

From Reactive to Proactive First Nations Planning: Lessons from the Metlakatla CEM Program



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We respectfully acknowledge this conference is taking place on the shared unceded territory of the Squamish Nation and Lil'wat Nation.

Presentation Outline

PHASE

1

Develop CEM
Framework and
Identify Priority
Values and
Indicators

PHASE

2

Assess Current
Condition of
Priority Values

PHASE

4

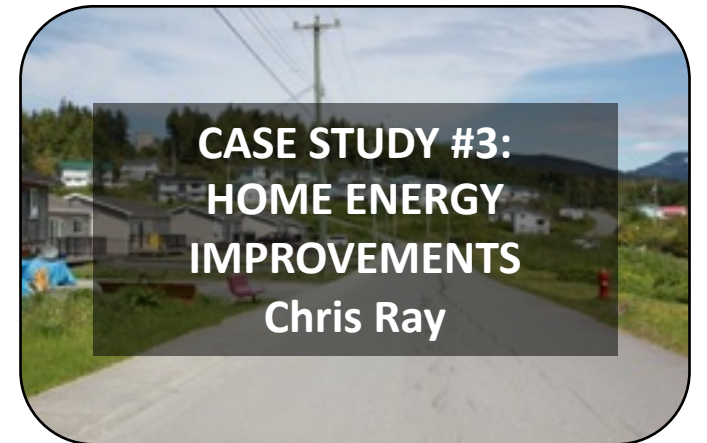
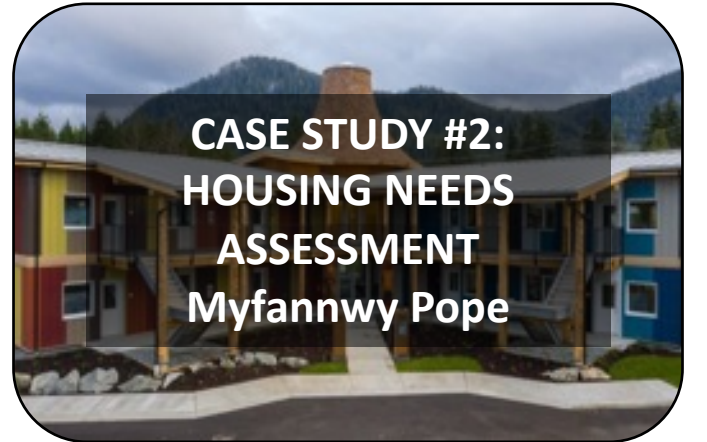
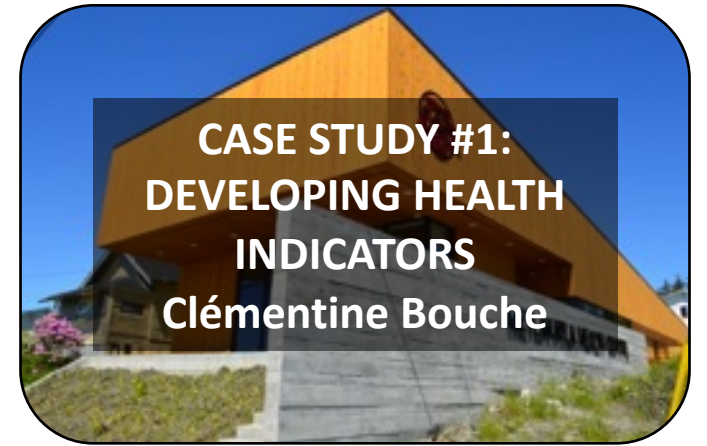
Monitoring,
Management
and Mitigation

PHASE

3

Establish
Management
Triggers

METLAKATLA CEM PROGRAM OVERVIEW
Katerina Kwon





Overview: Metlakatla Cumulative Effects Management (CEM) Program

Presented by Katerina Kwon (PhD Candidate)

Metlakatla First Nation

- Progressive Tsimshian community located in a biologically rich area on British Columbia's North Coast
- Metlakatla people have inhabited area for thousands of years
- Community supports development but not at the expense of lands, waters, and culture
- Members continue to enjoy their inherent rights and freedom to harvest traditional food





 **Metlakatla Territory**

-  Territory Boundary
-  Community/Municipality



METLAKATLA

PRINCE RUPERT

TERRACE




Changing Development Context on BC's North Coast

LNG Gold Rush (2012 to 2017)



Port Expansion (2017+)

- Several LNG facilities at numerous stages of assessment, one being constructed
- Port undergoing expansion (bulk liquids and cargo)
- CN rail expansion near Prince Rupert to accommodate growth
- Marine bunkering service



What are the **combined impacts** of all these developments? What are we doing to **manage those impacts**?

NEED FOR:

- Indigenous-led program and processes
- Innovative, proactive and practical solutions



Metlakatla
CEM

COMMUNITY PARTNER

CUMULATIVE EFFECTS MANAGEMENT



EXPERTISE

RESEARCH CAPACITY



CEM DECISION CONTEXT


LNG PROJECTS


PORT ACTIVITY


FISHING

POTENTIAL
SOURCES
OF PAST,
PRESENT
AND FUTURE
IMPACT

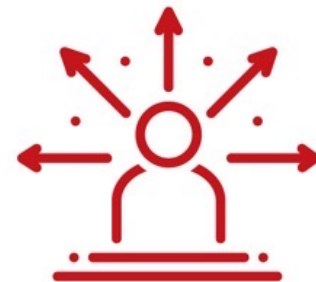
METLAKATLA
VALUES



CEM PROGRAM
Tracks condition of
values and manages
impacts over time



INFORMS
DECISION-MAKING



- Treaty Strategy
- Impact and Benefits Agreements
- Land/Marine Planning
- Community Services
- Environmental Assessment Response
- Regional Planning





Metlakatla CEM is guided by Metlakatla worldview, principles and traditional knowledge.



Metlakatla CEM is rooted in Metlakatla values. Community members, staff and leadership are involved in every step.



Metlakatla CEM is informed by best practices in planning, impact assessment and Indigenous governance.

CEM Framework

PHASE

1

Develop CEM Framework and Identify Priority Values and Indicators

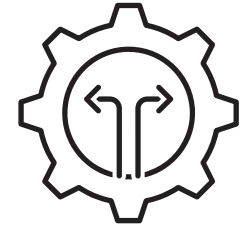
PHASE

2

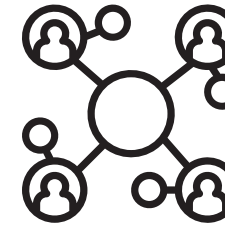
Assess Current Condition of Priority Values



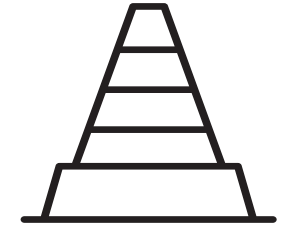
VALUES-FOCUSED



IMPLEMENTABLE



INTERDISCIPLINARY



EMBRACES
UNCERTAINTY

PHASE

4

Monitoring, Management and Mitigation

PHASE

3

Establish Management Triggers

GUIDING PRINCIPLES

1. CEM must be culturally relevant
2. CEM is a program not a project
3. Collaboration is necessary

Phase 1: Metlakatla Priority Values

PILOT VALUE



**FOOD, SOCIAL,
CEREMONIAL (FSC)
ACTIVITY**

PILOT VALUE



BUTTER CLAM

PILOT VALUE



HOUSING

PILOT VALUE



EMPLOYMENT



**ACCESS TO HEALTH
SERVICES**



PERSONAL SAFETY



**CHRONIC HEALTH
CONDITIONS**



**WEALTH
DISTRIBUTION**



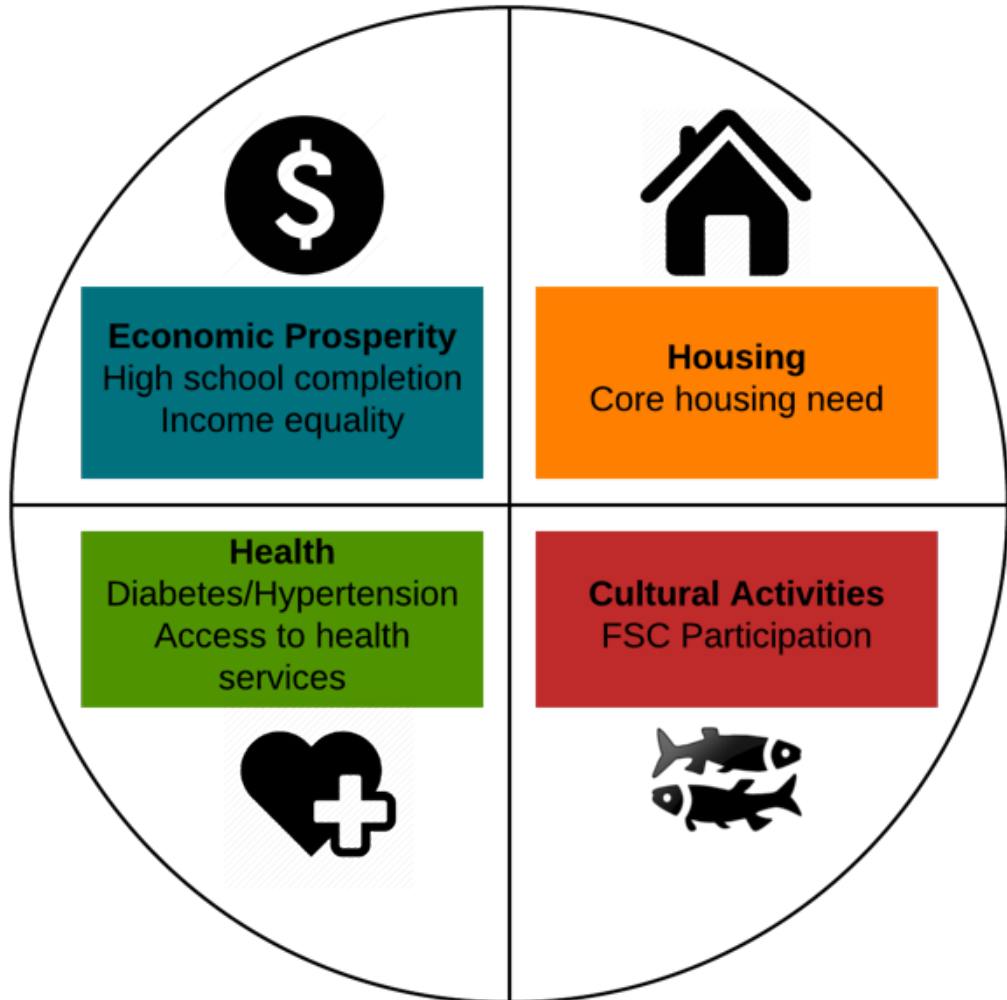
CHINOOK SALMON



ABILITY TO STEWARD

Phase 2: Metlakatla Membership Census

SOCIO-ECONOMIC VALUES



- Census used to collect consistent data specific to Metlakatla First Nation
 - Members 15 and over living in traditional territory
- Census carried out in 2015-2017, 2020
 - Door-to-door
 - Online option
 - Metlakatla-SFU teams
- Single survey instrument for Metlakatla to reduce survey fatigue

Phase 2: Intertidal Clam Surveys

ENVIRONMENTAL VALUES



- Gather data on clams that can be used to estimate condition of clam populations
 - 6+ beaches
 - Population and habitat parameters
 - Contaminant sampling
- Surveys conducted in 2017-2021
- Field & lab components
 - Included local Metlakatla field techs

Phase 3: Tiered Management Triggers

Series of progressive, quantitative markers that reflect increasing degrees of concern about the condition of a value



Phase 4: Management Action Strategies

VISION / GOALS FOR VALUE

CEM VALUES FOUNDATION

- Description
- Selection Rationale
- Indicators
- Influence Diagram
- Interconnected Values
- Current Condition
- Future Trend
- Other Key Considerations

CEM MANAGEMENT TRIGGERS AND ACTION STRATEGY

LONG-TERM COMMUNITY-BASED MONITORING PROGRAM

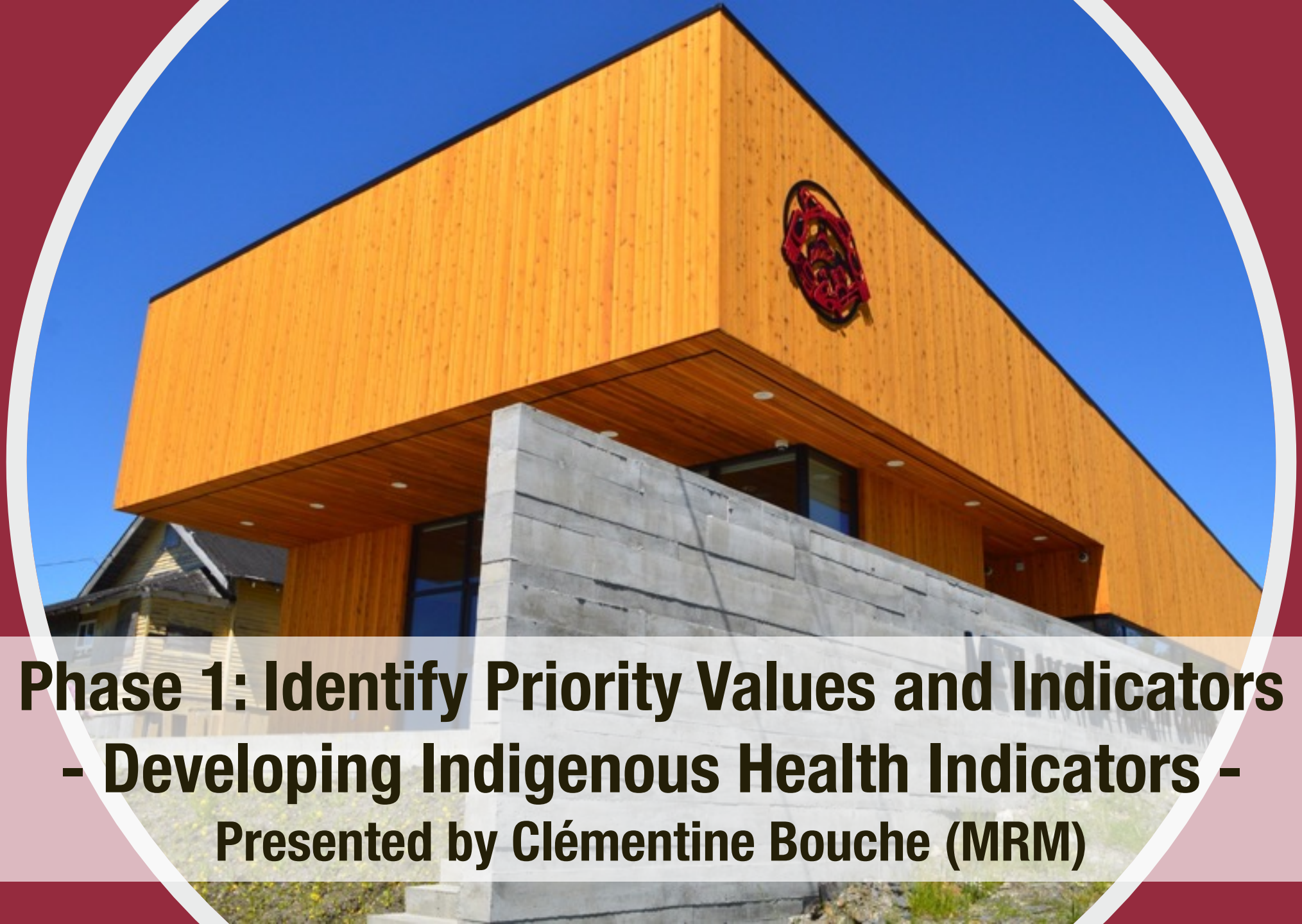
INTERNAL MANAGEMENT STRUCTURE

EXTERNAL MANAGEMENT OPPORTUNITIES

IMPACT ASSESSMENT LEVERS

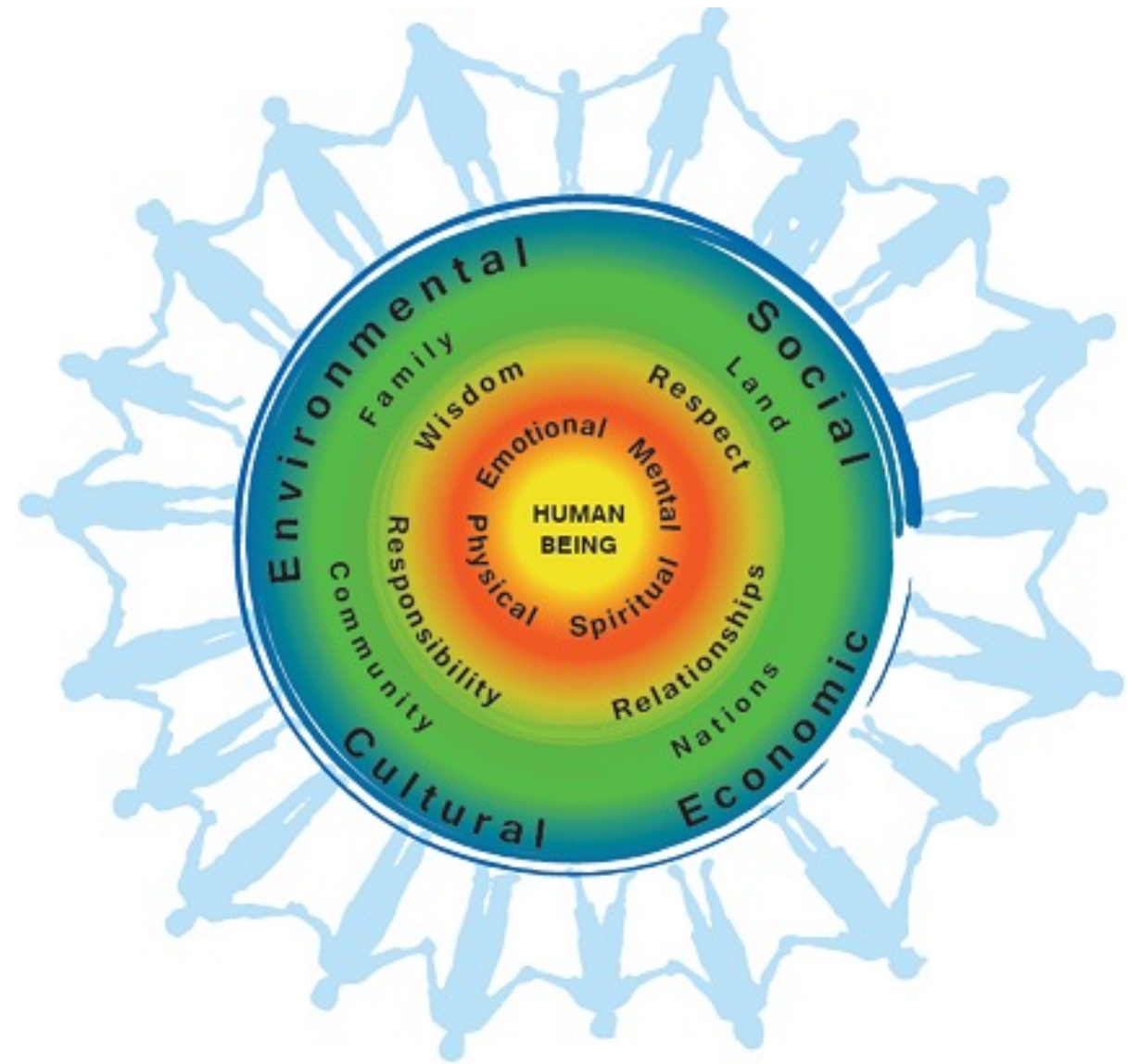
GAPS (KNOWLEDGE AND CAPACITY)

IMPLEMENTATION PLAN OPERATIONAL PLAN



Phase 1: Identify Priority Values and Indicators
- Developing Indigenous Health Indicators -
Presented by Clémentine Bouche (MRM)

First Nation Perspective on Health and Wellness



Research Objectives

Chronic Health Conditions

Condition Indicators

- Diabetes (Type 2)
- Hypertension



Stressor Indicators

- ?
- ?

Access to Health Services

Condition Indicator

- Ambulatory Care Sensitive Conditions



Barriers

- *Revisions*

Research Steps



Obj. 1: Validate Priority Values

Chronic
Health
Conditions
(CHC)



Access to
Health
Services
(AHS)



Obj. 1: Validate Condition Indicators for CHC

Condition Indicator	Literature	CEM Criteria	Members	Experts	Metlakatla Census
Diabetes (Type 2) Prevalence <i>% of members with Type 2 Diabetes</i>	✓	Accurate: ✓ Practical: ✓ Sensitive: ✗ Relevant: ✓	✓	✓	✓
Hypertension Prevalence <i>% of members with Hypertension</i>	✓	Accurate: ✓ Practical: ✓ Sensitive: ✗ Relevant: ✓	✓	✓	✓

Obj. 2: Identify Stressor Indicators for CHC

Stressor Indicator	Literature	CEM Criteria	Members	Experts	Metlakatla Census
<p>Social & Cultural Connectedness</p> <p><i>% of members who are moderately or very connected to Metlakatla Culture, Community, History, and Traditional Lands and Waters</i></p>	✓	Accurate: ✗ Practical: ✓ Sensitive: ✓ Relevant: ✓	✓	✓	✓
<p>Food</p> <p><i>Further Investigation Needed</i></p>	✓	NA	✓	✓	NA

Obj. 3: Revise Condition Indicators for AHS

Condition Indicator	Literature	CEM Criteria	Members	Experts	Metlakatla Census
<p>Ambulatory Care Sensitive Conditions (ACSC)</p> <p><i>ACSC per 100,000 in Prince Rupert younger than 75 years old</i></p>	X	Accurate: ✓ Practical: X Sensitive: X Relevant: ✓	NA	X	NA
<p>Continuity of care</p> <p><i>% of members who have a primary care provider</i></p>	✓	Accurate: ✓ Practical: ✓ Sensitive: X Relevant: ?	NA	✓	✓

Obj. 3: Revise Barriers for AHS

Barriers	Literature	CEM Criteria	Members	Experts	Metlakatla Census
<ul style="list-style-type: none"> Do not have a family doctor Unaware of available services Racialized discrimination No access to traditional medicines Wait times are too long Services/Appointments unavailable Transportation problems Cost Unable to leave the house because of a health problem 	✓	NA	✓	✓	✓

Recommended Indicators

Chronic Health Conditions

Condition Indicators

- ✓ Diabetes (Type 2)
- ✓ Hypertension



Stressor Indicators

- + Social & Cultural Connectedness
- + Food

Access to Health Services



Condition Indicator

- X Ambulatory Care Sensitive Conditions
- + Continuity of Care



Barriers

- ? Access to Traditional Medicines

Importance of Health and Planning

"Everything is connected."

"Our kids are going to be the ones who are going to live through our decision-making now."

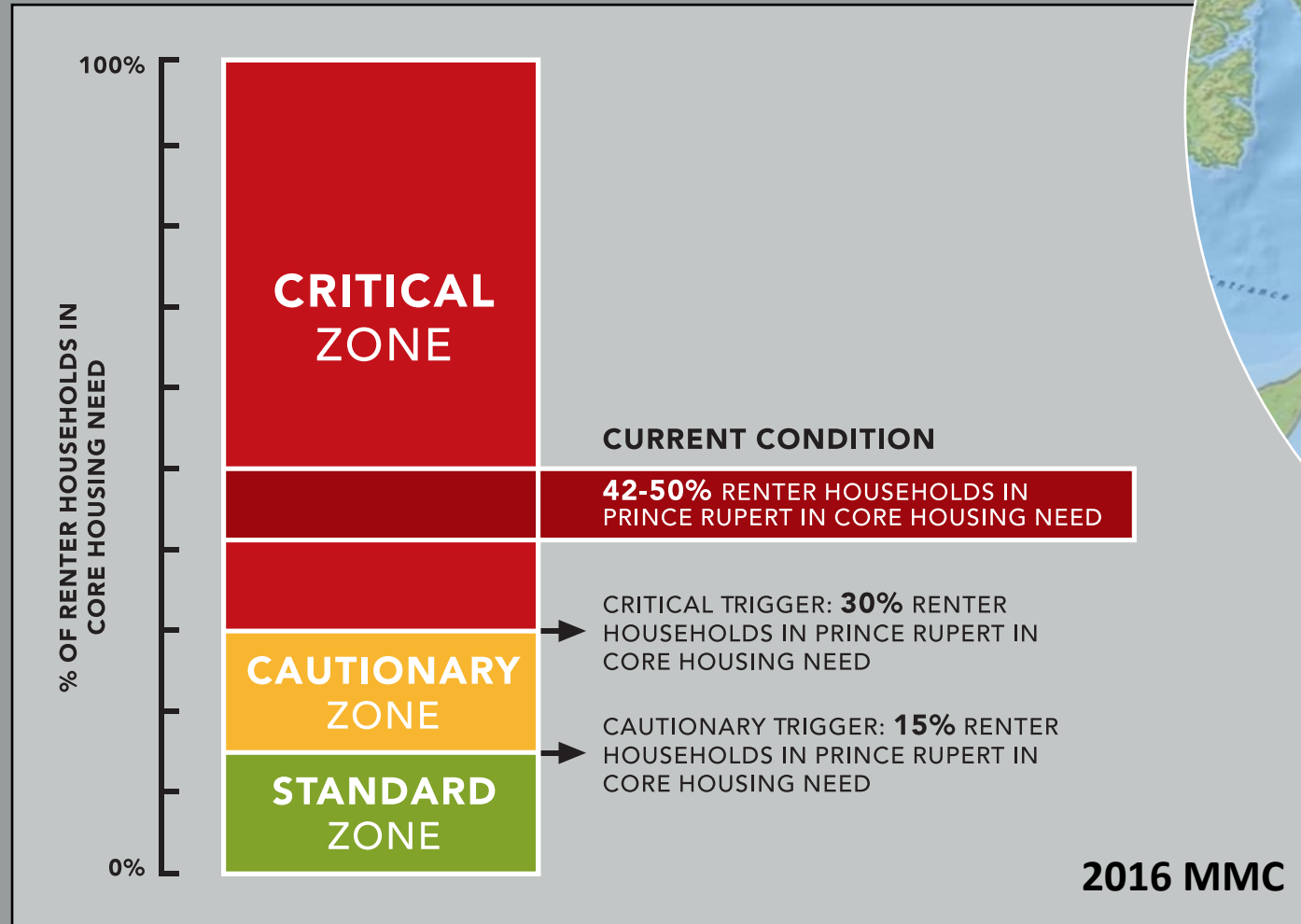
Metlakatla Members
October 2020



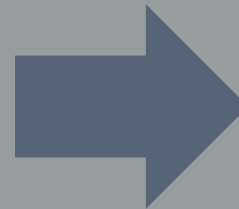
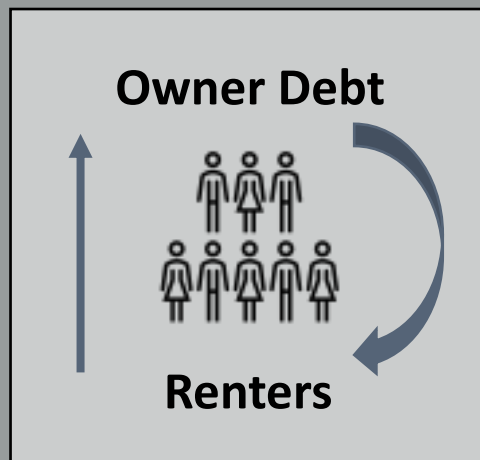


**Phase 4: Monitoring, Management & Mitigation
- Metlakatla's Housing Needs Assessment -
Presented by Myfannwy Pope (MRM)**

CEM Background



First Nations Housing Issues



BC Housing Needs Assessment

- Provides funding for local governments to perform housing needs assessment
- Lacks guidance on collecting and managing disaggregated Indigenous household data
- Lacks guidance for First Nation governments to perform housing needs assessment

Research Objectives



What are the major housing challenges for Metlakatla renters in Prince Rupert?



How effective are existing housing programs in addressing these challenges?



What actions can Metlakatla take to address these challenges?

Methods

Literature
Review



Metlakatla
Membership
Census



Metlakatla
Member and
Staff Workshop



Adapting the Housing Needs Assessment

Commensurability

- Core Housing Need

Actionability

- Grandmother's Perspective
- Asset Inventories

Data Sovereignty

- OCAP™

Methods

Literature
Review



Metlakatla
Membership
Census



Metlakatla
Member and
Staff Workshop



Key Findings – Core Housing Need

In 2020, 38% of Metlakatla renters in housing need



Families with children



Elders living alone or with family



Youth-led households

Affordability = #1 Challenge



Low supply



Projected growth

Key Findings – Access to Support



- Low overall awareness (50%> across all services)
- Low overall use (13%> across all services)



- Difference between awareness and use among households in core housing need may indicate barriers to access



- Cash assistance services, among others, did not have high efficacy at removing users from core housing need



Methods

Literature
Review



Metlakatla
Membership
Census



Metlakatla
Member and
Staff Workshop



Key Findings - Workshop Takeaways

“All the information that was gathered can help show what that could look like [...] to prioritize housing actions and create strategy.”



Housing projects and programs should be accountable and transparent to Metlakatla members and emphasize community voice in priority-setting and implementation of solutions



Housing solutions should be creative, adaptive, and ready to take advantage of opportunities for funding and capacity building that arise



Metlakatla should develop relationships with service providers, other governments, and members to increase capacity for addressing housing needs for members

Housing Needs Assessment as Proactive Planning

Housing needs assessment as a cumulative effects tool

- Disaggregated data
- Measurement as management

Capturing First Nation members with the housing needs assessment

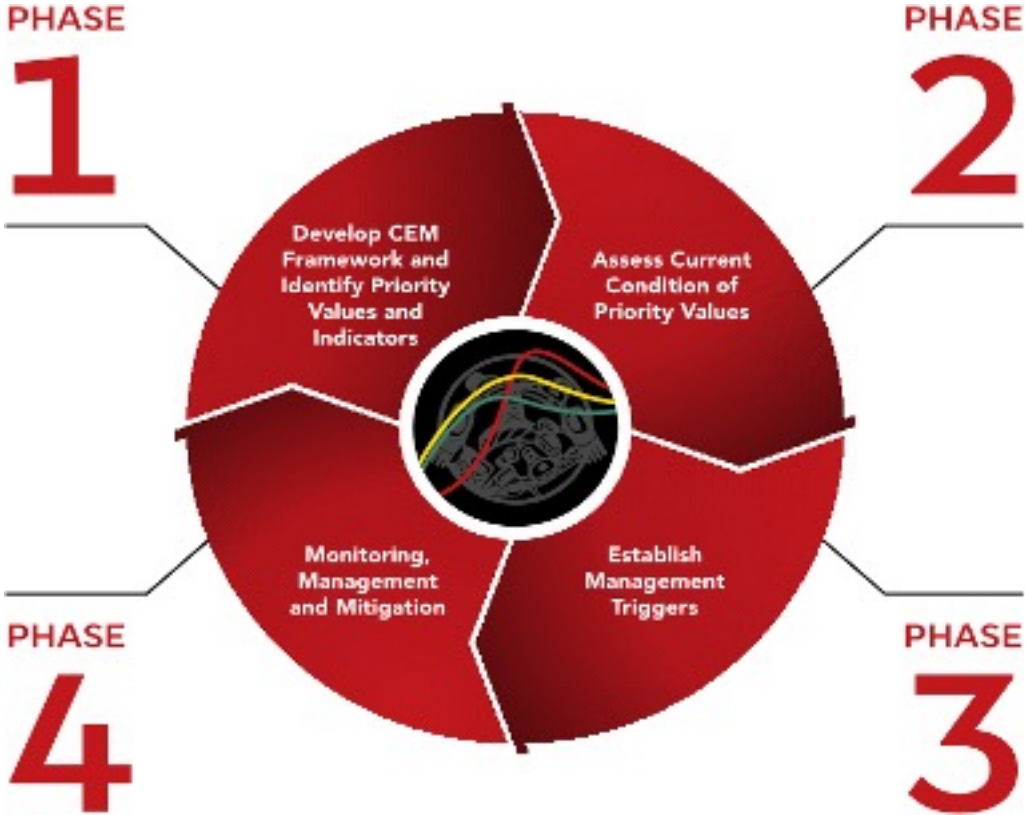
- Gaps in current guidance
- Inclusive and culturally informed data frameworks
- First Nation-led assessments





**Connecting CEM: Assessing Values and Priorities for
Home Energy Improvements
Presented by Chris Ray (MRM Candidate)**

How Does Home Energy Connect to CEM?



Current Priority Values:

 FOOD, SOCIAL, CEREMONIAL (FSC) ACTIVITY	 BUTTER CLAM	 HOUSING	 EMPLOYMENT	 ACCESS TO HEALTH SERVICES
 PERSONAL SAFETY	 CHRONIC HEALTH CONDITIONS	 WEALTH DISTRIBUTION	 CHINOOK SALMON	 ABILITY TO STEWARD

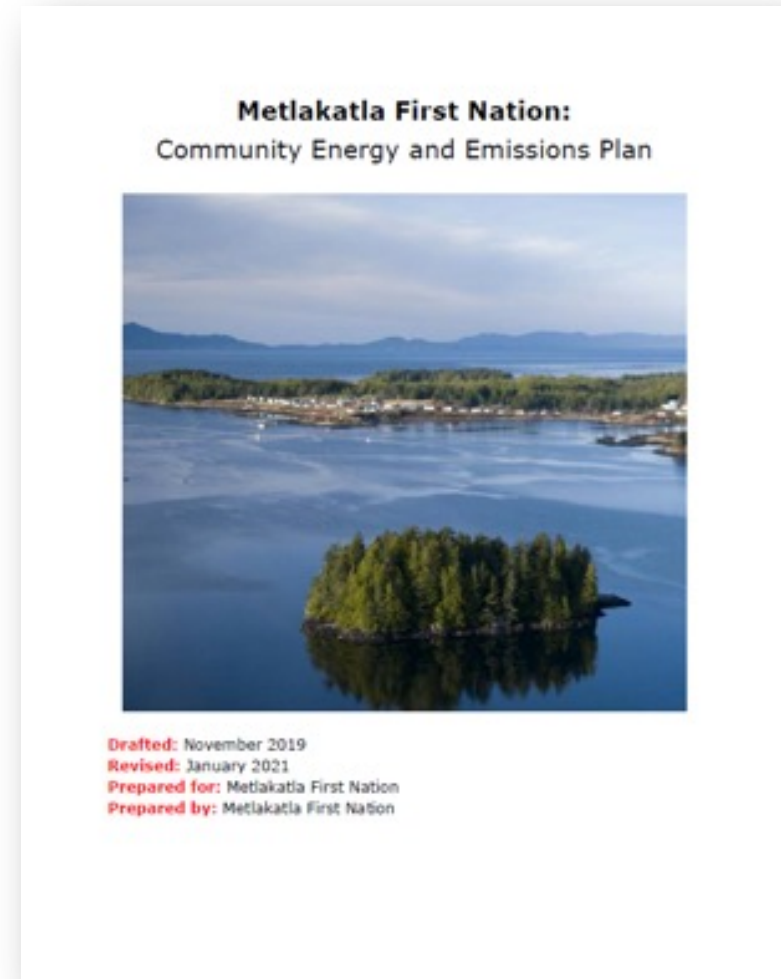
Values to Explore:

CLIMATE CHANGE

Why does this matter?

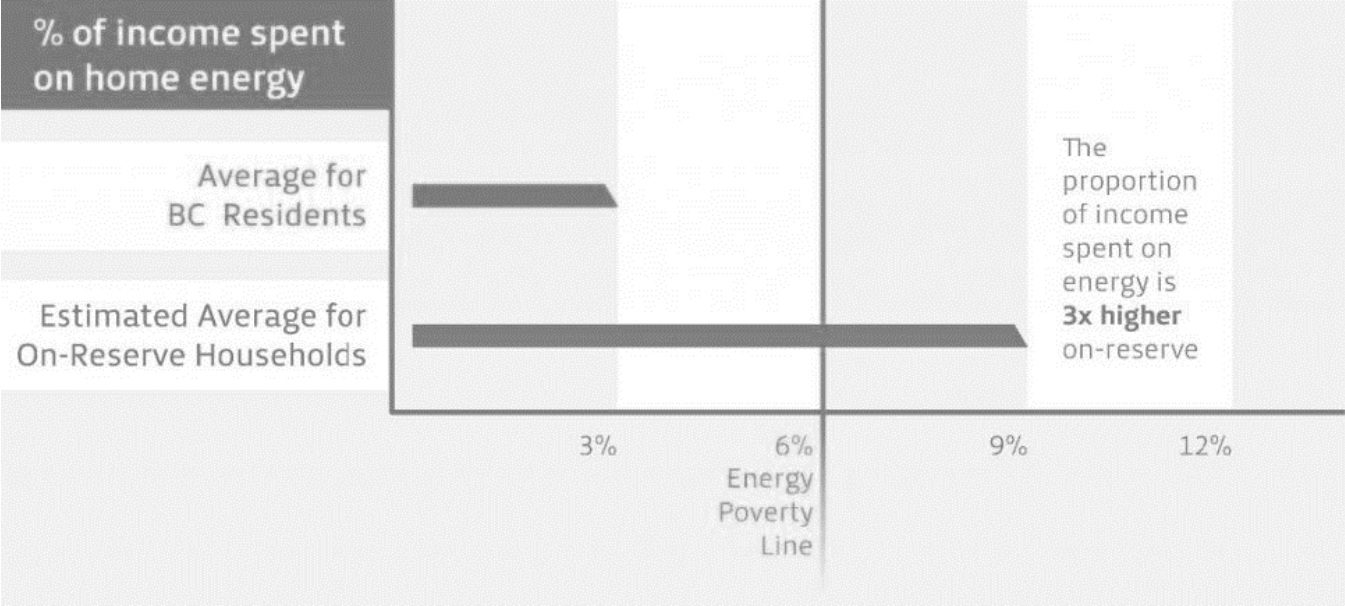
Community Energy and Emissions

- Metlakatla Community Energy and Emissions Plan (CEEP) drafted in 2019 to:
 - Gather community values regarding energy
 - Determine how energy is used in the Metlakatla community
 - Identify how Metlakatla members can save electricity and utility costs
 - Identify what renewable energy projects may be feasibility in the Metlakatla community or territory
- Recommendation: **“Evaluate energy efficiency upgrades (e.g., door/window replacement, insulation upgrades, and appliance upgrades).”**



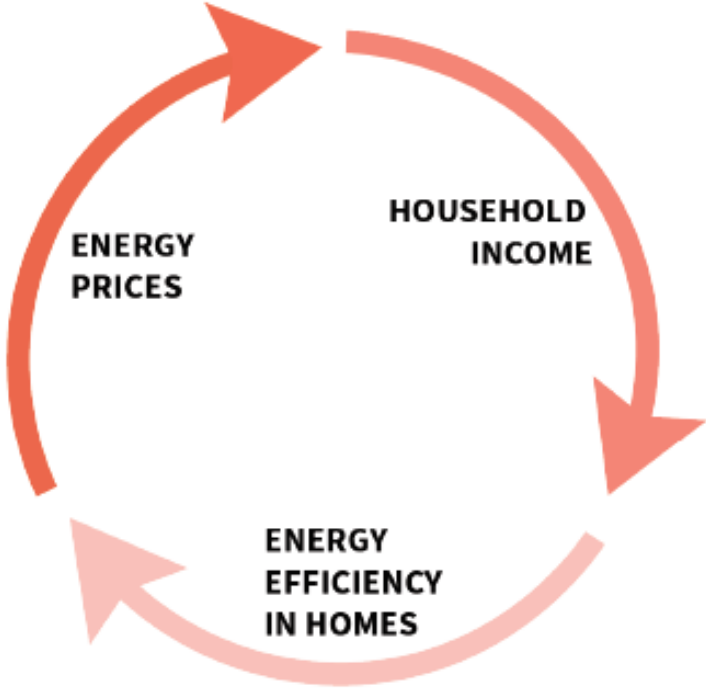
Why does this matter?

Indigenous Energy Poverty



Source: [Ecotrust Canada](#)

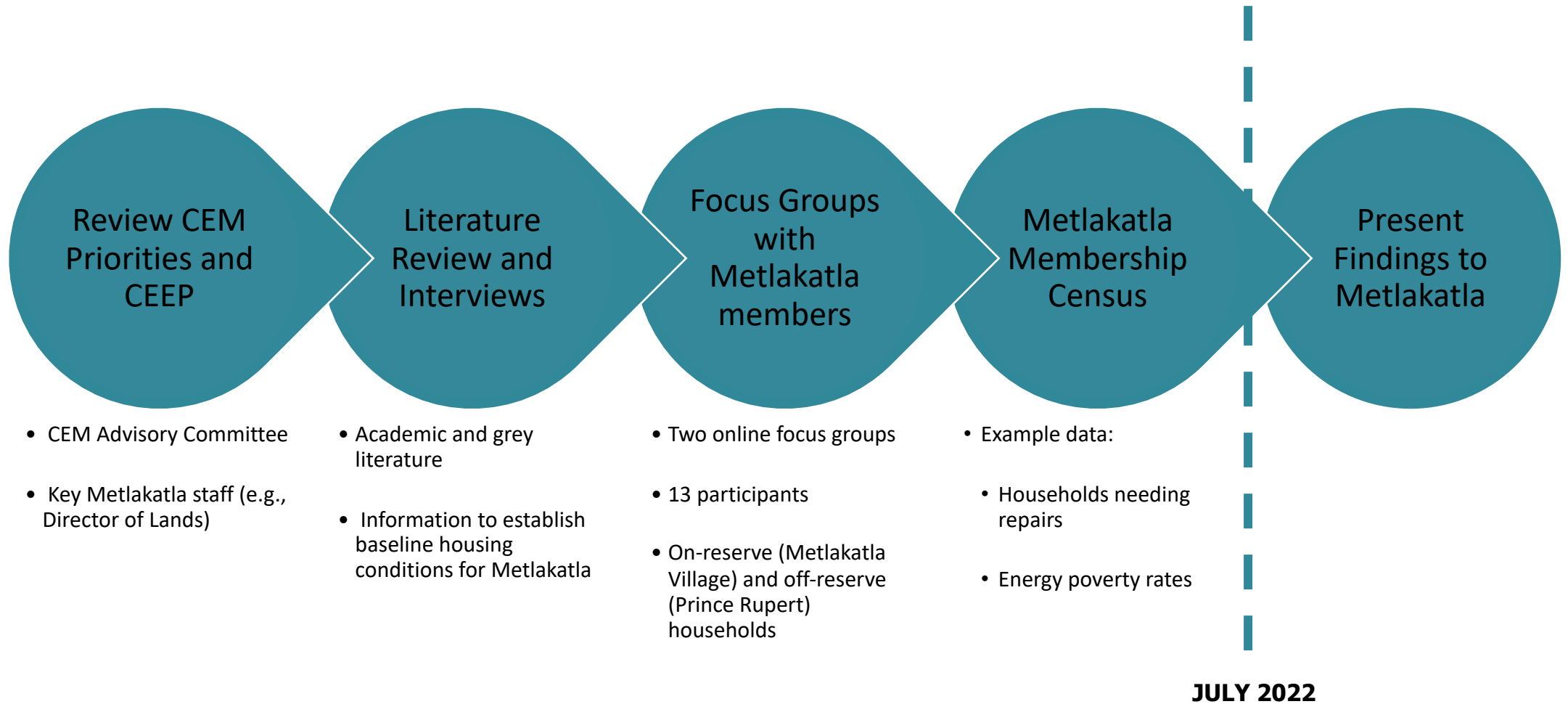
THREE DRIVERS OF ENERGY POVERTY



What did we want to achieve?

1. Determine barriers to home energy upgrades in Metlakatla and other Indigenous communities in BC
2. Determine Metlakatla members' priorities and values related to their home energy system
3. Recommend solutions that can be adopted by Metlakatla for a Home Energy Retrofit Program

What did we do?



What did we find?

Energy Poverty

- Many participants reported **high home energy costs**
 - Both natural gas and electric baseboard heating
 - Highest costs were reported for households with electric baseboard heating
 - Both on-reserve and off-reserve households reported high energy costs



What did we find?

Problem Areas for Energy Efficiency



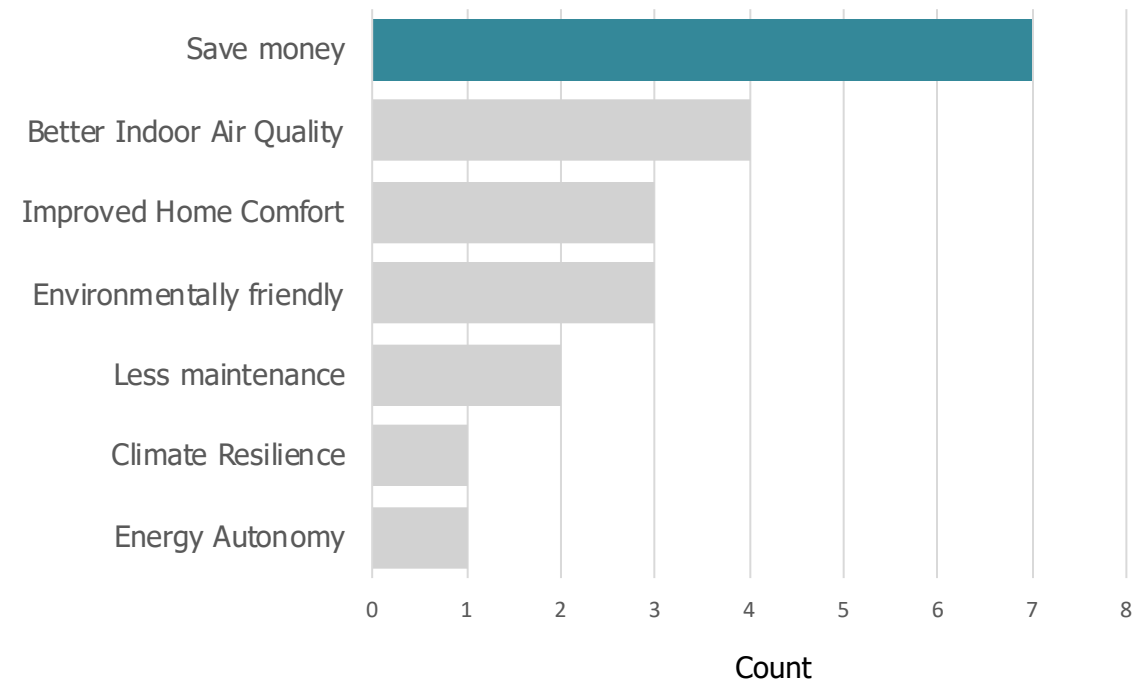
- Elements of the **building envelope** (e.g., insulation in exterior walls, roof, windows, doors) are the perceived culprits related to poor home energy efficiency
- **Heating and cooling system** not identified as a problem area, but many identified it as a desired upgrade
- **Low hanging fruit** has already been picked (e.g., LED lighting, energy efficient appliances)
- Connection between **moisture** and energy efficiency

What did we find?

Motivators for Home Energy Upgrades

- **Saving money** is the most common motivator for completing home energy upgrades
- Other motivators are **still important** considerations
- Energy autonomy (“**getting off the grid**”) did not appear to be a major motivator
 - Skepticism on what small-scale renewable energy options are available considering the local climate

Choose your top 3 motivations for following through with home energy upgrades



What did we find?

Barriers for Home Energy Upgrades

- **High cost** is the main barrier preventing major home energy upgrades (e.g., heating and cooling system, building envelope)
- **Lack of knowledge** is a secondary barrier
 - Not enough knowledge on the topic to make a confident decision
 - Don't know where to look for resources that could help them
- **Contractor availability and access** are a concern, specifically for on-reserve households



Key Recommendations

- Provide home energy coordinator support that helps homeowners through the retrofit journey
- Coordinate and seek funding for home energy assessments (i.e., EnerGuide Assessments)
- Use replacement cycles as an opportunity to identify solutions that also address non-energy related problems (e.g., mold)
- Focus on replacing electric baseboards, but coupling with envelope upgrades can ensure non-financial benefits are addressed (e.g., home comfort, indoor air quality, climate resilience)



Closing Remarks: Reflections & Lessons

Presenter: Katerina Kwon

How to Effectively Address Cumulative Effects

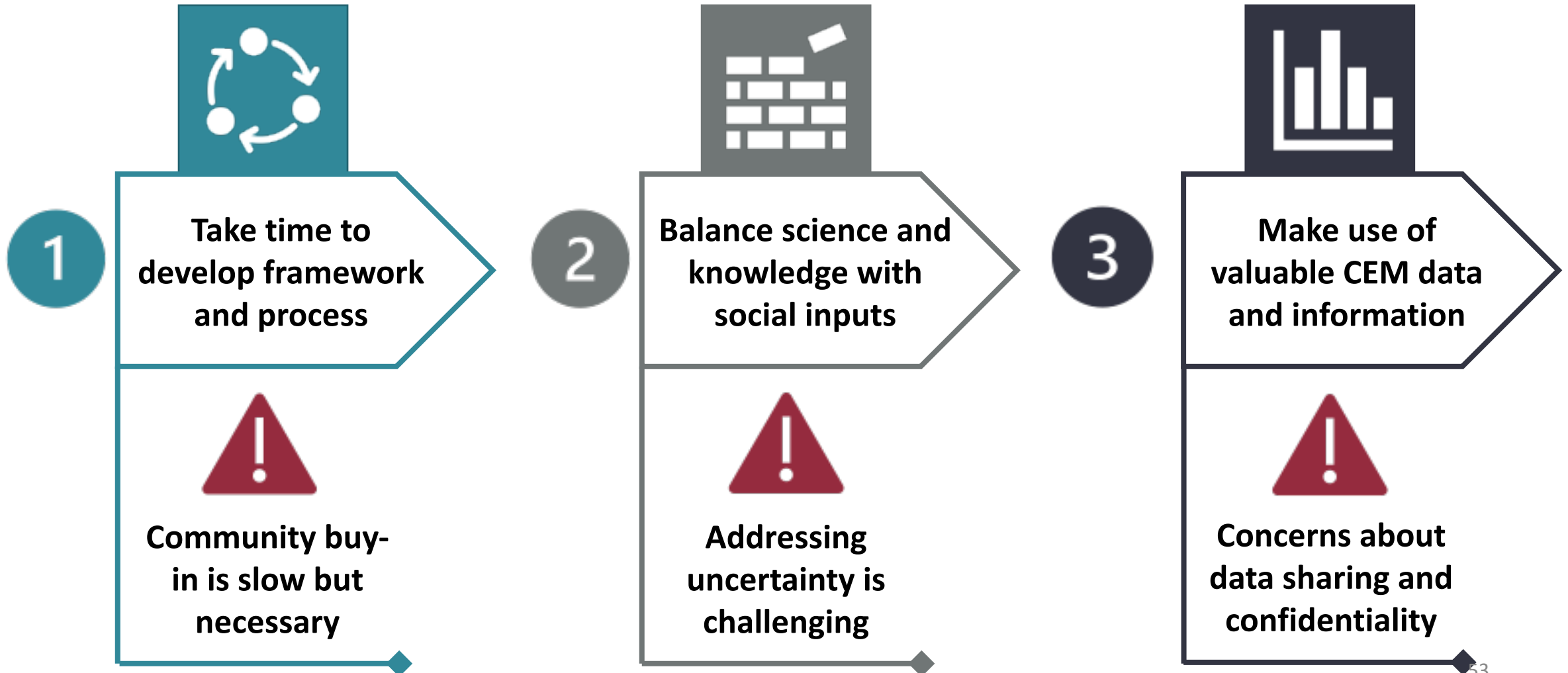
IMPACT ASSESSMENT APPROACH

- Reactive
- Project-specific and narrowly scoped
- Data driven
- Stressor focused
- Linear, siloed approach

INDIGENOUS PLANNING APPROACH

- Proactive
- Regional and broadly scoped
- Decision driven
- Values focused
- Holistic approach – “everything is connected”

Lessons for Other Indigenous Communities



An aerial photograph of a coastal landscape. In the foreground, a rocky shoreline with patches of green moss or algae meets a small inlet of water. The middle ground features a large, calm body of water, possibly a bay or fjord. In the background, a long, narrow island covered in dense green forest stretches across the horizon. The sky is overcast and grey.

**“CEM is about restoring balance to
Metlakatla waters, lands and people”**



Acknowledgements

- Metlakatla First Nation (All photo credits)
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- Indigenous Centre for Cumulative Effects

SFU



Thank you!

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