A RIGHTS BASED APPROACH TO IA:

INDIGENOUS RESILIANCE AND RESURGANCE THROUGH ENGAGING IN IA

TEAM ACFN

Athabasca Chipewyan First Nation
Dene Lands and Resource Management
Canada

TEAM ACFN

CO-CHAIRS:

Callie Davies-Flett - Regulatory Advisor, Dene Lands and Resource Management (DLRM)
Mandy Olsgard M.Sc., P.Biol - Toxicologist/Health Risk Assessor, Integrated Toxicology Solutions

Presenters:

Lori Cyprien - Director of Rights and Lands, DLRM
Keji Banjoko - Government Relations and Consultation Coordinator, DLRM
Timothy Bebeteidoh - Regulatory and Environmental Advisor, DLRM

A RIGHTS BASED APPROACH TO IA:

INDIGENOUS RESILIANCE AND RESURGANCE THROUGH ENGAGING IN IA

ATHABASCA CHIPEWYAN FIRST NATION

We have occupied our region for thousands of years. We continue to hunt, trap, fish, and gather just as our ancestors before us.

We are the K’ai Taile Denesuline, stewards of the region. We carry a deep understanding of the land and are committed to creating a better world for the generations to come.

WHERE ARE WE?

Our traditional territory is in the heart of the boreal forest in Canada. We have occupied this land for thousands of years and continue to do so. Within that land is the community of Fort Chipewyan, a community directly downstream of Canada’s Oil Sands Operations.

TREATY RIGHTS AND UNDRIP

Our communities constitutionally protected treaty rights demand that both government and industry honourably engage with us to ensure industrial development does not meaningfully diminish the ability of our members to exercise their treaty rights on the land.

UNDRIP outlines a framework for fostering respectful and meaningful dialogue with indigenous communities, emphasizing principles such as free, prior, and informed consent (FPIC) and the recognition of indigenous peoples' inherent rights to self-determination and land stewardship.

ACFN STRESSORS

- OILSANDS
- URANIUM
- HYDROELECTRIC DAMS
- RARE EARTH MINERALS

USING INDIGENOUS KNOWLEDGE TO LEAD WESTERN SCIENCE

LORI CYPRIEN

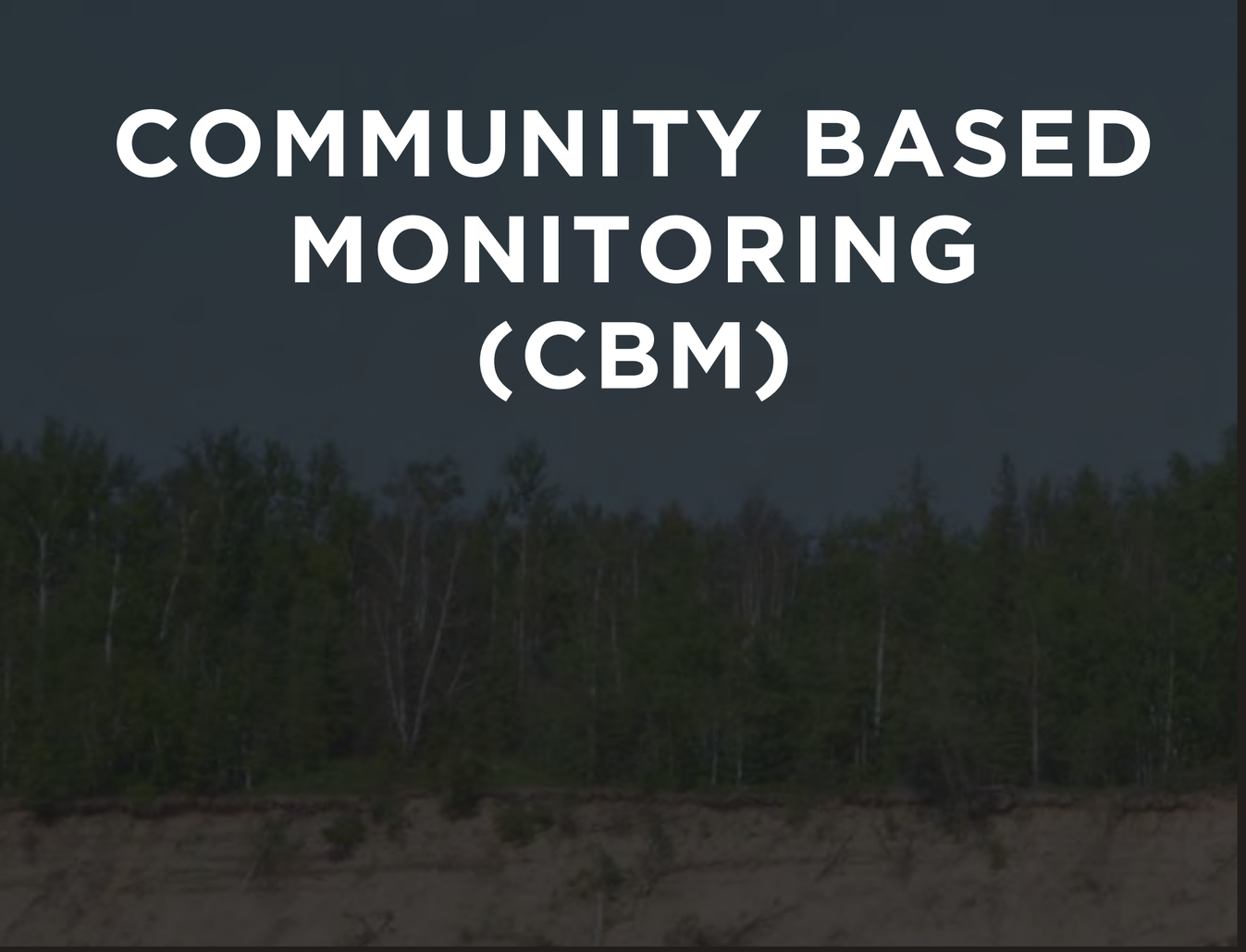
INDIGENOUS KNOWLEDGE HOLDER, MSc.

Athabasca Chipewyan First Nation
Canada

INDIGENOUS KNOWLEDGE

- Knowledge passed down from generation to generation
  - Stories, experiences, written
- Wholistic View – everything is connected
- Adaptable - knowledge changes as time goes on
- Encourages responsible use and care for the land

COMMUNITY BASED MONITORING (CBM)

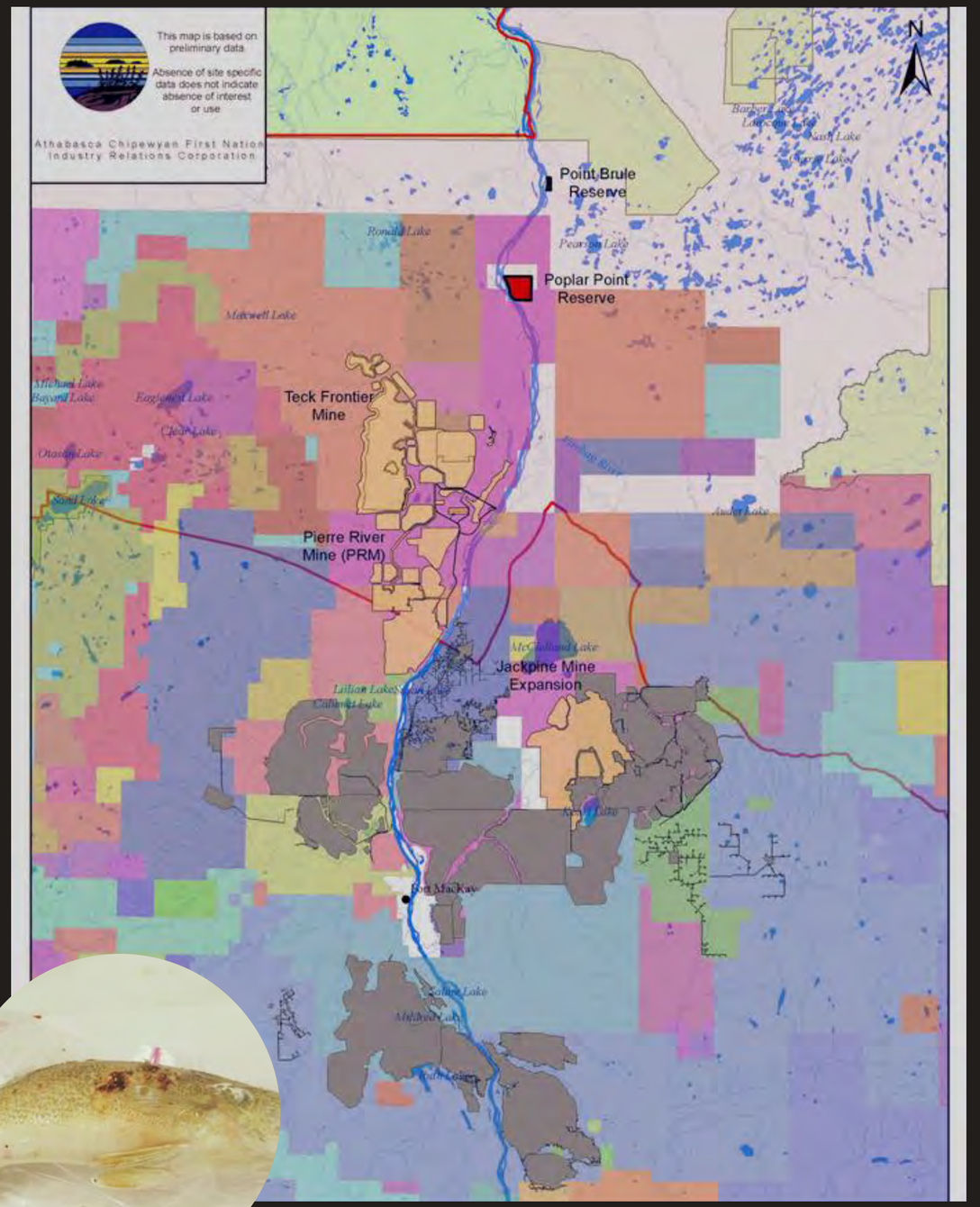


Why CBM

- Environmental concerns affecting ACFN treaty and Inherit rights
- No trust in external data

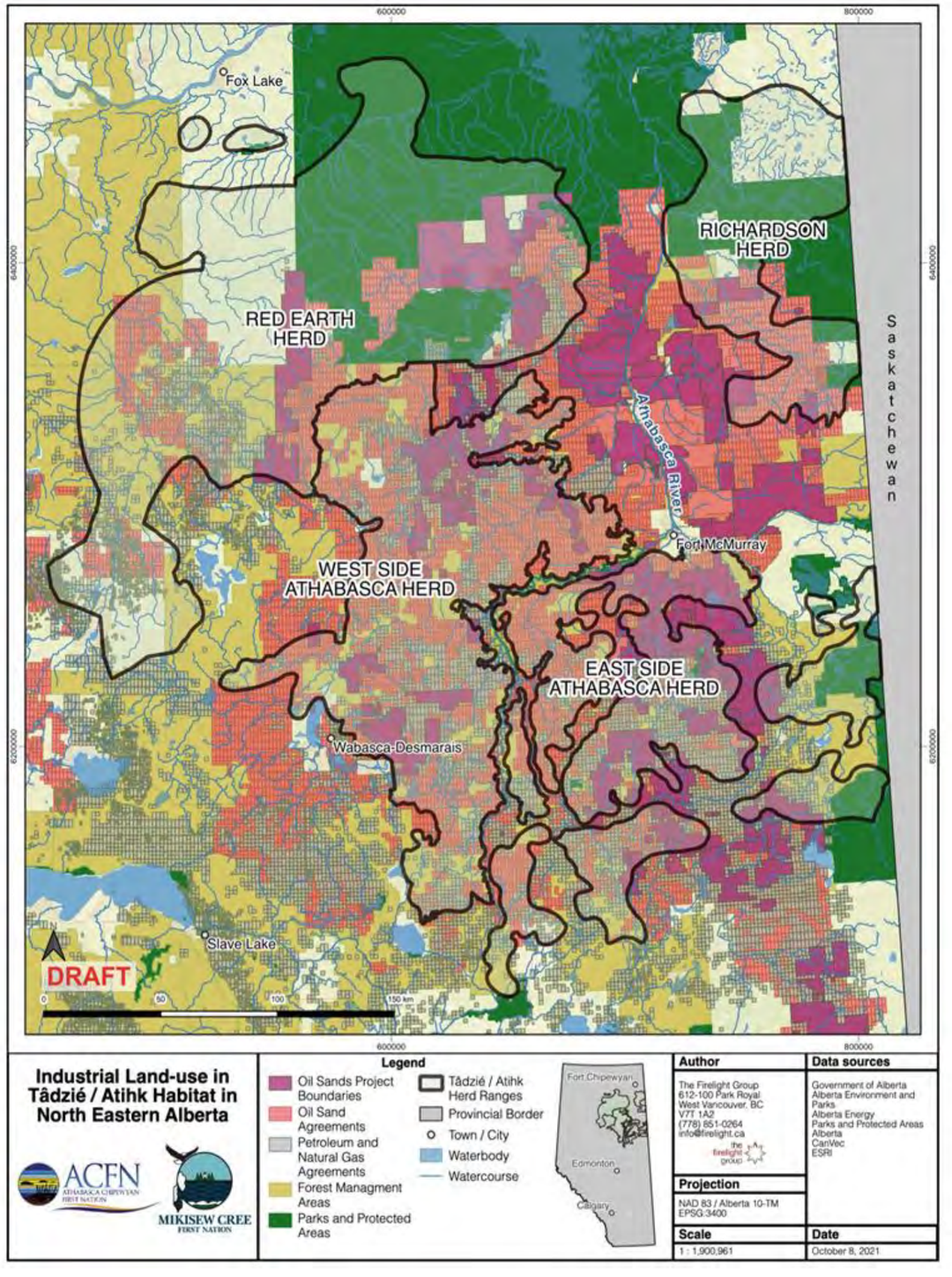
Addressing the Nation's immediate concerns:

- Water Quality and Quantity
- Fish



CARIBOU STEWARDSHIP PLAN

- Culturally Keystone Species
- Populations are being pushed to the brink of extirpation
- Listed as threatened species
- Lack of effective range plans to protect critical habitat



BUFFALO PROTECTION

RONALD LAKE
BUFFALO HEARD

Nipîy Tu

RESEARCH KNOWLEDGE CENTER

- Indigenous led Knowledge Centre
- Established to protect the Peace Athabasca Delta
- PAD is listed as a UNESCO world heritage site
- Transparency

Let’s continue the conversation!

Message me your questions or comments in the IAIA25 app.

#iaia25

LORI CYPRIEN
IK HOLDER - MSc
Athabasca Chipewyan First Nation
Canada

FROM DATA MONITORING AND OWNERSHIP...

...TO DATA UTILIZATION AND FRAMEWORK DEVELOPMENT

NĮ CHU TU KELNĮ ACFN LAND AND WATER KEEPERS

KEJI BANJOKO LLB.

Dene Lands and Resource Management
Athabasca Chipewyan First Nation
Canada

~70 km

Punchline: The tailings footprint of the world's ten largest mining operations is dwarfed by the scale and concentration of Oil Sands tailings. The oil sands mining footprint is without global precedent

1. Bingham Canyon, USA
2. Garzweiler, Germany
3. Chuquisaca, Chile
4. Kiruna, Sweden
5. Grasberg, Indonesia
6. Mirny, Russia
7. El Teniente, Chile
8. Oyu Tolgioi, Mongolia
9. Carajas, Brazil
10. Goldstrike, USA

OILSANDS MINING DISTURBANCE VS. WORLD'S TEN LARGEST MINING OPERATIONS

PAST ACFN STUDIES...

FOCUSED ON TITLE & RIGHTS

As Long as the Rivers Flow

Athabasca River Knowledge, Use and Change

2004

Athabasca Chipewyan First Nation

Traditional Land Use Study

2010

Nih boghodi: We are the stewards of our land

An ACFN stewardship strategy for thunaze, et'thén and dechen yaghe ejere (woodland caribou, barren-ground caribou and wood bison)

Athabasca Chipewyan First Nation

2011

Athabasca Chipewyan First Nation

Integrated Knowledge and Land Use Report and Assessment

for

Shell Canada's Proposed Jackpine Mine Expansion and Pierre River Mine

April 20, 2011

Craig Candler, Ph.D. and the Firelight Group Research Cooperative with the Athabasca Chipewyan First Nation (ACFN)

2012

2013

Athabasca Chipewyan First Nation

Knowledge and Use Report and Assessment

for

Teck Resources Limited Proposed Frontier Oil Sands Mine Project

November 20, 2013

Craig Candler, Ph.D. and the Firelight Group Research Cooperative with the Athabasca Chipewyan First Nation (ACFN)

Athabasca Chipewyan First Nation

Report on Peace River Knowledge and Use for BC Hydro's Proposed Site C Project

September 20, 2013

Craig Candler, Ph.D. and the Firelight Group Research Cooperative with the Athabasca Chipewyan First Nation (ACFN)

2016

"THIS IS THE SAME PATTERN I WAS DOING IN 1998, IT'S THE SAME PATTERN WITH NO RESULTS, HAVE WE WON A CASE YET? **WHEN WE CHALLENGE INDUSTRY – NOT ONE [CASE] HAVE WE WON,** AND ALL OF THIS INFORMATION THAT HAS BEEN GATHERED DID NOT IMPACT THE OUTCOME OF THESE PROJECTS, **OUR APPROACH IS WRONG AND HAS TO BE LOOKED AT FROM ANOTHER LENS…"**

WHY DID WE DEVELOP A METHODOLOGY ASSESSMENT FOR IMPACTS TO RIGHTS (MAIR)?

- Crown Indigenous Working Group – Environment and Climate Change Canada and Indigenous communities
- Accumulation of tailings - threat of release ***418 Mm3 or 1.6 trillion liters***
- Assessing alternatives to treatment and release of Oil Sands Process Affected Water
- Risk to inherent and Treaty Rights

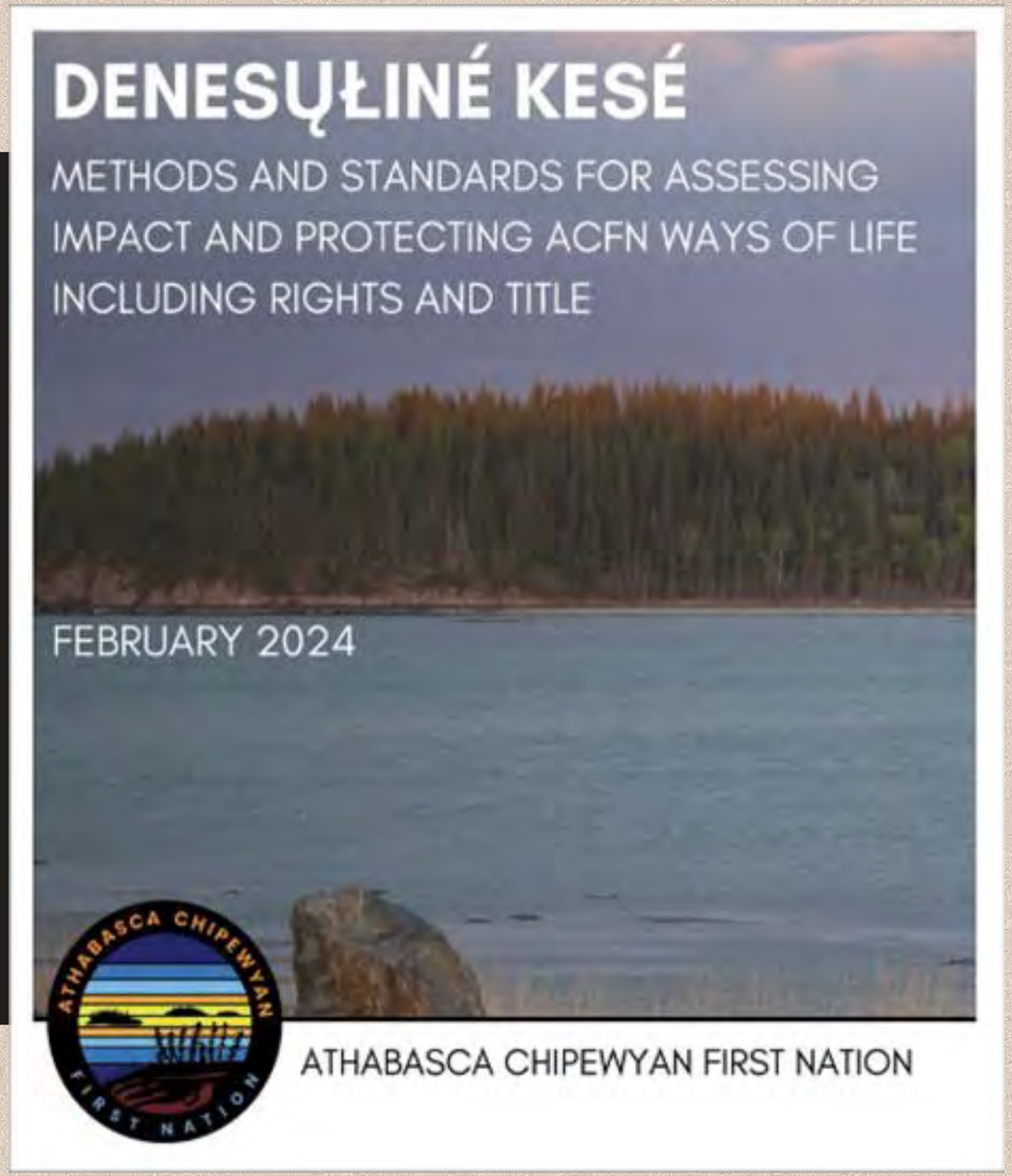
ACFN WANTS TO TRANSFORM IMPACT ASSESSMENT
REFLECT INDIGENOUS WORLDVIEWS IN HOW RISK AND POTENTIAL IMPACTS TO RIGHTS ARE PERCEIVED
LISTEN, AND LISTEN AGAIN – THEN INCORPORATE AND ADAPT
CENTER IK – NOT APPENDIX AFTER THE FACT

IMPORTANCE OF MAIR

- Highlights Treaty 8 and Denesuline Way of Life
- Roadmap for meaningful engagement
- Shares ACFN involvement in EA processes
- Centers ACFN Indigenous Knowledge, grounded in lived experience
- Identifies gaps Cumulative Impact Assessments

MAIR:

- Document outlining ACFN-led methods and standards
- Utilize community-based information to communicate ACFN's priorities & protect Denesųłiné Kese (Dene way of life)
- And supported the finalization and verification of the Denesuline Kese MAIR
- Two pieces of the puzzle have come together
- Focus group ⟶ led to creation of NI Chu Tu Kelni



ACFN examples of these non-site-specific, and site-specific VCs are as follows:

Non-site-specific VCs:

- Migratory Waterfowl and Aquatic Fur
- Caribou, Bison, and Moose
- Water, Wild Foods, and Contaminants
- Access and Water Levels

Site-specific VCs:

- Habitation Sites
- Subsistence Sites
- Environmental Features
- Cultural and Spiritual Sites
- Transportation Routes

NĮ CHU TU KELNĮ

ACFN LAND AND WATER KEEPERS

Creating a community driven rights impact assessment framework

ESTABLISHMENT OF NI CHU TU KELNI

Group advising and informing ACFN-led impact assessment processes

Produce key recommendations to our Chief and Council on major activities and events that impact, or pose a risk of impacting, ACFN Homelands, inherent and Treaty rights, and way of life

TOGETHER THE MAIR AND NCTK ADVISORY GROUP EMPOWER ACFN TO:

- Make stronger decisions
- Adapt, improve harmful colonial systems
- Incorporate broader community perspectives
- Strengthen relationships
- Preserve key species, habitat and water systems

Let’s continue the conversation!

Message me your questions or comments in the IAIA25 app.

#iaia25

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Treaty 8 Territory
kg.banjoko@acfn.com

...FROM DATA UTILIZATION AND FRAMEWORK DEVELOPMENT

...TO INDIGENOUS KNOWLEDGE INFORMING POLICY

CASE STUDIES FOR RIGHTS INFORMED RESEARCH TO PROTECT INDIGENOUS USE

TIMOTHY BEBETEIDOH EPT
MANDY OLSGARD MSC.,P.BIO(ITS)

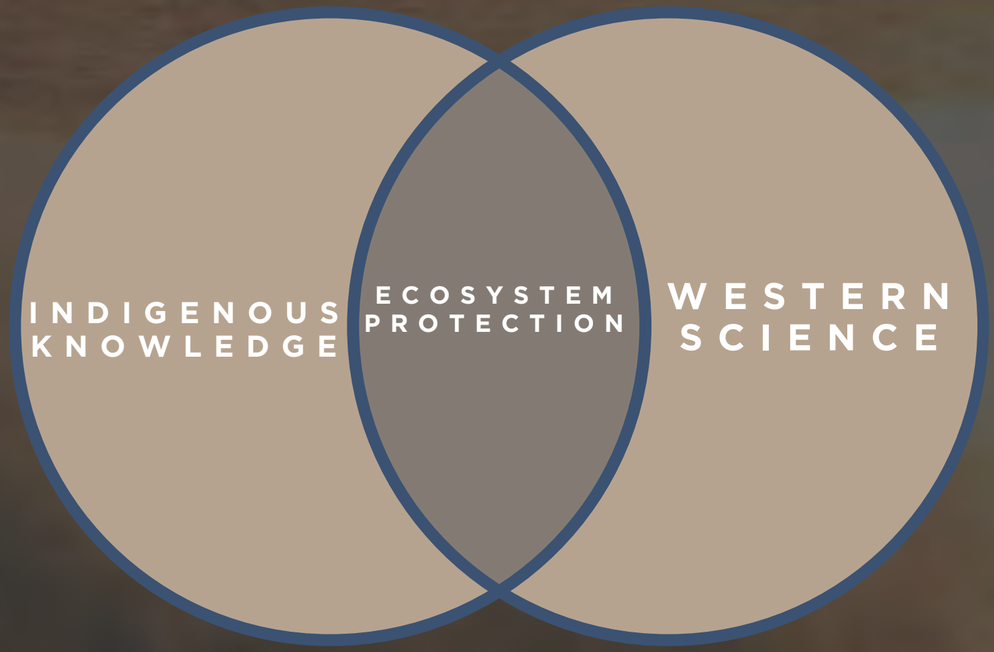
Athabasca Chipewyan First Nation
Canada

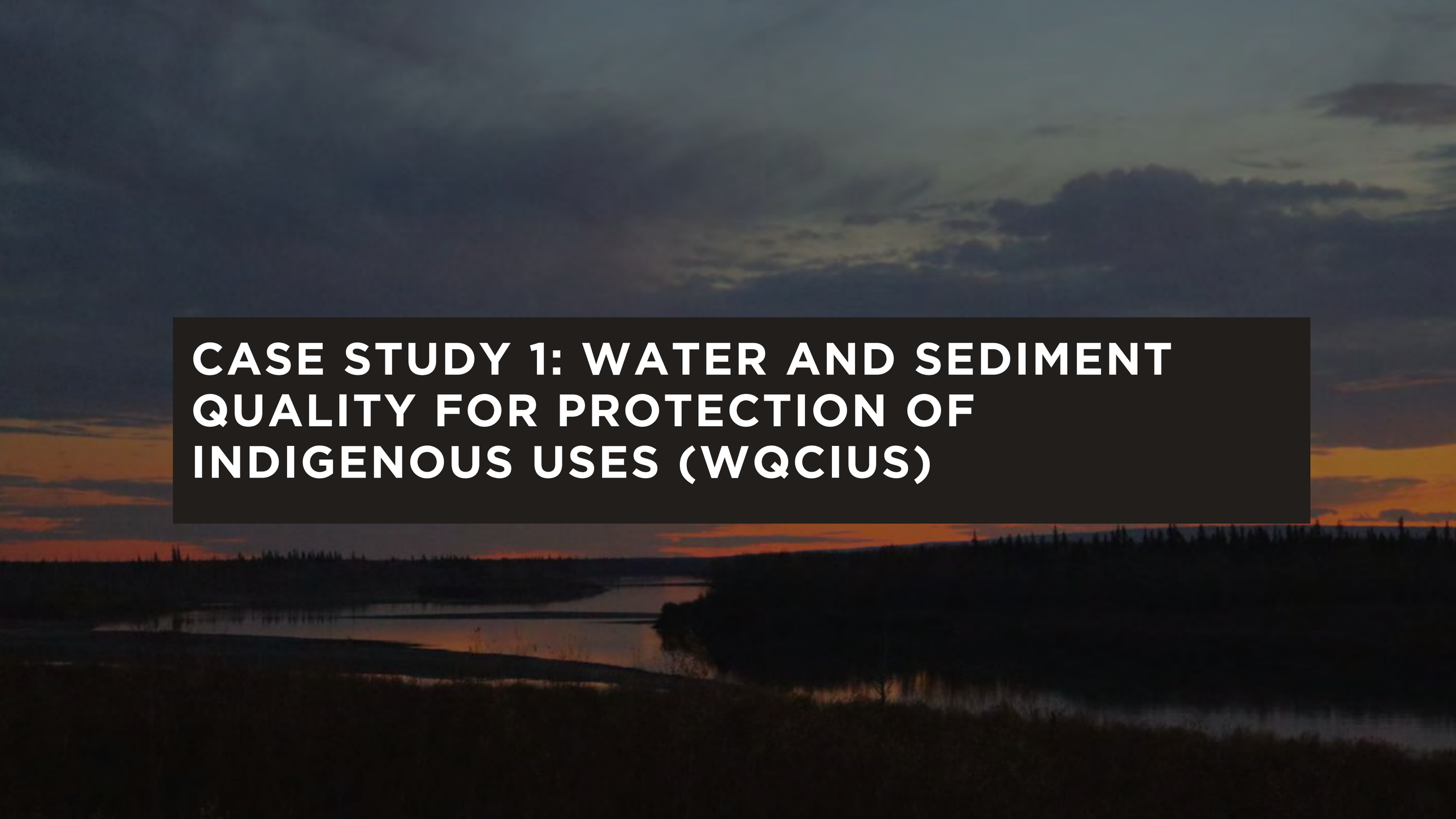
INTRODUCTION

Indigenous knowledge systems offer holistic understanding of ecosystem health

Western science contributes robust methodologies for risk assessment

Purpose:
Showcase integrated approaches that embed Indigenous knowledge and scientific rigor in policy actualization





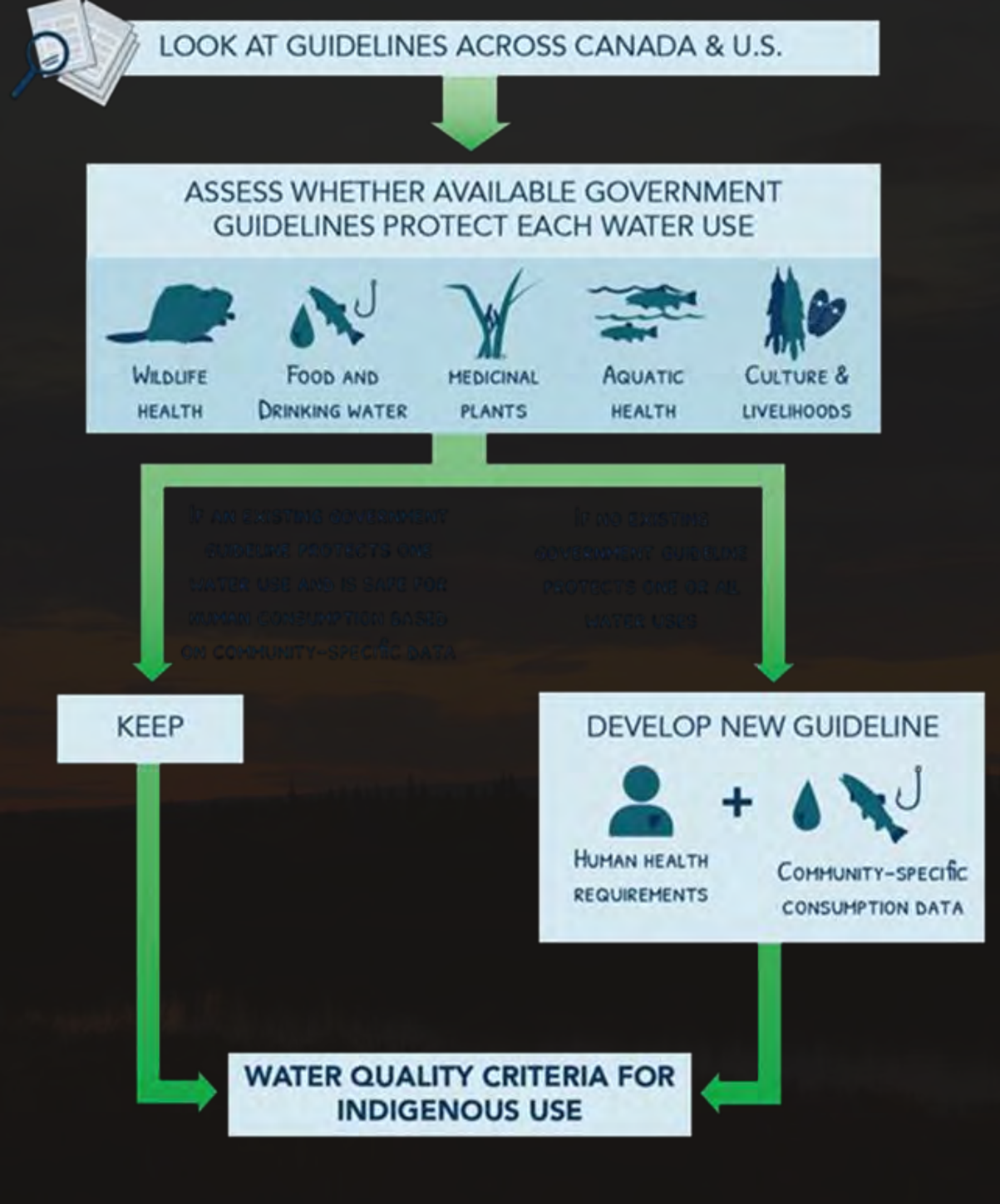
CASE STUDY 1: WATER AND SEDIMENT QUALITY FOR PROTECTION OF INDIGENOUS USES (WQCIUS)

FRAMEWORK FOR INTEGRATION

- Braided Approach
- Western Science: Toxicology, hydrology, risk modeling.
- Indigenous Knowledge: Land use, food, medicines, traditions.
- Community data
- Integration Outcome: ACFN Water Policy — 'tu bet'a ts'ena' (With Water We Live)

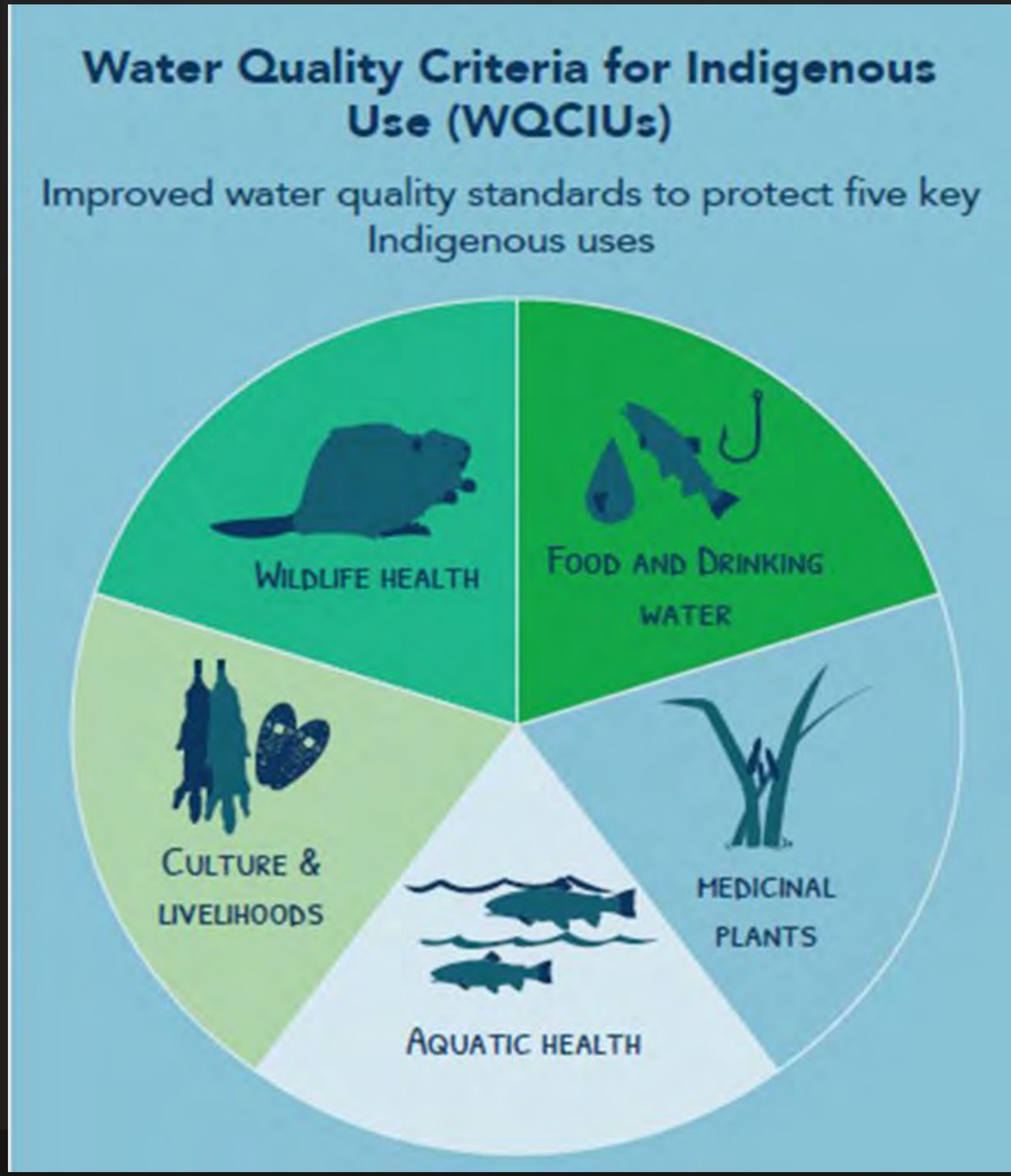
CASE STUDY 1: INDIGENOUS WATER QUALITY CRITERIA

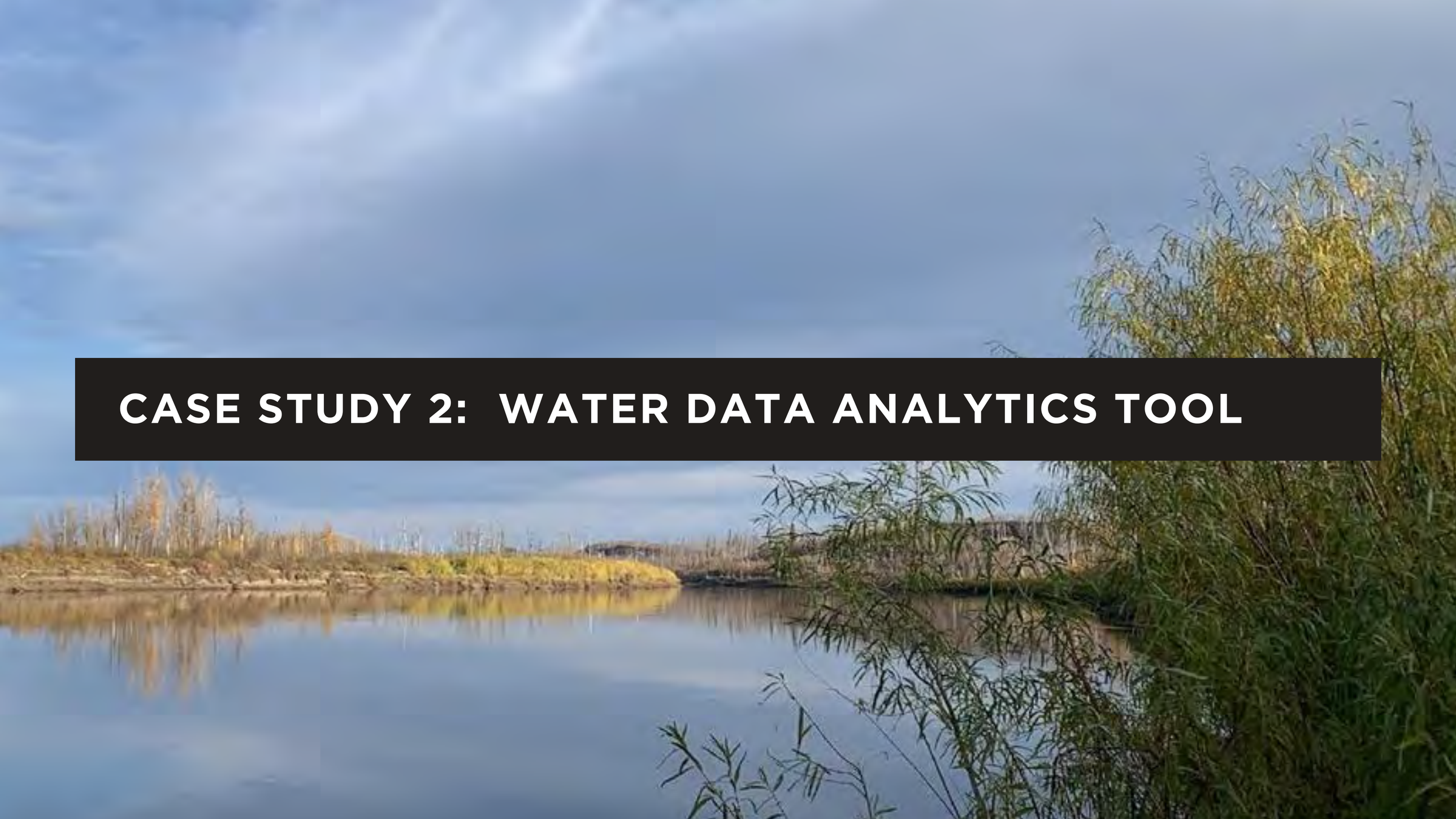
- Existing Surface Water Guidelines
  - Protect the health of aquatic biota
  - Don’t consider human health endpoints
- No consideration for Indigenous ways of being
  - drinking water from lakes/rivers/streams
  - eating traditional food and medicines



CASE STUDY 1: INDIGENOUS WATER QUALITY CRITERIA

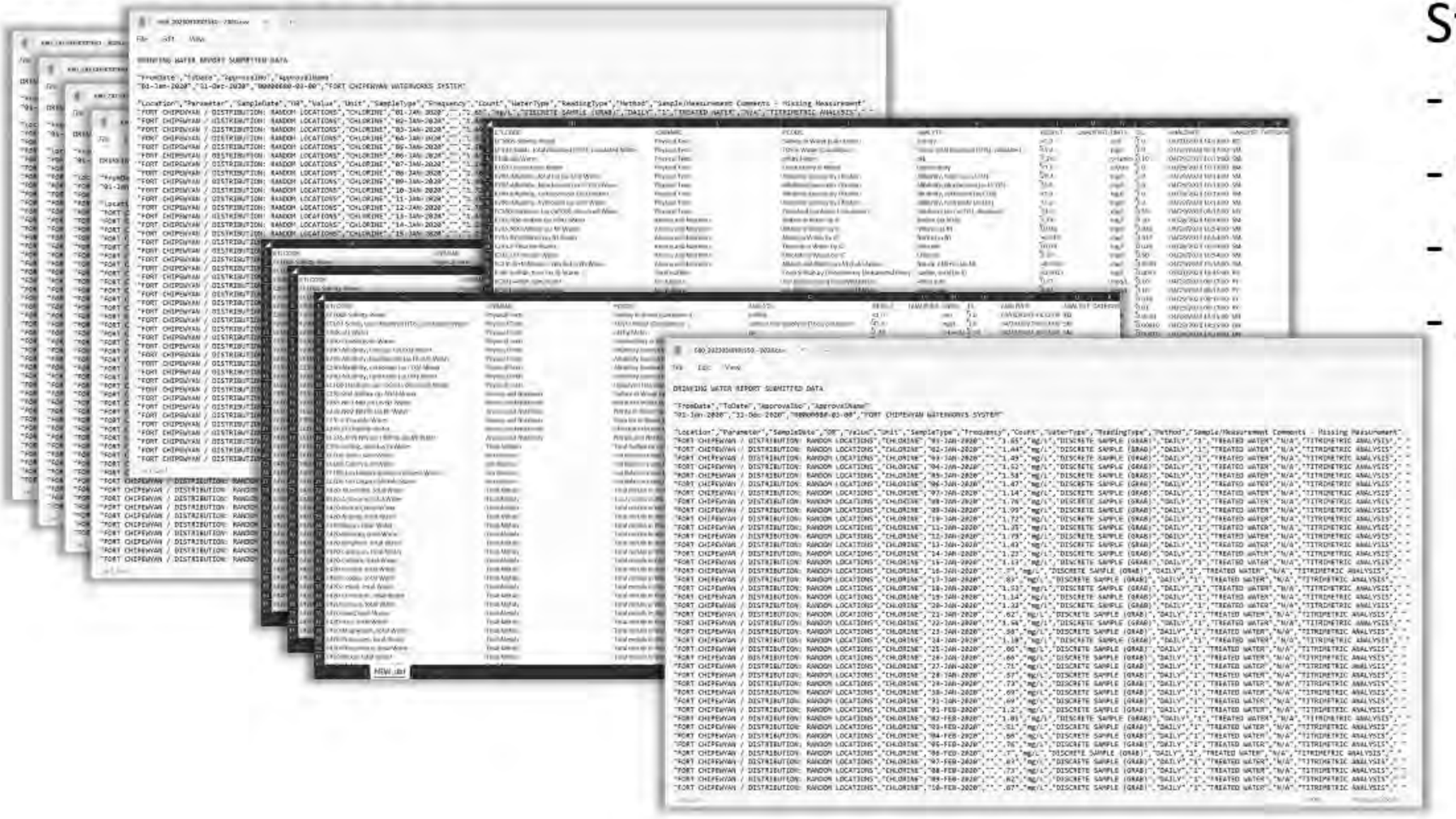
- Protect Indigenous water use
- Broader protection goals
- Community data
  - ingestion rates (kg/d) of trad. foods and medicines
- Two criteria
  - Health risk- based
  - Non-degradation/ current condition
- Outcome: if adopted they would better protect water for ACFN members, animals and plants than existing federal/provincial guidelines





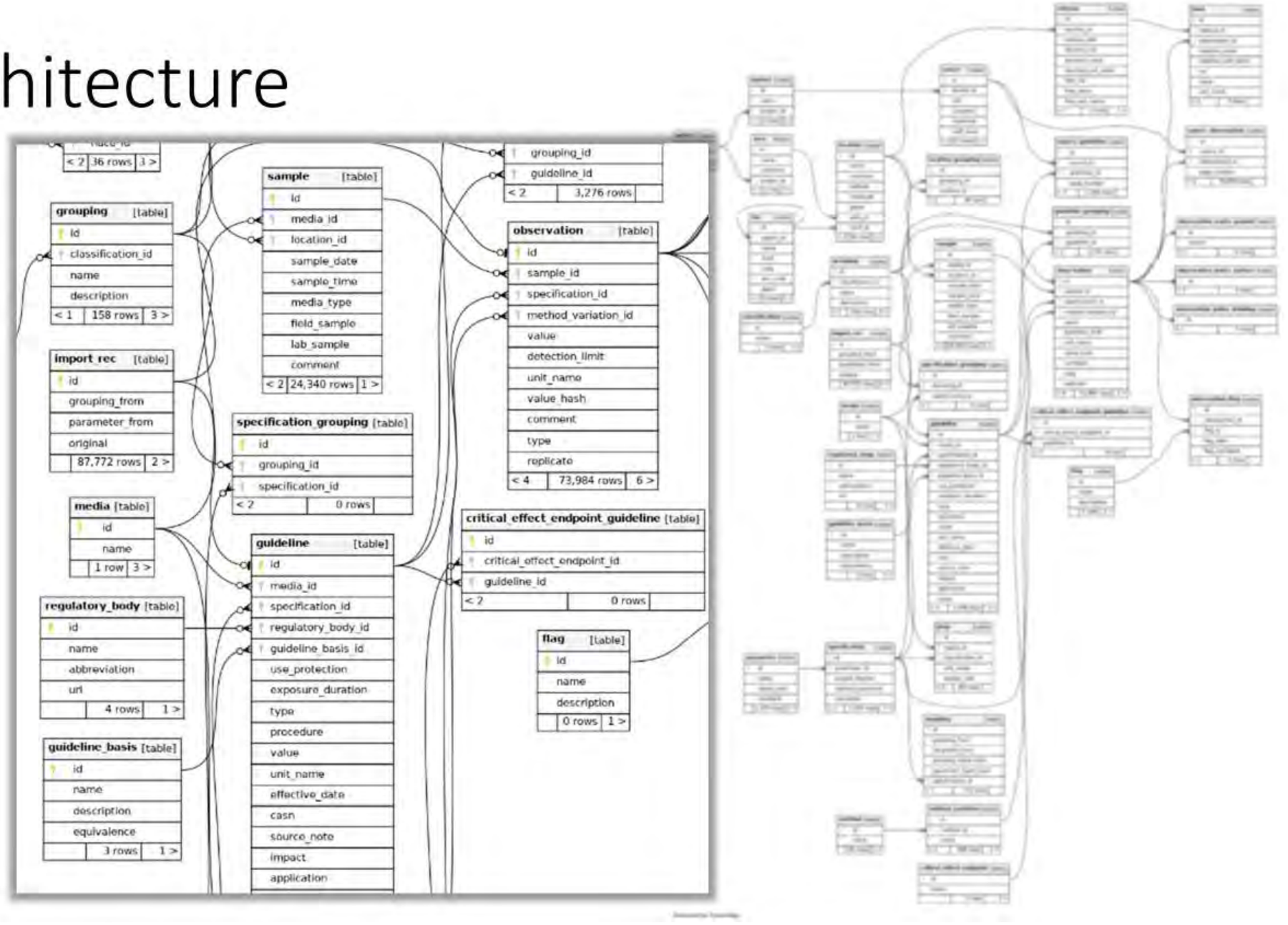
CASE STUDY 2: WATER DATA ANALYTICS TOOL

Source Data



Standardization
- Parameter
- Units
- Locations
- …

Architecture



FCWTP DAT - Home

Nav Menu

- Home
- Data Viewer
- Risk Evaluation
- Treatment
- Data Coverage
- FAQ & References
- Contact

Welcome to the FC WTP Risk and Data Explorer

This is a tool for exploring the data and risk results from the FC WTP.

Data Summary for October 2023

- 159 guidelines (17 exceeding)
- 146 parameters measured (10 exceeding)
- 147 observations (2 exceeding)
- 1 source document .

September 2023

- 220 guidelines (25 exceeding)
- 165 parameters measured (15 exceeding)
- 721 observations (18 exceeding)
- 4 source documents

August 2023

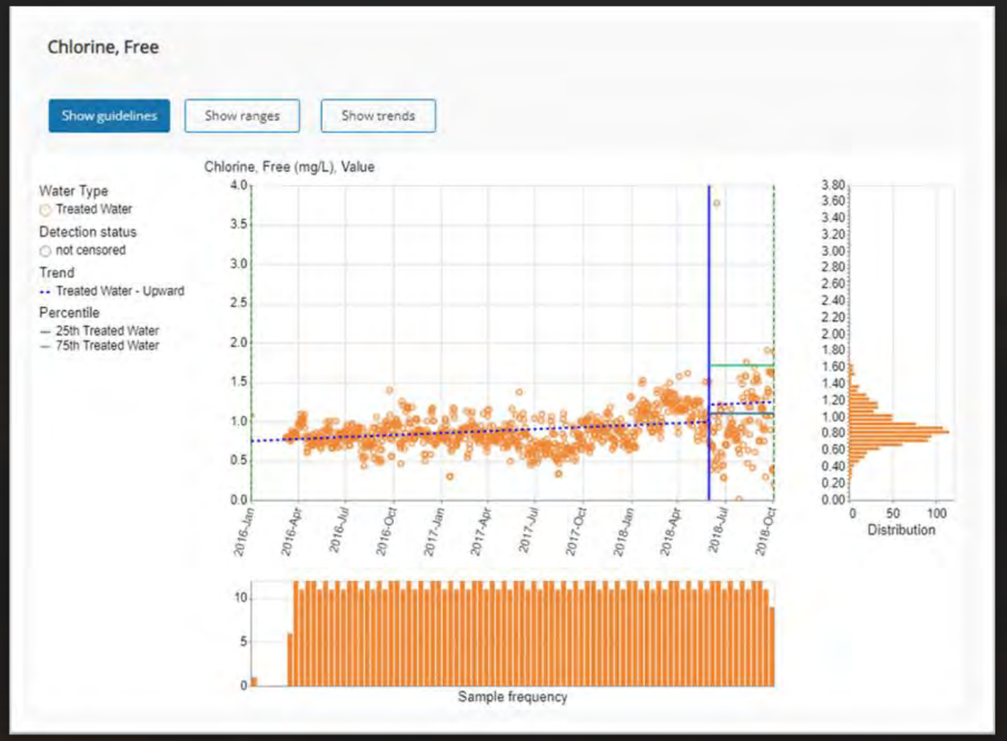
- 220 guidelines (25 exceeding)
- 165 parameters measured (15 exceeding)
- 593 observations (18 exceeding)
- 5 source documents

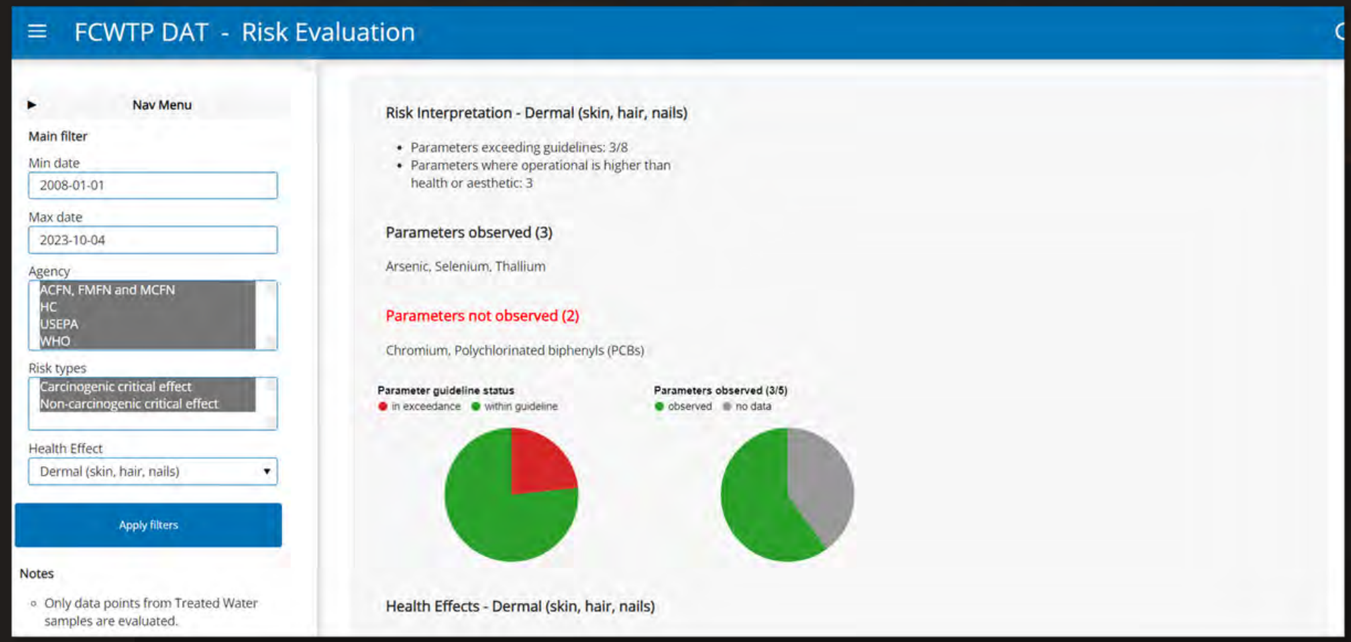
July 2023

- 159 guidelines (17 exceeding)
- 146 parameters measured (10 exceeding)
- 588 observations (8 exceeding)
- 4 source documents

WATER DATA ANALYTICS TOOL

- Real-time water quality data visualization and analysis
- Comparison to guidelines - Health Canada and Community (WQCIU)
- Trend analysis
- Risk analysis for mixtures by health endpoint
    - observation compared to 95 UCL
- Supports risk communication





CASE STUDY 3: BUSH STANDARDS


Bush Standards: Our journey to healing ancestral lands for future generations
Honouring the Traditional Knowledge Holders
This is the big picture!
"WE ARE THE TRAPPERS AND LAND USERS."
"OUR LAND USERS ARE OUR SCIENTISTS."
WHAT IS A HEALTHY FOREST?
"THE FOREST IS HOME."
"A HEALTHY FOREST IS SAFE."
"TRANQUILITY."
"IT'S WHERE YOU NEED TO BE."
"THE FOREST IS MY CHURCH."
"THE MEMBER IS THE INDICATOR!"
AWARENESS
ACCEPTANCE
ACTION
"WE ARE BETTER TOGETHER!"
THERE IS STRENGTH IN NUMBERS
OUR COLLECTIVE VOICE GIVES OUR PEOPLE HOPE
"EVERYTHING IS INTERCONNECTED"
"WE USE PLANTS IN THE FOREST FOR HEALING"
"A HEALTHY FOREST HAS NO SCIENCE - JUST SPIRIT"

Bush Standards for Healthy Forests and Safe Indigenous Land Use

Soil | Invertebrates | Plants | Wildlife | Forests | Humans

1. Risk-based Soil Quality

Generic

Protects all traditional land use categories*

Community Health* (consumption of traditional foods/ medicines)

Invertebrate Health*

Plant Health*

Wildlife Health*

Ecosystem Health*

2. Baseline Soil Quality

Chemical Parameters

Physical Parameters

3. Biological Effects

Chronic Toxicity (observed)

Acute Toxicity (observed)

Chemical Tissue Residues (observed)

Health Risk Quotients (predicted)

4. Community

Training

Process and Policy

Implementation

Verification

Member as indicator (land based observation, evaluation, and self reporting)

Soil Baseline Data Compilation Project

- 19 mines
- 674 monitoring locations
- 146 parameter specifications
- 27,986 observations

Download observations

Preview of observations

ObservationId	SampleId	Mine	MineType	MonitoringLocationName	Latitude	Longitude	Series	SoilTexture	SoilLayerByHorizon	Soi
4	95	Mackay River In Situ	In situ	WW19	56.8692	-112.1241	WNF	Coarse	Subsurface	Su
7	1929	Kearl Mine	Surface	1177	57.4262	-111.0943	Unknown	Fine	Subsurface	Su
9	1927	Kearl Mine	Surface	M204	None	None	Unknown	Coarse	Ice	Su
11	1801	Aurora Mine	Surface	DALKIN-XL (p72)	None	None	DALKINXL	Coarse	Surface	Un
13	72	Mackay River In Situ	In situ	WW128	56.714	-111.9039	MIL	Fine	Subsurface	Su
17	2161	Northern Lights Project	Surface	JB23	None	None	Unknown	Coarse	Subsurface	Su
18	1593	Aurora Mine	Surface	FIREBAG-GR (p85)	None	None	FIREBAGGR	Coarse	Subsurface	Su

app

danger zone

data coverage

sql query

summaries

viewer

WIP BTV Export

WIP BTVs

WIP units

WIP viewer

Settings

Additional settings

Mine Type

In situ | Surface

Soil Texture

Coarse | Fine | Unknown

Soil Layer (By Horizon)

Ice | Subsurface | Surface | Unknown

Soil Layer (By Depth)

Overlap | Subsurface | Surface | Unknown

Chemical Parameter

Choose an option

Physical Parameter

Choose an option

Chemical Parameter

Arsenic

Physical Parameter

Bulk density

Facet By

Mine

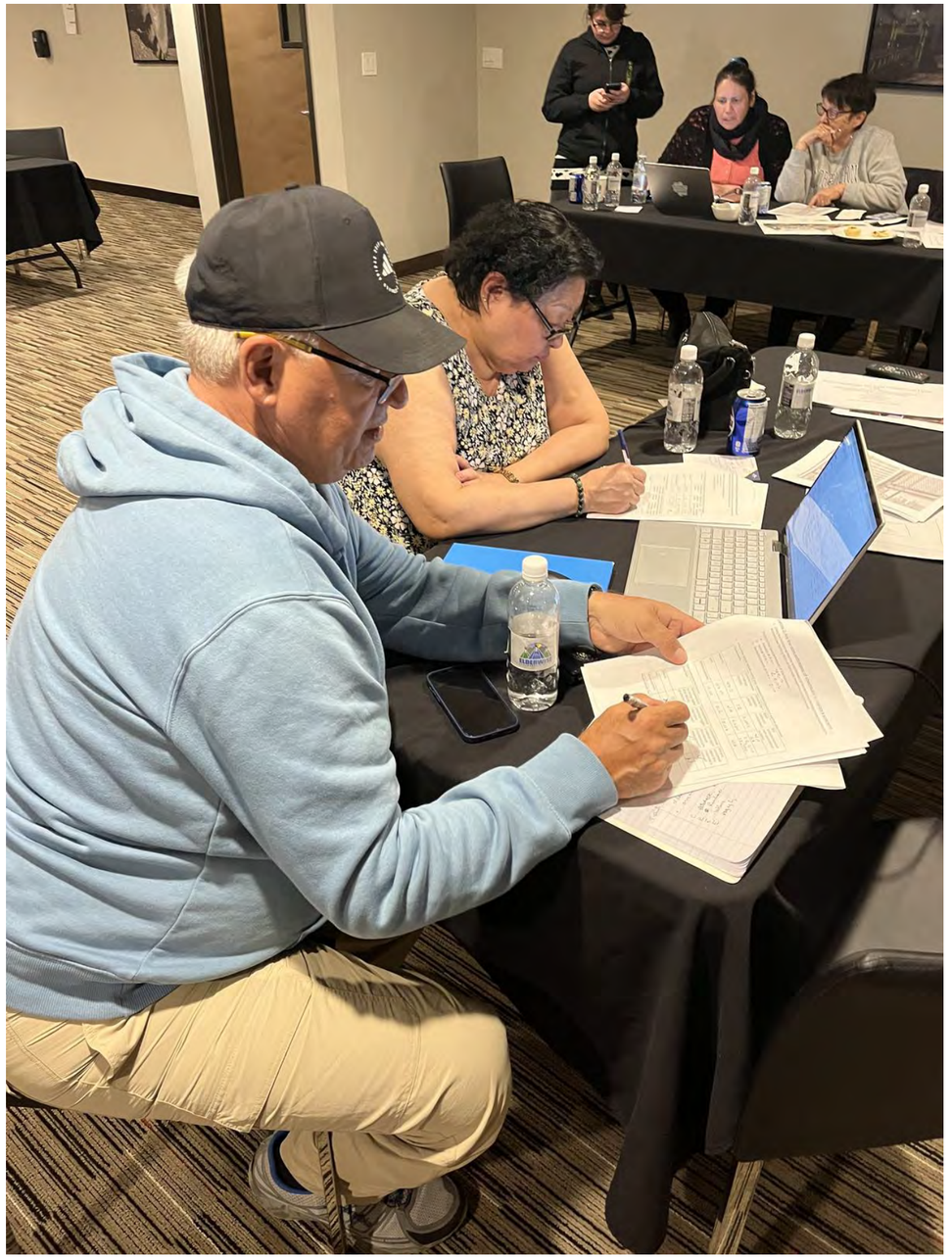
Plots | Data table | Map

Note: These boxplots are for exploration only. The actual calculation of the percentiles is performed and provided elsewhere

Arsenic and Base Saturation by Mine

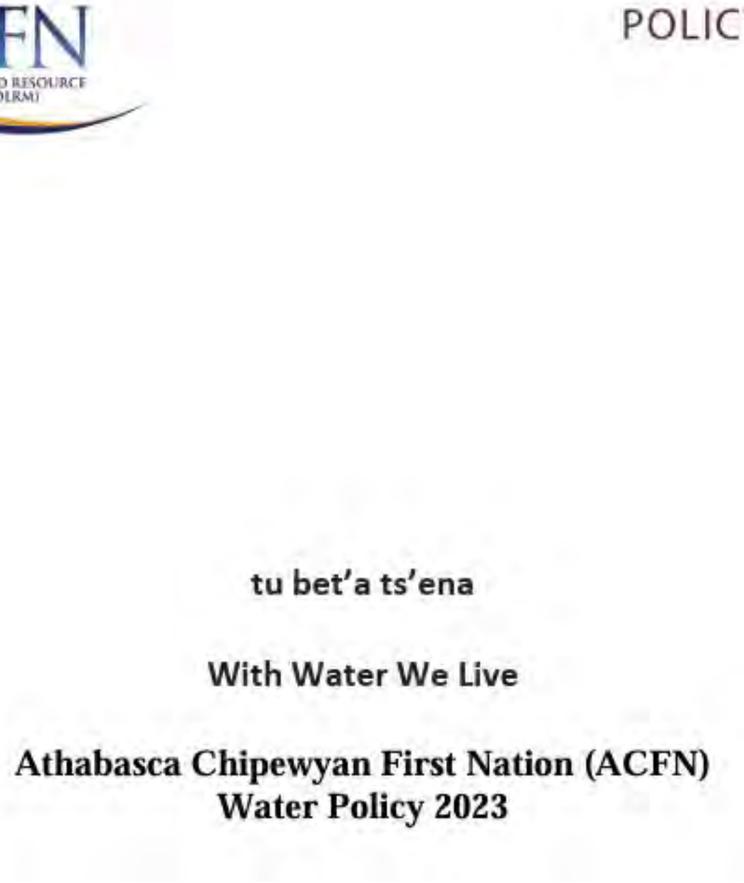
Bush Standards final workshop

Hands on exercises with the steering committee to train members on how to use the data tool to interpret western science data using their standards.



POLICY DEVELOPMENT WITH INDIGENOUS KNOWLEDGE

- **Health-based + culturally relevant.**
- **Grounded in Treaty 8 & UNDRIP**
- **Foundation for Nation-to-Nation negotiations.**
- **Guides the application of the Water Quality Criteria for Indigenous Use.**
- **Guides the application of the Bush Standards.**
- **Provides ACFN's water quantity thresholds that supports navigation**



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...FROM INDIGENOUS KNOWLEDGE INFORMING POLICY

...TO DISCUSSING THE FUTURE OF OUR INDIGENOUS KNOWLEDGE

CAN AI SUPPORT THE INTEGRATION AND MEANINGFUL USE OF INDIGENOUS KNOWLEDGE?

LET'S DISCUSS

CALLIE DAVIES-FLETT & MANDY OLSGARD

Athabasca Chipewyan First Nation &
Integrated Toxicology Solutions
Canada

ACFN INDIGENOUS KNOWLEDGE IS LIVING, CUMULATIVE, AND OFTEN PLACE-BASED, BY VIRTUE OF ITS:

- ORIGIN
- BROAD AND FLUID TEMPORAL NATURE OF PAST AND GENERATIONALLY PASSED KNOWLEDGE INFORMING CURRENT AND FUTURE KNOWLEDGE; AND
- PARTICULAR PROTOCOLS AS REGARDS CUSTODY, USE AND SHARING OF THAT KNOWLEDGE

WE ARE THE SOLE OWNERS OF OUR NATION'S INDIGENOUS KNOWLEDGE

WE MUST BE ABLE TO **UNDERSTAND, APPLY, AND ACCESS** OUR INDIGENOUS KNOWLEDGE IN ANY WORK IN WHICH IT IS USED

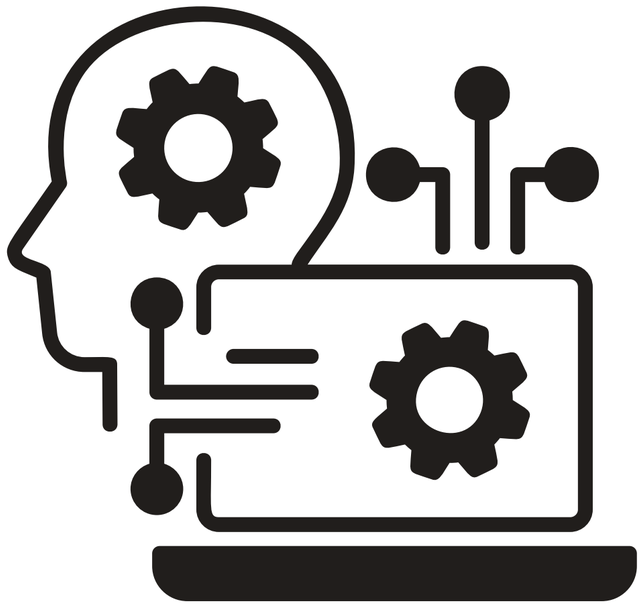
SACRED KNOWLEDGE

HUMAN TO HUMAN CONNECTION LIVING AND BREATHING CAN'T BE MINIMIZED

CONSIDERATIONS & RISKS

COMMUNITY PROTECTION NEEDS TO BE FRONT AND CENTER

GENERATIVE VS PREDICTIVE



Risks

Existing AI perpetuates and embeds colonial epistemologies

Systematic operationalization of bias against non-white, non-male, and non-Western peoples(Edward Lewis et. al., 2024)

SOLUTION:
INDIGENOUS BUILT AI

INDIGENOUS AI?

FLUID KNOWLEDGE

GENERATIONS ADAPT

POLICY DEVELOPMENT

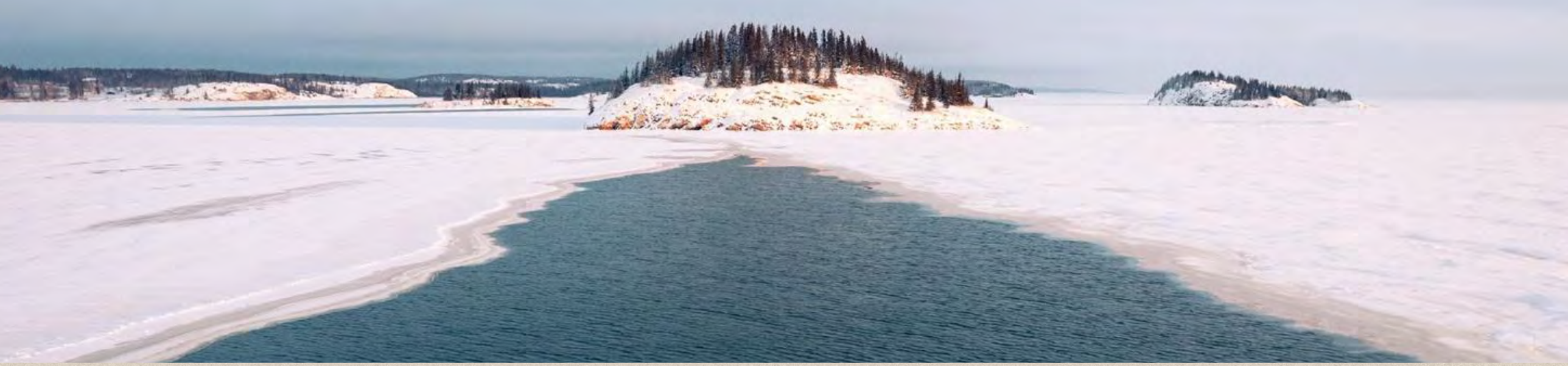
DISCUSSION
IS INDIGENOUS KNOWLEDGE READY TO MEET AI?

Resources
Budget, Time, Skills

Processes
FPIC, OCAP, Co-development

If done incorrectly AI could perpetuate and expedite colonization of Indigenous communities

Faster and more efficient isn't always better



WHY IS IT IMPORTANT TO LEAD WITH INDIGENOUS KNOWLEDGE?

AS LONG AS THE SUN SHINES AND THE GRASS GROWS, THE RIVER FLOWS

DISCUSSION
IS INDIGENOUS KNOWLEDGE READY TO MEET AI?

Resources
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If done incorrectly AI could perpetuate and expedite colonization of Indigenous communities

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