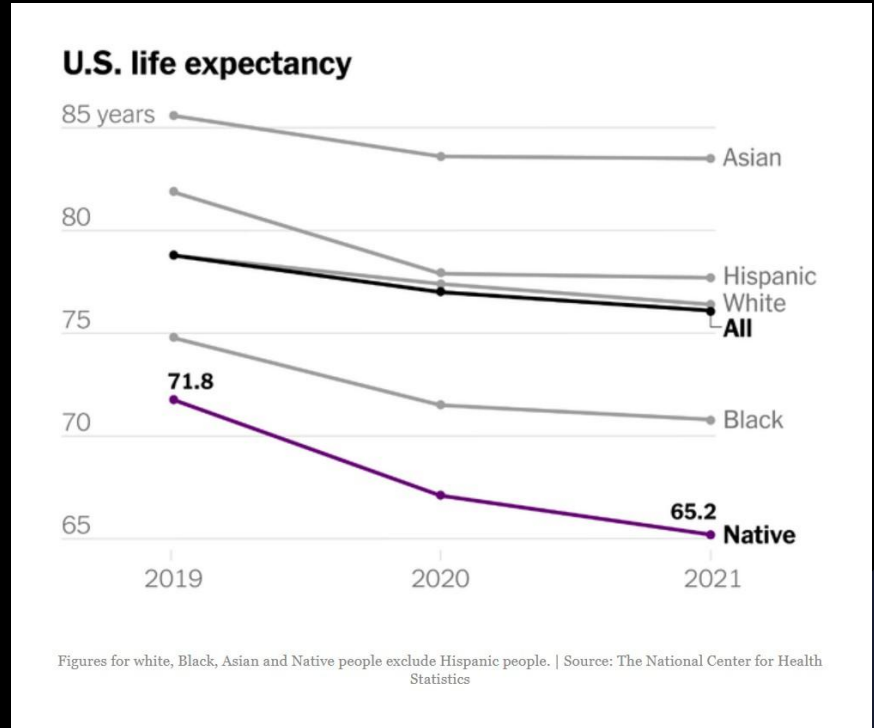
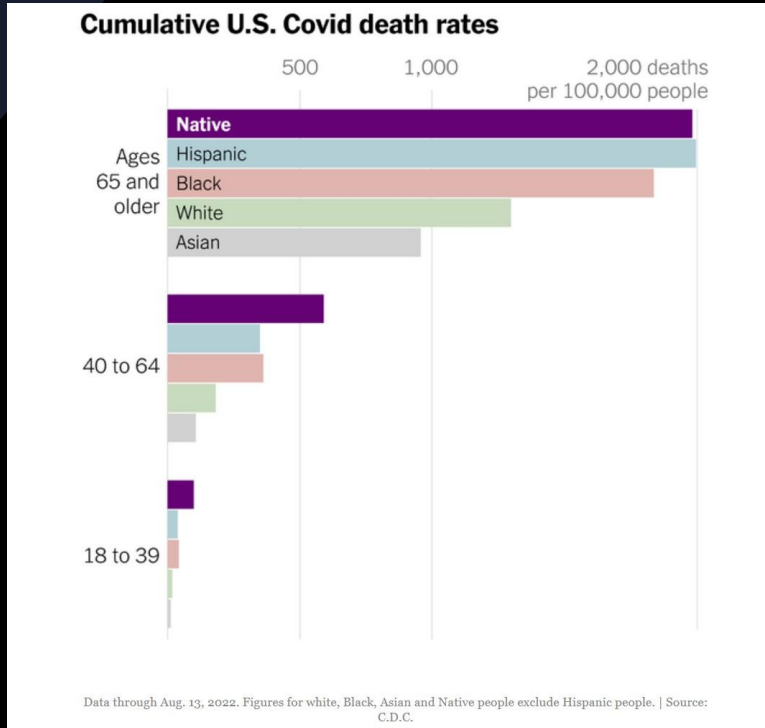
AI/AN	Male	White	AI/AN	Female	White
①	Heart disease	①	①	Cancer	②
②	Cancer	②	②	Heart disease	①
③	Accidents	④	③	Accidents	⑥
④	Diabetes mellitus	⑥	④	Diabetes mellitus	⑧

Life Expectancy at Birth The non-Hispanic AI/AN population in CHSDA counties, 2007-2009, had the lowest life expectancy compared with other US racial/ethnic groups, 2008.

Life expectancy at birth

Male		Female	
68.0 y	Non-Hispanic AI/AN	74.3 y	
70.5 y	Non-Hispanic black	77.0 y	
76.0 y	Non-Hispanic white	80.7 y	
78.0 y	Hispanic	83.3 y	

“Among them: Native Americans have some of the highest rates of health conditions, such as obesity and diabetes, that make a person much more likely to die from Covid.” – NYT



The United Nations General Assembly Adopts the UN Declaration on the Rights of Indigenous Peoples September 13th, 2007



“The rights recognized herein constitute the minimum standards for the survival, dignity and well-being of the Indigenous Peoples of the world.” -- Article 43

UN Bodies, Agencies and States SHALL promote, respect and fully apply the UN Declaration

“The United Nations, its bodies, including the Permanent Forum on Indigenous Issues, and specialized agencies, including at the country level, and States shall promote respect for and full application of the provisions of this Declaration and follow up the effectiveness of this Declaration.” -- Article 42





The Declaration is the “Minimum Standard”

- “The rights recognized herein constitute the minimum standards for the survival, dignity and well-being of the Indigenous Peoples of the world.”

--Article 43



Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources...

-- Article 29, para. 1, UN Declaration on the Rights of Indigenous Peoples

Right to Health and to Traditional Health-Related Practices

“Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals...” ---
UNDRIP Article 24



UNDRIP Article 30

- 1. Military activities shall not** take place in the lands or territories of indigenous peoples, unless justified by a relevant public interest **or** otherwise freely agreed with or requested by the indigenous peoples concerned.
2. States shall undertake effective consultations with the indigenous peoples concerned, through appropriate procedures and **in particular through their representative institutions**, prior to using their lands or territories for military activities.



Article 32: FPIC and Development



“States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources...”

Violence Against Indigenous Women and Children, Article 22



2. States shall take measures, in conjunction with indigenous peoples, to ensure that indigenous women and children enjoy the full protection and guarantees against all forms of violence and discrimination.

Rights of Indigenous Peoples were recognized in the Paris Agreement

“Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, **respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples**, local communities, migrants, children, persons with disabilities and people in vulnerable situations...”

-- *Preamble, the Paris Agreement, adopted by consensus December 12, 2015 to go into force in 2020*

THANK YOU!

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