The Role of Indigenous Knowledge in Improving Sustainable Fisheries in Canada

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BUILDING ABUNDANCE: Restoring Canada's Fisheries for Long-Term Prosperity
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Format

* Fish-WIKS Partnership
* Background
* Constraints
* Opportunities
* Recommendations

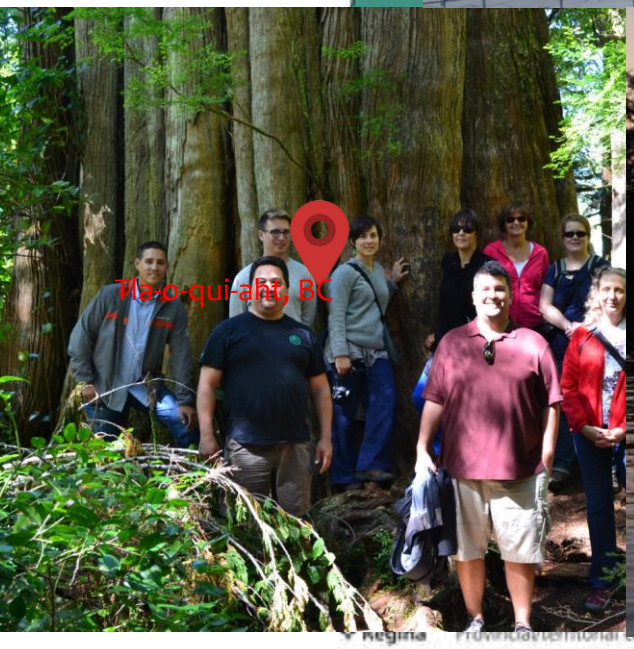
Purpose:

Through engagement and collaboration, strengthen opportunities for governing fisheries on Canada's 3 coasts and inland region

Research Goals:

1. Understand how knowledge is obtained, valued, shared and used in different knowledge systems in each of 4 regions across Canada
2. Identify commonalities and differences across the regions and systems
3. Examine how knowledge systems influences fisheries governance at multiple levels.
4. Understand how distinct IKSs can improve current efforts.


Naujaat, NU

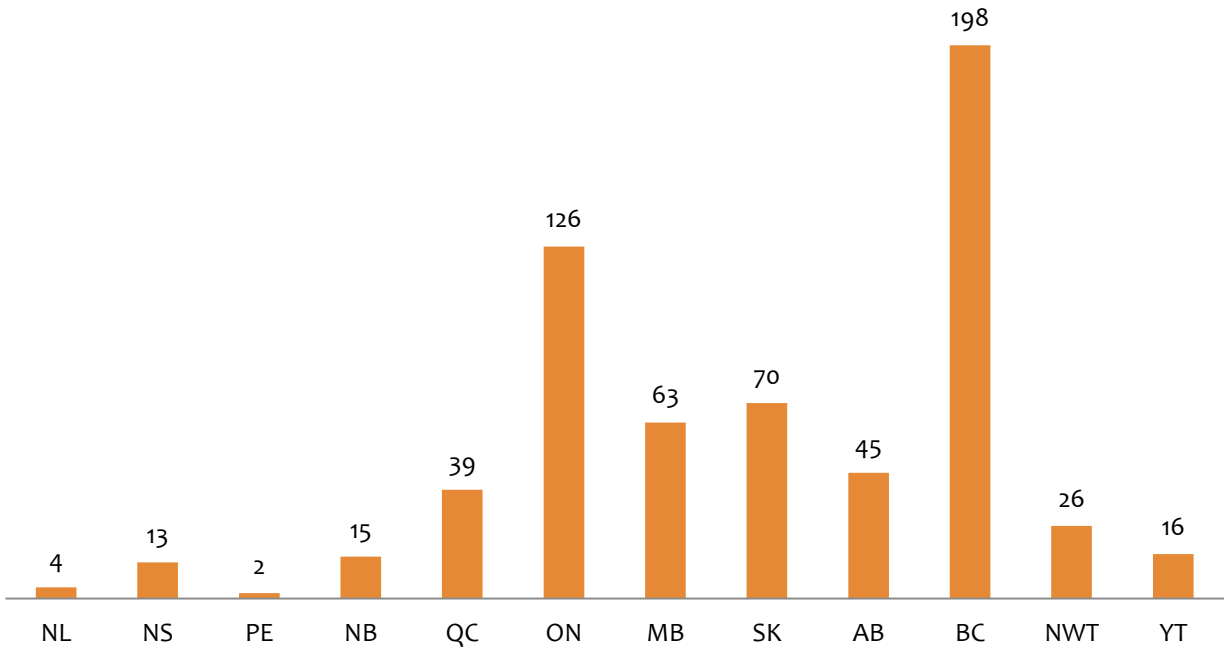

Tla-o-qui-aht, BC

Background

Population

* First Nations – 2.6% (just under 1M)
* Metis – 1.4% (just over 0.5M)
* Inuit – 0.2% (around 60,000)

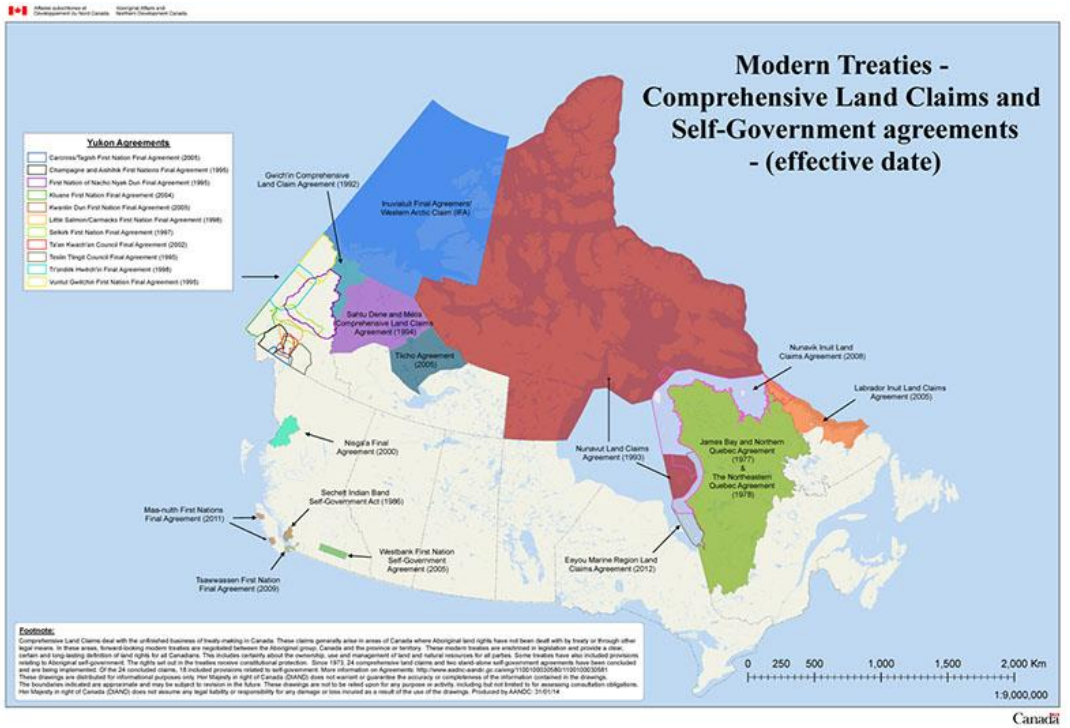
Distribution of 617 First Nations by Province and Territory



Source: NHS, 2011

Legal Landscape

- Aboriginal rights are rights based on original occupancy; inherent right
- Treaty rights are rights negotiated between groups
  - Land claims
  - Exchange
  - Varies across Canada
- Both are protected under the *Constitution* s. 35



Source: https://www.aadnc-aandc.gc.ca/eng/1373385502190/1373385561540

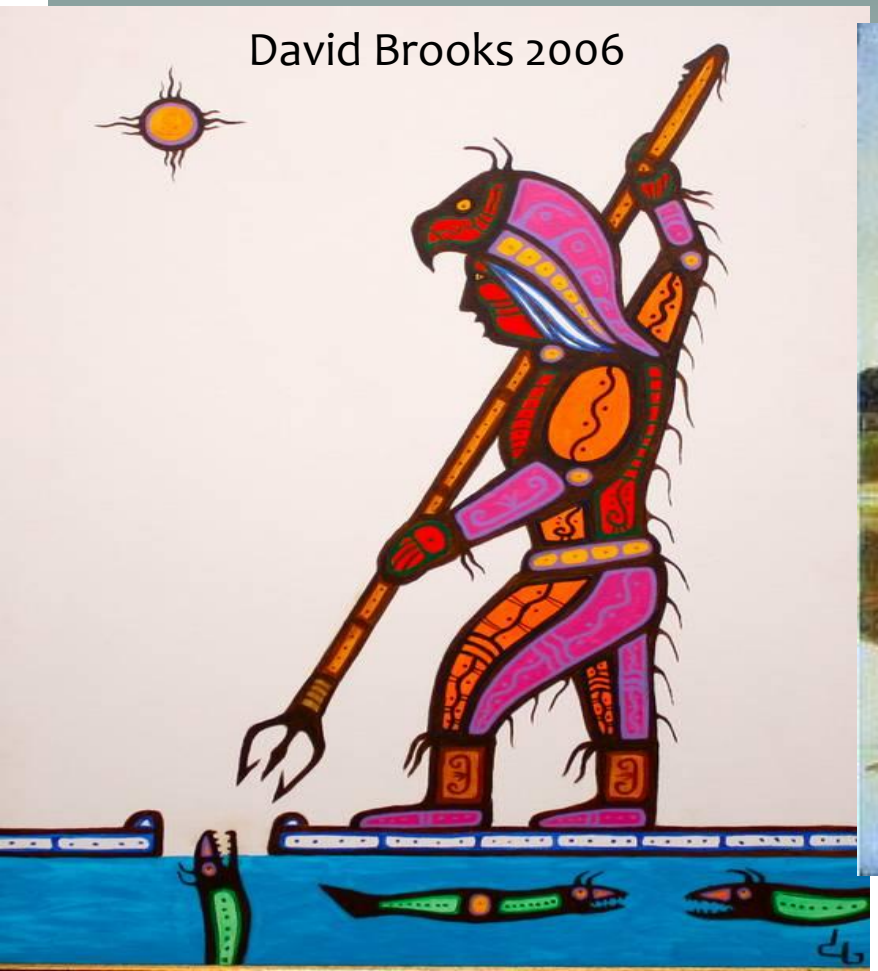
Attributes of Indigenous Knowledge Systems across Canada

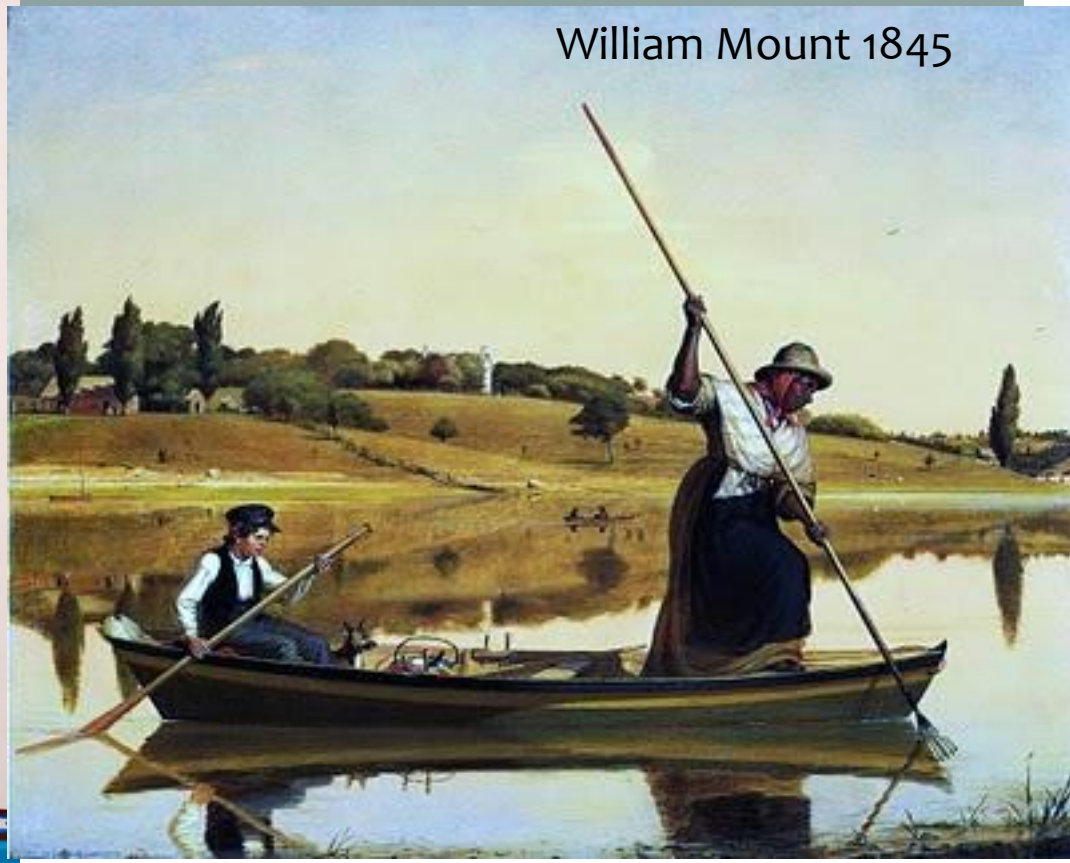
- Rooted in ancestral territories
  - belief systems and values,
  - cultural meanings,
  - social relations
  - identities tied to place,
- Holistic
  - intertwining spirituality, culture, beliefs, environmental knowledge, and social code into practices in all aspects of life
- Cosmology or worldview
  - motivates how people relate to the world
  - "all my relations", reciprocity
  - *Netukulimk* - recognizes that sustenance is physical and spiritual, and that harvesting practices should not foreclose on options for the next seven generations to sustain themselves

Image source: Orillia Native Women Group http://www.onwg.org

LaTulippe, 2015; Denny and Fanning, 2016

- What constraints and opportunities exist for improving the role of indigenous knowledge in sustaining Canada's fisheries?





Federal Government Decision Making Process

Constitution Act

Prime Mini

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Policy

Fisheries Act

Minister of Fisheries

-fisheries

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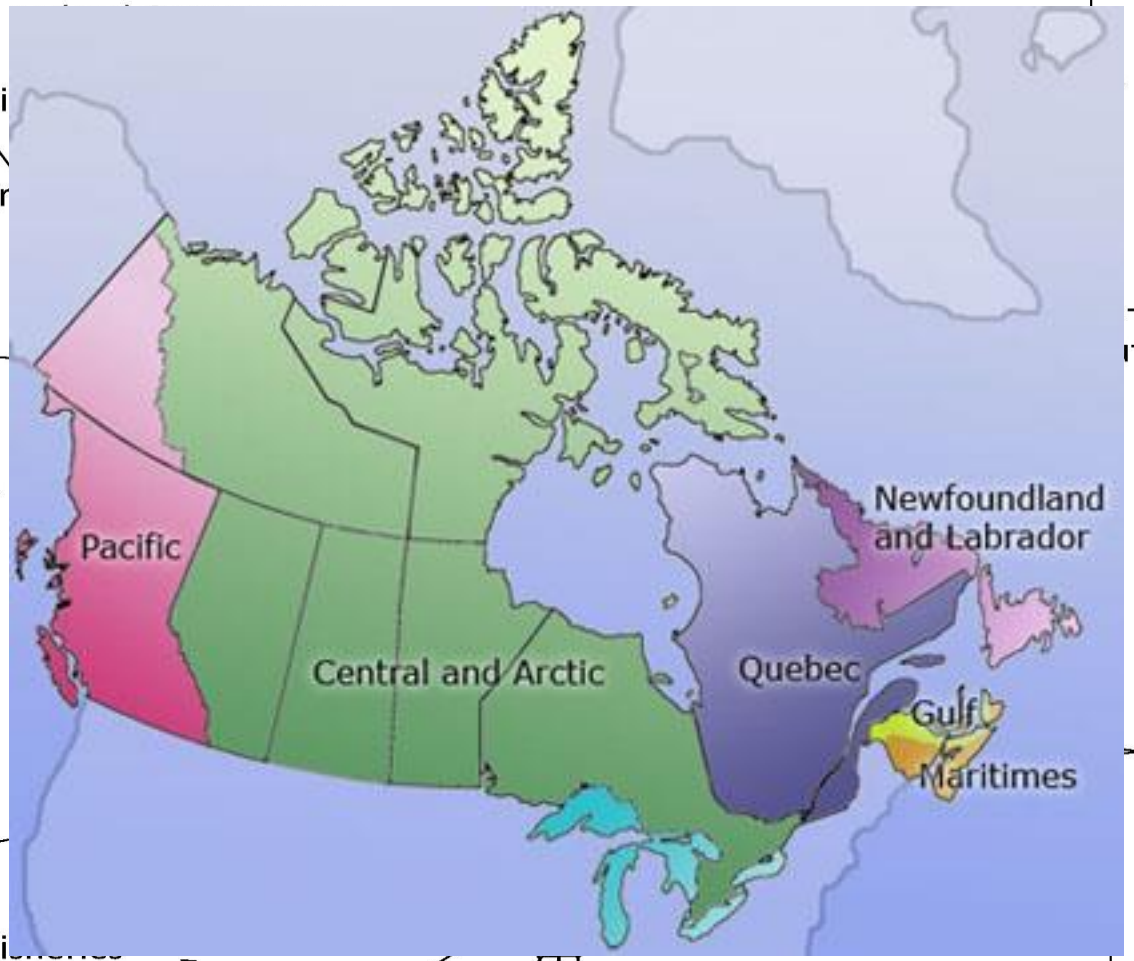
High-level public servants

Sectors



Science-based

Research surveys

Fi

catches

Fishery

Boudreau and Fanning, 2014

Challenge of Developing Effective Engagement at a Regional Scale for Fisheries

First Nations Geographic Scales

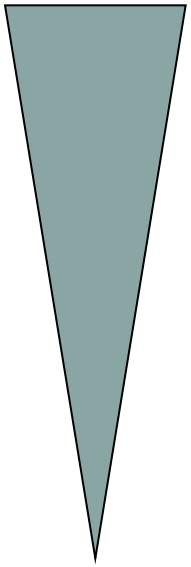
Strength of authority

high

Local

Area/ Region

Provincial



Government Organization

Strength of authority

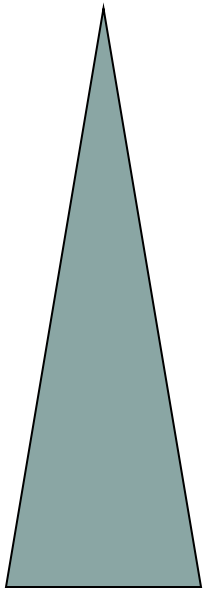
Field officers

Field officers / managers

Area chief / Area director

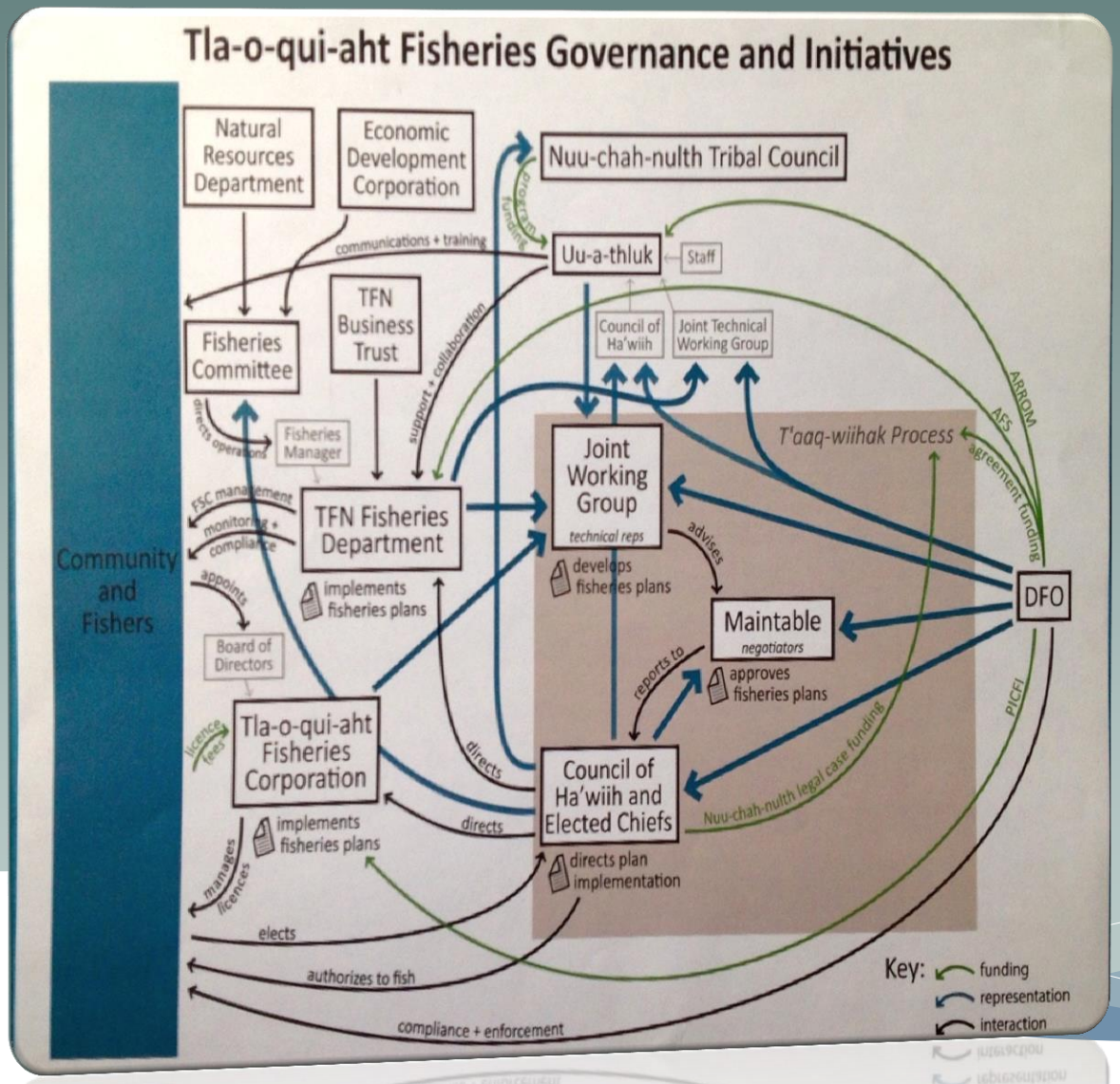
RDG / Regional Directors

ADM / DM / Minister



Milne, 2016

Tla-o-qui-aht Fisheries Governance Initiatives



Milne, 2016

Role of evidence in NS Mi'kmaq decision making
Assembly of Nova Scotia Mi'kmaq Chiefs

Evidence Input "Global" Issue/ Concern	Evidence Processed, Gathered and Communicated	Evidence Discussed, Debated and Filtered Decision to further issue made	Evidence Presented, Discussed & Debated Evidence-based Decision Made	Community Support	Further Action or Process

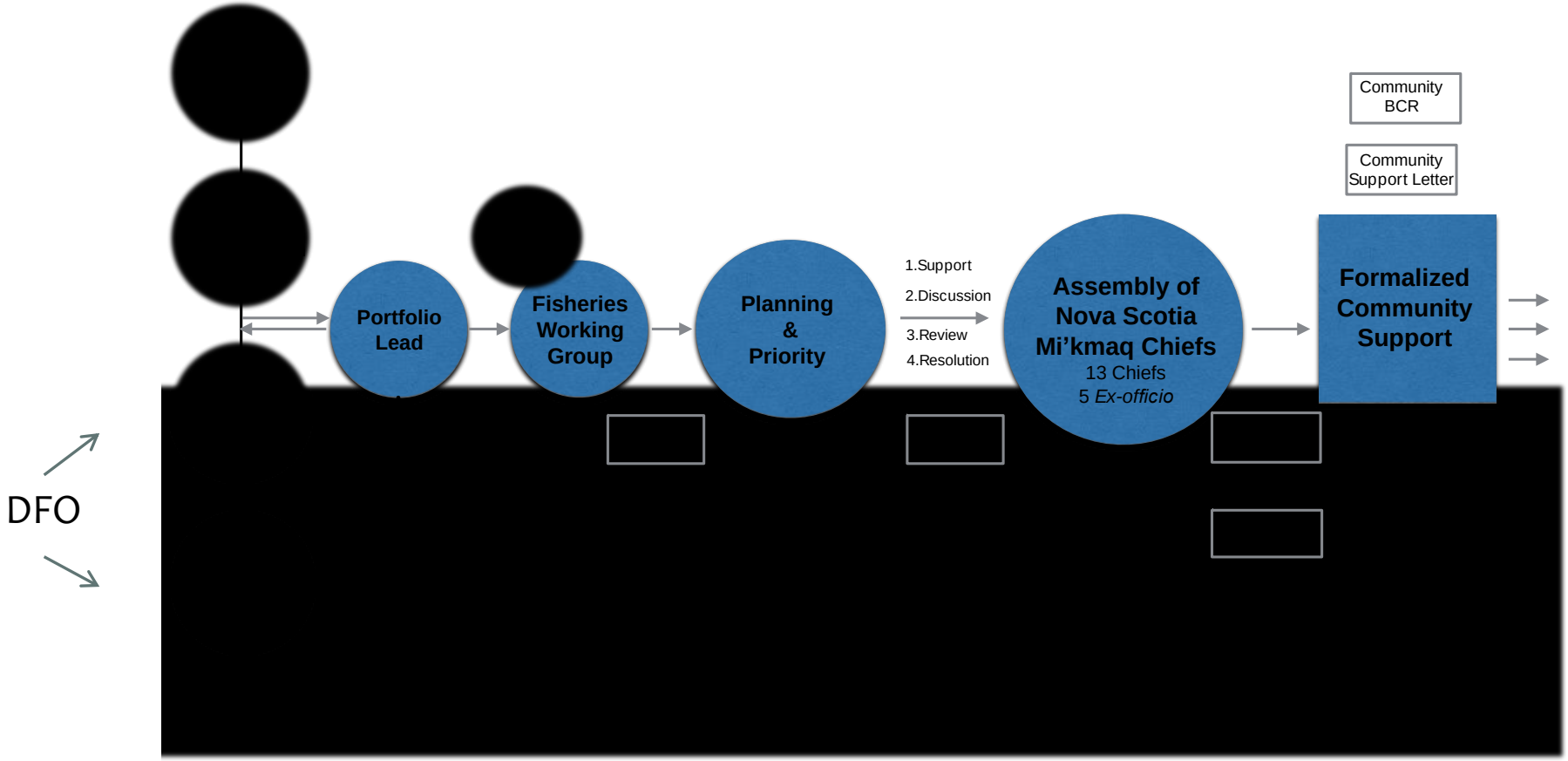


Figure 1. Role of evidence and the decision-making process for the Mi'kmaq of Nova Scotia. Blue circles indicate presence of decision-maker (chief) and the larger the circle, the greater number of decision-makers (chiefs) present. Shaded area indicates internal KNKNO role in process.

Denny and Fanning, in press

Pursuing Opportunities for IK in Fisheries Governance - Salmon and Eel
A cultural and legal relationship for Mi'kmaq

Salmon and Eel

* Food source
* Dependable and predictable
* Species and fishing activities tied to Mi'kmaq identity
* "*M'sit no'komaq*" – " All my relations"
  * Kinship
  * Connection to the land, water, plants and animals
  * Life has spirit and are of one origin
  * Loss of species is deeply connected to loss in cultural identity

* R. v. Simon (1985)
  * Aboriginal and Treaty rights co-exist
* R. v. Denny, Paul and Sylliboy (1990)
  * Aboriginal right for food has priority over other user groups (exception conservation and management)
* **R. v. *Sparrow* (1990)**
  * Aboriginal and treaty rights are protected by the Constitution of Canada
  * DFO has the responsibility to justify valid legislative objective for infringing right
  * DFO must act in fiduciary capacity so that rights are taken seriously

Case Study: The Salmon Fishery in NS

* Mi'kmaq dissatisfied with lack of salmon consultation on the recreational retention fishery
  * Limited in tags to a few rivers; rec fishery could target all rivers in SFA 18
  * No opportunity to negotiate while rec fishery had input through advisory committee
  * Bearing the burden of conservation measures

Establish Salmon Consultation Table under NS negotiation process

* Variety of DFO reps from Policy, Resource Management & Science from 2 regions
* Provincial reps
* Parks Canada
* Mi'kmaq representation
* Co-Chaired by Mi'kmaq Chief (Fisheries Portfolio) and DFO-RDG

WESTERN PERSPECTIVE	MI'KMAQ PERSPECTIVE
Worldview * Western, scientific based reflected in belief of human superiority * Application of single rule to multiple watersheds	**Worldview** * Multiple ways of knowing * Equality of life with humans as part of the ecosystem * Mi'kmaq knowledge place-based
Management Philosophy * Species specific * Surplus production model * Policy based; written	**Management Philosophy** * Customary laws: Oral tradition and practice * Applies to all resources, habitat included * Relationship, respect, reciprocity
Beneficiaries * Preservation of salmon for human benefits	**Beneficiaries** * Role of salmon extend beyond human needs
Management * Hierarchical and segregated structure of science and management * Prescriptive	**Management** * Holistic – includes habitat and spirituality * Preventative * Netukulimk- no waste, take what is needed
Conservation Measures * SFA 18-22 - Zero retention * Max daily limit for "catch & release" * Prior to 2015, Targeted smaller portion of the population (grilse; <63 cm); no retention of MSW	**Conservation Measures** * Rotational fishing – sharing of rivers * Opposed to C&R fisheries * Do not target one stage (balance) with emphasis on taking what Mother Earth "offers"
Knowledge Used in Decision Making * Quantitative, scientific assessment * Advisory committees * Open to IK only as TEK as information to feed into science which feeds into management	**Knowledge Used in Decision Making** * Quantitative and qualitative * Open to science as a tool but fishing methods don't "fit" assessment criteria (spear vs reel) * IK includes the practical application of knowledge and experience (i.e inclusive of "management")

Creating Relationship

- Consultation led to creation of working groups to **resolve** issues
- Off the record; without prejudice
- Opportunity to build trust
- **Opportunity for co-learning through "Two-Eyed Seeing"**

Two-Eyed Seeing "*…refers to learning to see from one eye with the strengths of Indigenous knowledges…and from the other eye the strengths of Western knowledges…and using both these eyes together, for the benefit of all.*"

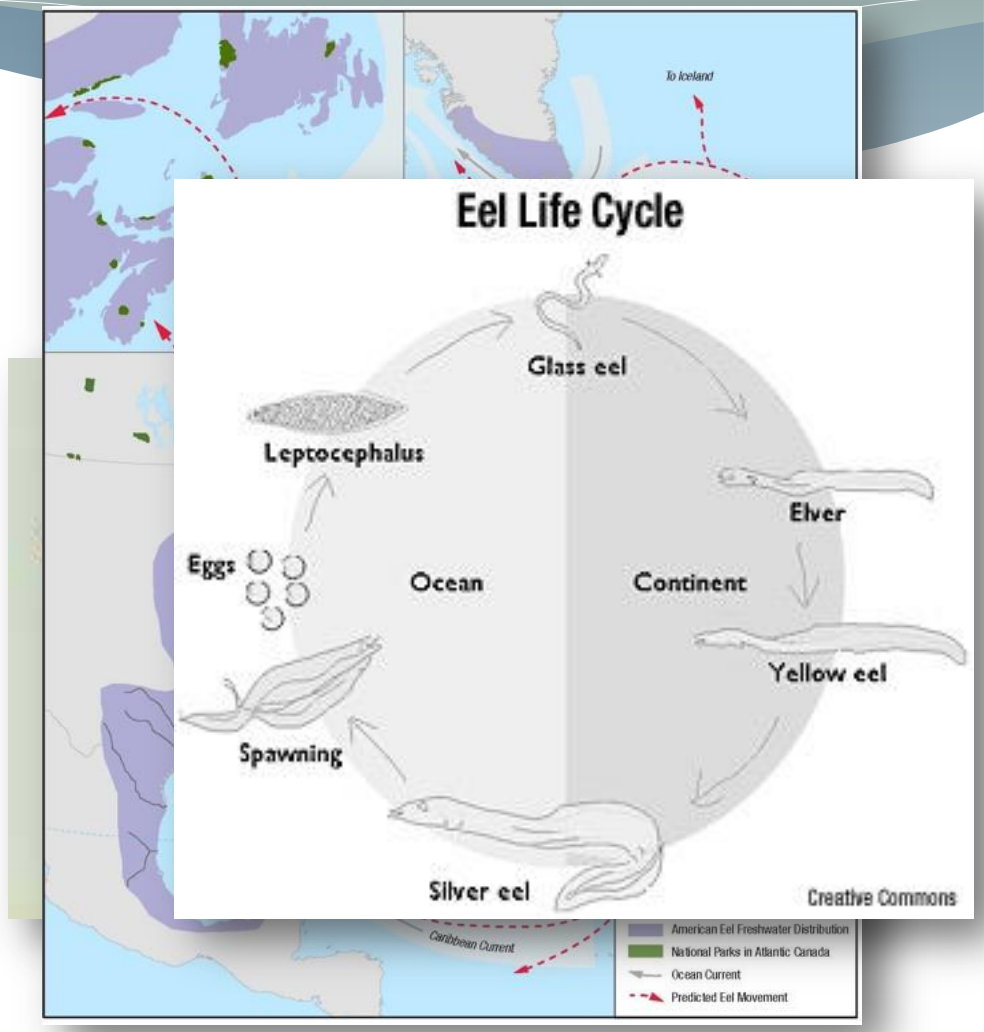
- *Mi'kmaq Elder Albert Marshall*

Improving Fisheries Governance through Consultation and Collaboration

- **Improving technical capacity through collaboration**
  - Sharing human resources
  - Sharing data used in assessments
- **Improving current management of rec fishery**
  - Warm water closures & reduction in tags
- **Creating innovative processes**
  - Breaking down barriers in DFO working habits
- **Improving reporting of Mi'kmaq salmon harvests for assessments**
  - Greater collaboration for timely receipt of information
- **Creating Mi'kmaq salmon advisory process**
  - Advise ANSMC if further declines is observed
- **Opportunity to balance Mi'kmaq culture with conservation**
  - Agree to primary conservation measure & co-exist

Improving the eel fishery through the incorporation of Indigenous Knowledge Systems into policy level decision making

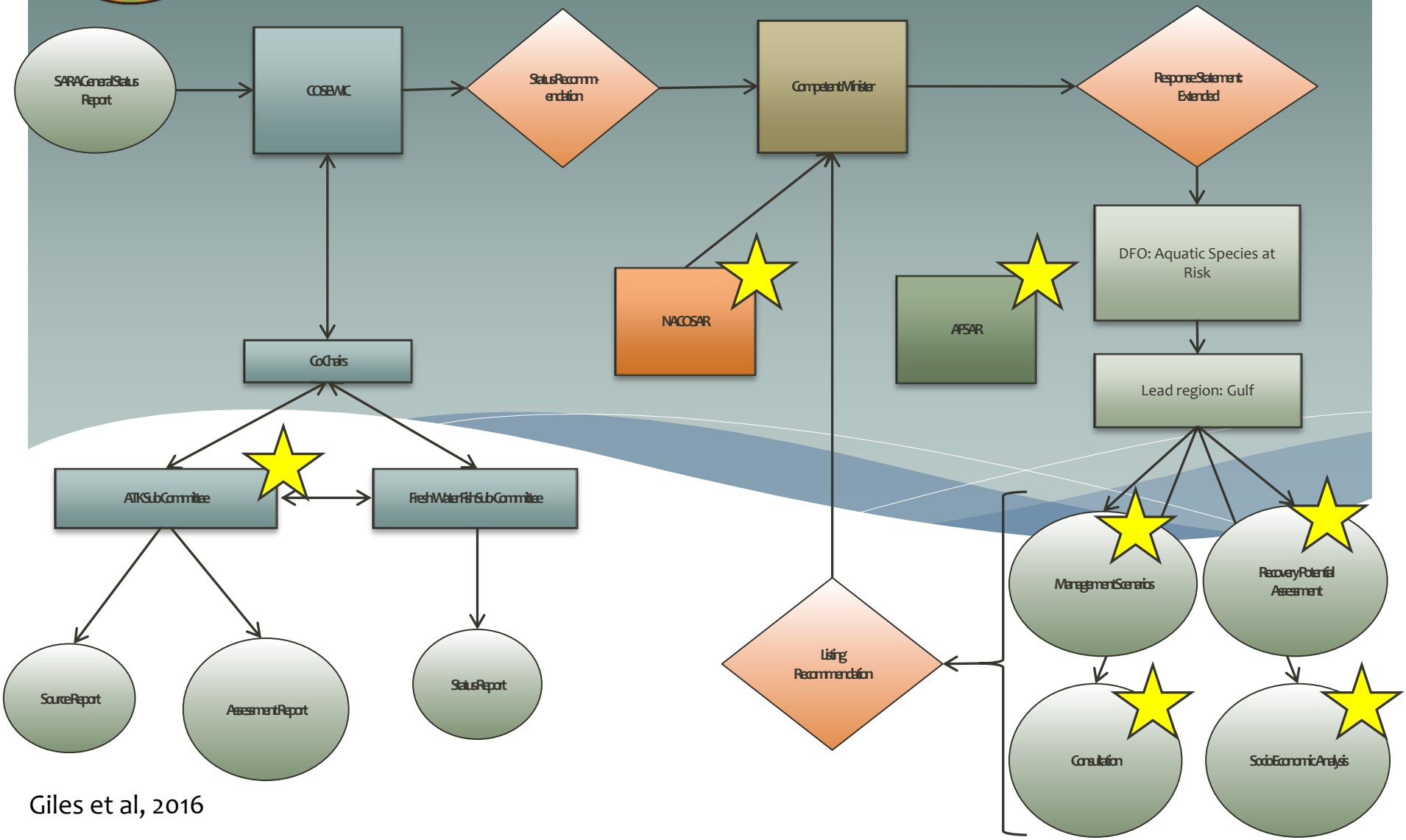
- COSEWIC: Threatened
- SARA: Currently being assessed
- Large distribution, crossing international boundaries
- Complex life history
- Eels' social, economic, spiritual, medicinal, and cultural importance
- Concerns over declining status of the eel and implications for SARA designation on Aboriginal and Treaty fishing rights



Giles et al. 2016

Eeling Practice	Mi'kmaq Perspective on Eeling Values Expressed	Opportunities to Bridge Knowledge Systems Recommendations to DFO
Sharing eels with elders, family, and community members	• Kinship • Reciprocity • Generosity	• Minimum FSC level ensured
Undertaking a period of observation before eelers begin to eel	• Respect for the eel • Oral tradition • M`sit No'kamaq	• Courses for fishers which include Mi'kmaq cultural awareness
Deciding to leave the commercial eel fishery	• 7 Generations • Netukulimk	• Conservation efforts
Using spears over nets	• Respect for the eel • Netukulimk	• Gear restrictions
Keeping all eels caught during winter spearing	• Respect for the eel • M`sit No'kamaq	• Change to seasonal management for fishery • Varying Size Limitation of seasonal periods
Not fishing or only taking enough for the elders during years of low populations	• 7 Generations	• Adaptive management • Monitoring programs
Visiting eeling sites only once in a cycle	• Netukulimk • Relationship with territory • Respect for place	• Conservation efforts
Being extremely selective during summer fishing, only taking the "good sized ones"	• Netukulimk • Respect for the eel	• Size limits for summer eeling

Improving the Role of Indigenous Knowledge in Species at Risk Decision Making



Giles et al, 2016

Conclusion

* Case law creates legal platform for interactions between Indigenous peoples and the state
* Consultation is ***the*** governance mechanism for Mi'kmaq involvement in salmon and eel governance
* Consultation is an effective process to create the opportunity to learn from each other, address conflict, build relations, improve cultural awareness, & improve salmon governance.
* If power is the issue, **consultation is not the end-point solution;** need to negotiate power relationships leading to co-management and self-government for solutions to be effective
* Need an interdisciplinary process to develop cross-cultural conservation ethics based on perspectives
* "Relationship" - trust building exercise

Bringing Governance into Conversation with 'Indigenous Knowledge'

Orientation	What are the commonalities and differences between Western and Indigenous knowledge systems?	How can Indigenous knowledge systems improve fisheries management?
Ecological	Indigenous knowledge complements post-positivist science	Through adaptive management frameworks
Critical	Uneven relations of power marginalize Indigenous knowledge	Only with structural change
Relational	Distinct knowledge systems can be shared for mutual benefit	Through self-governance and the nation-to-nation relationship
Collaborative	Potential for knowledge co-production	Empowered, collaborative processes at multiple scales

LaTulippe, 2015

Thank you
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