



3rd Conference on Environmental
Education and Lifelong Learning:
Indigenous Knowledges and Approach

Corporate Land Use and Indigenous Health: Uncovering the Public Health Burden of Resource Extraction

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Focus: To achieve residency

Turtle Island



Sweetgrass



Braided (3 strands) symbolizes, harmony, unity and peace

Land Acknowledgement

*I (we) wish to acknowledge this land on which we operate. For thousands of years, it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across **Turtle Island** and we are grateful to have the opportunity to work on this land.*

Welcome Colleagues – Summer Institute

- 3 weeks Summer Institute with Nana George Dei & 10-year Celebration of Nana's mom – Madam Afia Donkor
- Lived, learned, travelled, socialize in cultural activities with community and Elders, children and families,
- Happy to welcome Nana Kofi and others – Meeting at Ghana Parliament
- Sankofa Square

U of T - #1 in Canada, Top 25 in world

3 campuses, 100,000 students, 26000 International students

700,000 Alumni in 199 countries

250+ programs (School of Environmental Health, Public Health. Medicine)

Opportunities for experiential, lifelong learning, mentorship abound

EELL, climate change, Indigenous studies, climate change are not just timely conversations – but critical, should be had, and should continue after leaving today with vigor and Plan of Action

- Work on advocacy, transforming policies, prepare leader to continue the work with young and old – students, seniors, elder, Nigeri's son (Nathan)
- Climate change is a global issues – we shouldn't be working in silos

Uncovering an oral history of Tkaronto

Shared by the Indigenous Education Network at OISE, University of Toronto. Features Sara Roque, who reflects on living in Tkaronto (this place we now call Toronto) and the layered histories of the land beneath our feet.

- <https://www.youtube.com/watch?v=voXySM-knRc>

Objectives

- Examine how corporate land use, from mining, oil and gas development, logging and deforestation, impact public health in Indigenous communities across Canada and globally.
- Analyze how these industries not only degrade the **ecosystems** but disrupt land-based practices, food systems, cultural continuity, and lead to increased illnesses, mental health and other health and chronic diseases.
- Advocate for transformative policy shifts (supported by good research) for more mandatory community-driven Health Impact Assessments (HIAs) in public health and environmental governance.

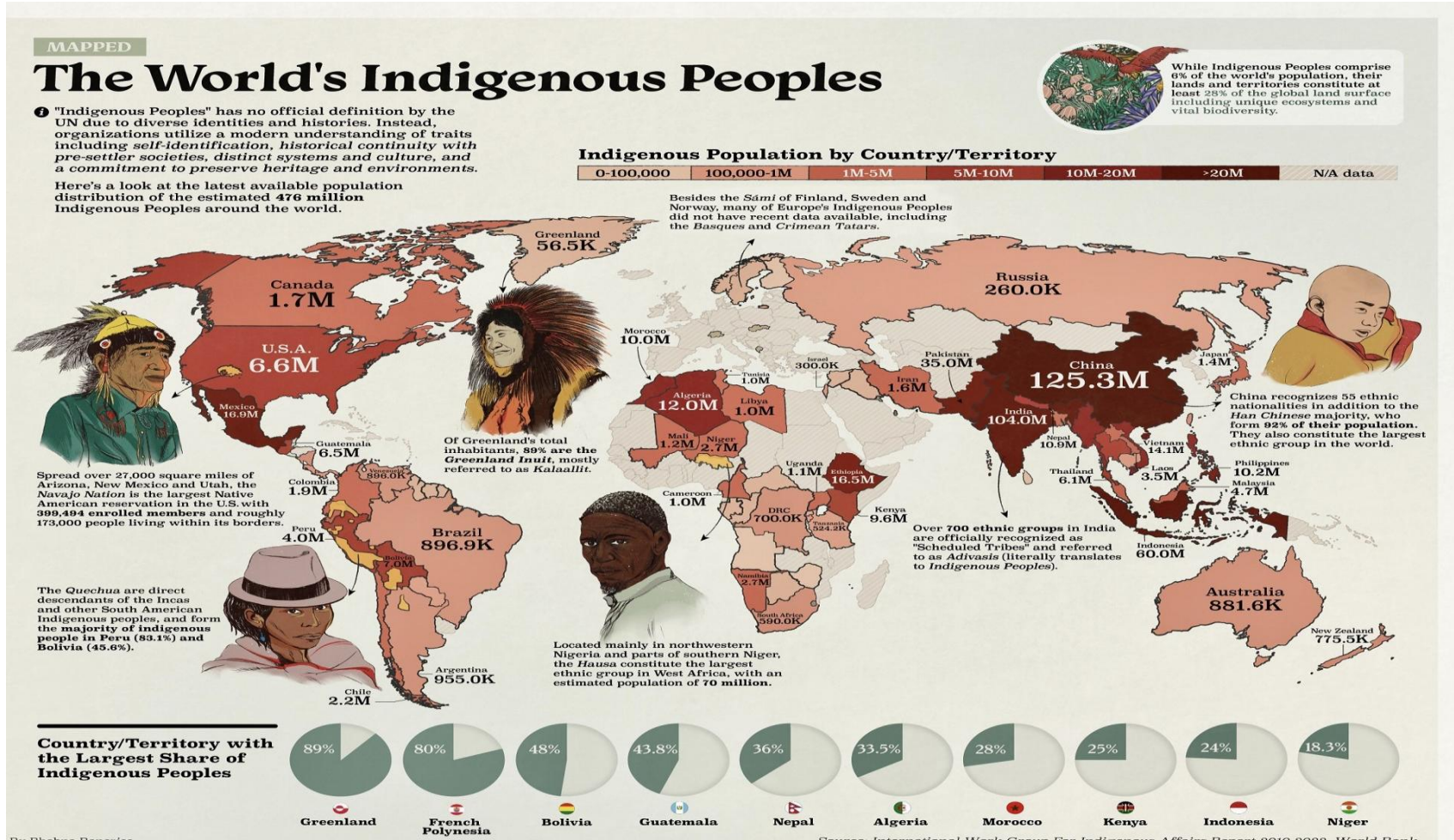
Introduction

- Resource extraction often occurs on unceded or treaty-protected Indigenous lands. These activities have been justified as economic development but often lead to serious health and cultural impacts, which remain understudied in public policy.
- (Richmond & Ross, 2009; Truth and Reconciliation Commission of Canada, 2015).

Historical Context

- History shows that colonization brought pandemics, residential schools, and land dispossession.
- Despite these systemic oppressions, Indigenous communities continue to lead resistance movements for sovereignty, climate justice, and cultural renewal.
- Simpson, 2017; Truth and Reconciliation Commission of Canada, 2015; King, 2012

Global Overview

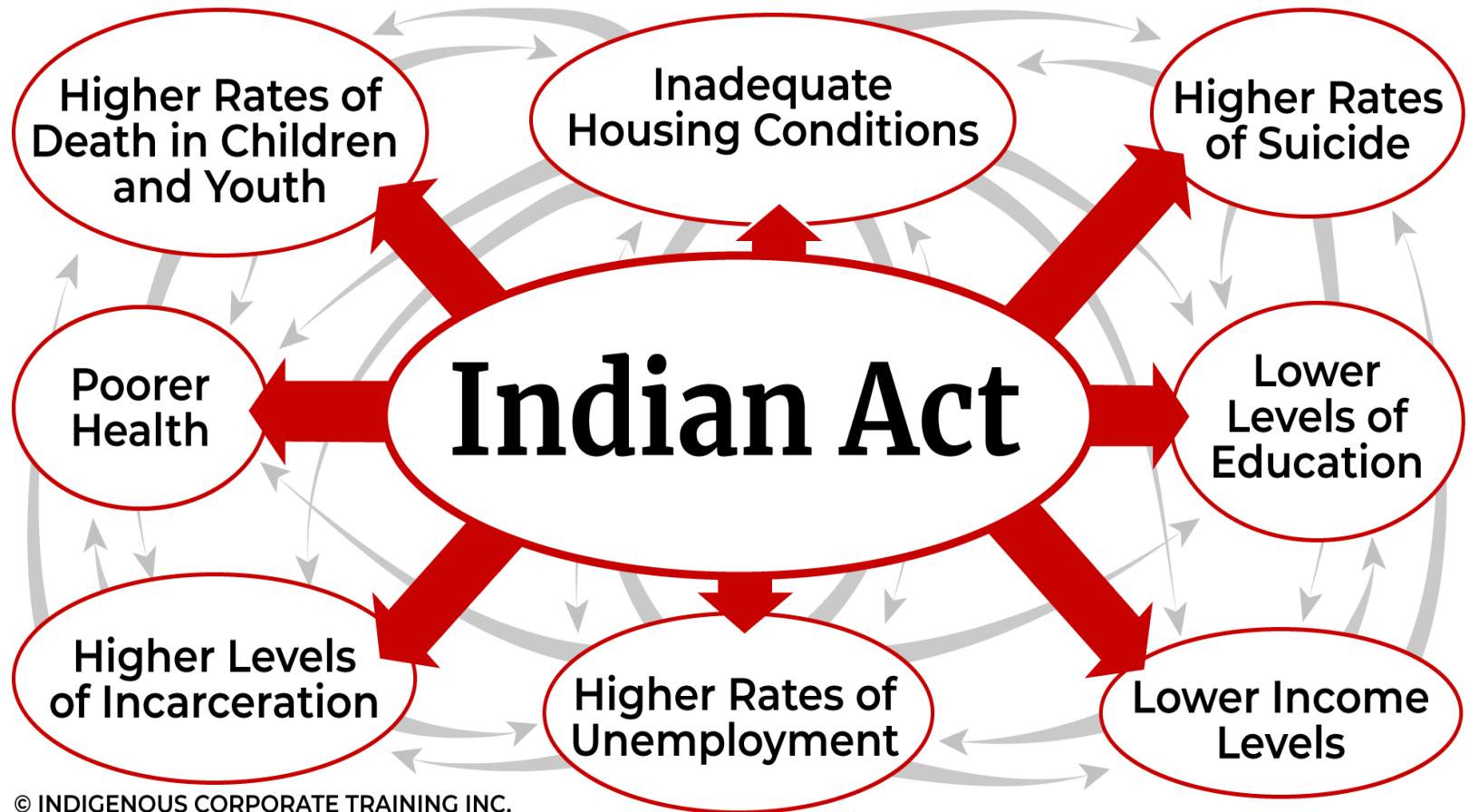


Disparities exist between the health of the Indigenous population and that of non-Indigenous population in nearly every country in the world, including the richest countries. Canada was ranked at 24th among richest countries according to Global Finance Magazine

Global Indigenous Population Overview

Indicator	Data
Total Indigenous People	476 million
Percent of Global Population	6.2%
Number of Countries	90+
Languages Spoken	Over 4,000
Living in Extreme Poverty	15%
Life Expectancy Gap	Up to 20 years lower
Biodiversity Stewardship	80%

Indian Act, est 1876



Goal to assimilate Indigenous people in residential schools, change their identity, language, culture, name, dress, social activities, teaching by elders and take away their land

Disease

- The Europeans introduced many foreign diseases that had a devastating impact on the indigenous population.
- One such disease was smallpox – a highly infectious and contagious illness. It creates headaches, fever and a rash would cover a person's hands and feet. This often meant people could not walk or feed themselves.
- Indigenous people had no immunity to small pox and by May 1789 it is estimated that it had killed half the



Methods

- A narrative review method was used.
- Peer-reviewed literature, Indigenous publications, and grey literature from 2010–2025 were synthesized.
- Focus was on health impacts, policy gaps, and Indigenous-led insights.

Key Findings

- Communities near industrial projects face high rates of cancer, neurological and reproductive issues, and loss of traditional food systems
- Mental health burdens and traumas are amplified by cultural disruption and displacement.

From Land Misuse to Health Harm

Pathways From Land Misuse to Health Harm in Indigenous Communities



Discussion

- The harms are not accidental—they stem from systemic exclusion in governance.
- Current assessments ignore Indigenous worldviews.
- Economic inequality and erosion of cultural identity further aggravate the burden.

Key Highlights:

- Extractive industries (mining, oil & gas, logging), disproportionately harm indigenous health
- Environmental contaminants linked to respiratory illness, reproductive complications, and chronic diseases
- Disruption of land-based practices undermines cultural and mental wellness
- Regulatory gaps and colonial frameworks allow corporate interests to override indigenous sovereignty

BIG QUESTION: How do we constrain them?

Environmental Exposure Pathways

Pathway	Examples	Health Impact
Airborne	Particulate matter, flaring emissions	Asthma, COPD, infections
Waterborne	Mercury, hydrocarbons	Neurological disorders, cancer
Soil contamination	Mining waste, pipeline leaks	Skin diseases, toxic ingestion
Food chain bioaccumulation	Contaminated fish/game	Mercury poisoning, reproductive issues
Cultural disruption	Restricted land access	Mental health deterioration

Case Comparisons: Indigenous Communities Affected by Extraction

Case	Location	Main Issue	Health Outcome
Grassy Narrows	Ontario	Mercury from pulp mill	Neurological, reproductive issues
Fort Chipewyan	Alberta	Oil sands emissions	Elevated cancer rates
Giant Mine	NWT	Arsenic dust from gold mining	Potential arsenic exposure
Amazon Basin	Peru/Brazil	Illegal gold mining	Mercury poisoning

Indigenous vs Western Entrepreneurship

Indigenous Entrepreneurship

Community-focused benefits

Co-operation

Equalitarianism

Satisfied with their contribution and support from the community

Community impact vs profit (focus)

Western Entrepreneurship

Material wealth and status

Individualistic

Competitive

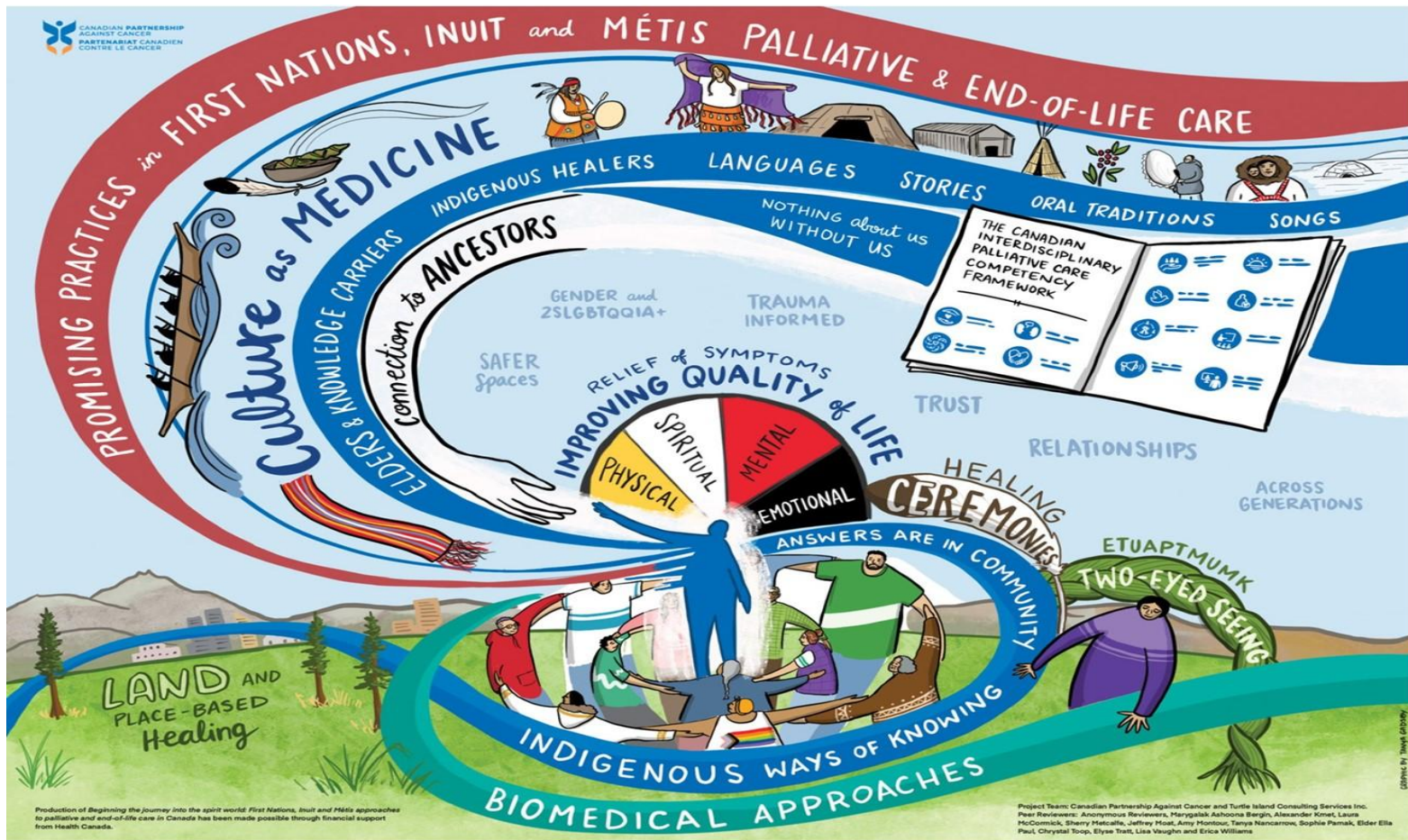
Hierarchy

Obtaining more than being “successful”

Land is Medicine, Land is Sovereignty

- Land is not just a resource of food, farming, hunting, gathering, and living, but a source of medicine for the mind, body and spirit of the Indigenous peoples.
- These traditional and cultural practices are known for helping to restore balance and resilience among people and communities, and peace, humility and harmony.

Spirituality



Source: [Culture as medicine – Canadian Partnership Against Cancer](#)

The Truth and Reconciliation Commission (TRC), 2008

- The Truth and Reconciliation Commission (TRC):
 - Documents the history of the residential schools and the impacts on the Indigenous peoples.
 - Brought to light the trauma caused by residential schools to children.
 - Called for the government, organizations and individuals to mobilize and make changes in society.
 - Acknowledges the ongoing impacts of colonial policies on dispossessing Indigenous peoples of their lands.
 - Acknowledges the disruptions to their ways of life.
- The TRC calls for action.

Policy 18-24

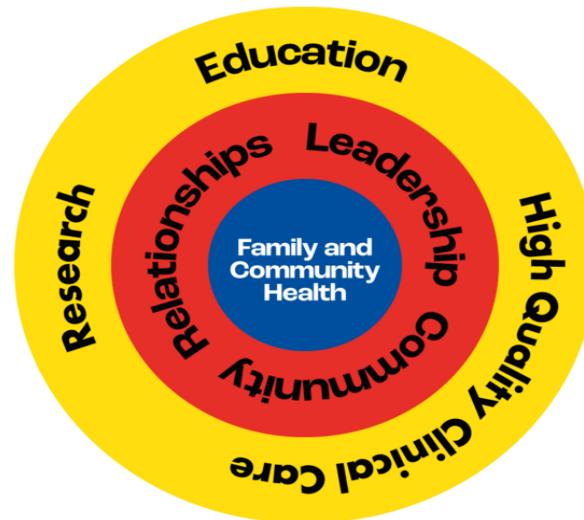
TRC Policy 18-24: Health and Land Justice

- Urges all levels of government to acknowledge that poor health outcomes and determinants of health of Indigenous peoples are a direct result of colonial policies on the land.
- Urges to recognize and implement the health-care rights of Indigenous peoples as affirmed in treaties, constitutional law, and international human rights instruments
- It calls to address root causes of poor health from lack of clean water, traditional food, and cultural care and community
- It calls to recognize the gaps between Indigenous health care needs from non-Indigenous health

DFCM Responses

DFCM Chair, Dr. Danielle Martin, took the job - not to lead the department but to champion new ideas and approaches for the well-being of all peoples and the training of Family Physicians for the future.

Established Strategic Planning Committee



C1.3 To meaningfully involve every DFCM site in addressing the gaps in primary care access, and attachment for First Nations, Inuit, and Métis communities, including by **partnering with Indigenous health organizations and other agencies.**

Good News

September 30, 2025 – Orange Shirt Day for Truth and Reconciliation:

DFCM celebrated receipt of \$5 million gift from an anonymous donor:

- To create an endowed Chair in Indigenous Health
- To open new Indigenous health space in the DFCM's Indigenous Leadership Circle.



Grandmother Alita Sauve, an Indigenous Elder of two nations, speaking with Vice Dean, Dr. Lisa Richardson, at the DFCM celebration.

New Mural in DFCM Lobby

Credit: Shawn Howe



Policy Recommendations

This is a Humanitarian, Equity and Climate issue:

- Bring all stakeholders around the table to buy into an Action Plan.
- Mandate community-led Indigenous Health Impact Assessments (HIAs) (allow Indigenous communities to have authority to lead and determine how health impacts are assessed and managed)
- Require binding Free, Prior, and Informed Consent (FPIC).
- Fund Indigenous governance.
- Use culturally aligned health metrics.
- Invest in remediation, food security, and health infrastructure.

Credits to Shawn Howe (Spirit name: Red Cedar Tree)



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Conclusion

- Corporate extraction has caused lasting harm.
- Justice begins with Indigenous sovereignty, legal reforms, and aligning health policy with land stewardship.
- True equity requires a partnership of academics, government, community leaders and community members and Edes in the conversation.

Keep Oil in the Ground



Planet Before Profit



**INDIGENOUS
PEOPLE ARE
THE UNSUNG
HEROES OF
CONSERVATION.**



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Thank you

Mvto Nya:wëh Miigwech

Wopila Chokma'shki

Ekosani Quayana Wado LemLmts

Ahó Pinagigi Hawuh Yakoke