

# COMMUNITY INVOLVEMENT & ENGAGEMENT FOR BRINGING ATK INTO DFO'S FISHERIES PLANNING

- working towards a methodology

## Albert Marshall

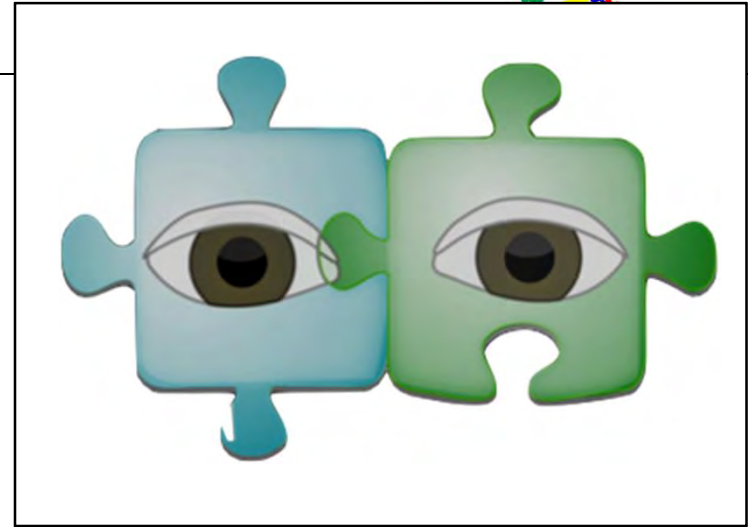
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PRESENTATION FOR APC – AAEDIRP – AAROM – FISHERIES WORKSHOP  
SHARING KNOWLEDGE AND BUILDING PARTNERSHIPS  
30-31 JANUARY 2014, MONCTON, NB

# **COMMUNITY INVOLVEMENT & ENGAGEMENT FOR BRINGING ATK INTO DFO'S FISHERIES PLANNING**

- **working towards a methodology**

## **Where to start?**

**... by reminding ourselves that:**

**THE ELDERS HAVE SPOKEN**



APCFNC/AAEDIRP  
Elders  
Research Project  
2010-2011

# Honouring Traditional Knowledge



**Atlantic Canada**  
**23 Elders**  
**Mi'kmaq**  
**Maliseet**  
**Innu**  
**Inuit**

## **THE ELDERS HAVE SPOKEN**

**We must bring our Traditional Knowledge  
into the present so that everything becomes  
meaningful in our lives and communities.**

(words of Elder Murdena Marshall)



**APCFNC/AAEDIRP  
Elders  
Research Project  
2010-2011**

# **Honouring Traditional Knowledge**

**Atlantic Canada  
23 Elders  
Mi'kmaq  
Maliseet  
Innu  
Inuit**



# PROJECT REPORT

<http://www.apcfnc.ca/en/resources/HonouringTraditionalKnowledgeFinal.pdf>

## APCFNC Elders Project: HONOURING TRADITIONAL KNOWLEDGE



Atlantic Aboriginal Economic Development  
Integrated Research Program



ATLANTIC POLICY CONGRESS  
OF FIRST NATIONS CHIEFS SECRETARIAT  
www.apcfnc.ca

### ELDERS RECOMMENDATIONS

The following is the list of recommendations from the APCFNC Elders Project Honouring Traditional Knowledge. It is an initial list concerning how Elders would like to be consulted when sharing Traditional Knowledge. Reading and acknowledging this list of recommendations should be considered a form of consultation with Atlantic Aboriginal communities.

1. It needs to be recognized that Atlantic Aboriginal communities are losing their Elders, their languages, and their cultural knowledge very rapidly. Therefore, Aboriginal communities and leadership need to recognize the urgency and importance of working alongside Elders and learning from their Traditional Knowledge immediately.
2. It is imperative that Elders be involved in all aspects of the territorial, cultural, linguistic, ecological, economic development, and social affairs of Atlantic Aboriginal communities. Elders are in a position to help prioritize what is most important because of their collective cultural knowledge.
3. Traditional Knowledge should be woven into all aspects of Aboriginal community life, including economic development, fisheries, health, social, law, environment, and education, etc.
4. Elders should be consulted in meaningful ways and have advisory roles for all Aboriginal community planning, development, implementation, and evaluation taking place. Meaningful involvement would include being members of steering committees and advisory committees that Elders have input into decision making.
5. Traditional Knowledge must be shared and passed on before it is lost. The ways in which Traditional Knowledge is passed on need to be directed by the Elders from each territory.
6. An Elders Council, appointed by Elders, that would advise on matters related to the sharing of Traditional Knowledge, should be formed for the Atlantic region. The Council would advise on matters related to protocols and/or ethics and the best practices for the sharing of Traditional Knowledge as well as the best practices for working alongside Elders. This would include working alongside Elders in all areas of community life and development including research. The Elders Council, once formed, would engage in a process of co-learning with the Atlantic region universities to create a template for how the process of this knowledge transfer could occur.
7. Elders should be involved in developing and approving educational curriculums related to Traditional Knowledge for Aboriginal community schools and provincial and post-secondary institutions in the Atlantic region. Traditional Knowledge should be woven into the social studies, science, and language curriculums for primary and secondary schools in Atlantic Aboriginal communities. This would ensure proper and meaningful education for Aboriginal learners, enable the communities to develop a balance between western and Aboriginal learning methods, and better prepare Aboriginal children for their future paths. Post-secondary institutions should be compelled to seek guidance from the Elders Council (described above in recommendation #6) to develop appropriate curriculums related to Traditional Knowledge for relevant post-secondary programming.
8. Each Aboriginal community needs to encourage the use of traditional practices, which are products of Traditional Knowledge. This would encourage younger generations to learn about and respect traditional practices such as traditional laws, cultural and spiritual practices, language learning, and practices related to hunting and fishing, food gathering, medicine, ecology, social arts, and education.

To view the complete project, go to:  
<http://www.apcfnc.ca/en/resources/HonouringTraditionalKnowledgeFinal.pdf>

### BACKGROUND

The Atlantic Policy Congress of First Nations Chiefs (APCFNC) brings together 38 First Nations in the Atlantic region of Canada as well as the Inuit in Labrador. Through the Atlantic Aboriginal Economic Development Integrated Research Program (AAEDIRP) administered by the APCFNC, from 2007 to 2011, 24 Mi'kmaq, Wolastoqiyik, Innu, and Inuit Elders have been involved in a project called "Honouring Traditional Knowledge."

This project was initiated because of the critical importance of consulting with Elders and having their perspectives included in community economic development projects and in research on Aboriginal economic development.

Elders determined the process and outcomes for the project. The project was supported by APCFNC staff and Aboriginal community members. As a foundation for the work on economic development research, APCFNC sought guidance from Atlantic region Elders on how they would like to be consulted when sharing Traditional Knowledge and Aboriginal traditions. As part of the project, the Elders have made eight recommendations (and input) concerning Traditional Knowledge and its importance.

The Atlantic Chiefs, having reviewed the eight recommendations at their 10<sup>th</sup> Annual General Meeting on September 29, 2011, support the recommendations put forward by Atlantic Region Elders as an All Chiefs' Resolution #25-14.

MOTIONED BY: Chief Mafud Joe, Miqsiqiyik First Nation  
SECONDED BY: Chief Rodney Goggin, Wóvotsh First Nation  
DISCUSSION: Passed by consensus  
DATE: September 29, 2011

### HONOURING TRADITIONAL KNOWLEDGE COMPONENTS

#### Elders Mawé'ni August 2010

An Elders Mawé'ni (a traditional name gathering in Mi'kmaq) brought together Elders from five Aboriginal nations of the Atlantic Region — the Mi'kmaq, the Wolastoqiyik, the Innu, and the Inuit. From August 16 to 21, 2010, Elders gathered in Miqsiqiyik First Nation at the Grand Bay-by-the-Sea. The Elders met for the meeting to be videotaped. They discussed a transcription of the Mawé'ni for educational purposes.

#### Video: Honouring Traditional Knowledge

This video highlights the role of Elders and Traditional Knowledge. Unlike the Elders guidelines the video was made from footage taken at the Elders Mawé'ni. It can be viewed by going to <http://kay.ny.gov/43867CA>.

#### Elders Recommendations

The Elders made eight recommendations concerning Traditional Knowledge. The recommendations are based on discussions from the Elders Mawé'ni. See page 10.

#### List of Resources

This is an initial list of protocols and best practices for the sharing of Traditional Knowledge and for working alongside Atlantic region Elders in research. It contains community-based and economy-relevant. It is a living document that will be added to as a ongoing basis. <http://www.apcfnc.ca/en/resources/HonouringTraditionalKnowledgeFinal.pdf>



### FOR MORE INFORMATION PLEASE CONTACT:

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Atlantic Aboriginal Economic Development Integrated Research Program, AAEDIRP  
APCFNC

Phone: 493-8021 (office) or 424-1713 (cell)  
Email: [gillian.austin@apcfnc.ca](mailto:gillian.austin@apcfnc.ca)

# ELDERS 8 RECOMMENDATIONS

Therefore it be resolved that the Atlantic Chiefs, having reviewed the recommendations at their meeting on 29 September 2011 hereby support the 8 recommendations put forward by Atlantic Region Elders as part of the APC Elders Project: Honouring Traditional Knowledge.



Atlantic Policy Congress  
Of First Nations Chiefs Secretariat  
[www.apcfn.ca](http://www.apcfn.ca)



# **ELDERS 8 RECOMMENDATIONS**

**2. It is imperative that Elders be involved in all aspects of the territorial, cultural, linguistic, ecological, economic development and social affairs of Atlantic Aboriginal communities. Elders are in a position to help prioritize what is most important because of their collective cultural knowledge.**



# **ELDERS 8 RECOMMENDATIONS**

**3. Traditional Knowledge should be woven into all aspects of Aboriginal community life, including economic development, fisheries, health, social, law, environment and education, etc.**





# 2013: we helped APC encourage DFO to include ATK in their IFMP process

## BRINGING ATK INTO DFO'S FISHERIES MANAGEMENT PLANNING CYCLE FOR SNOW CRAB (GULF MANAGEMENT AREA 12)



### BRINGING ATK INTO DFO'S FISHERIES MANAGEMENT PLANNING CYCLE FOR SNOW CRAB (GULF MANAGEMENT AREA 12)



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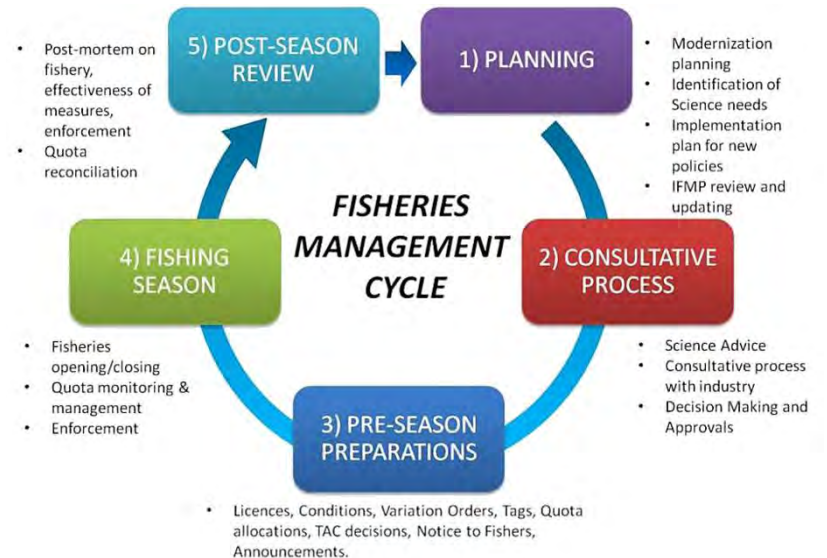
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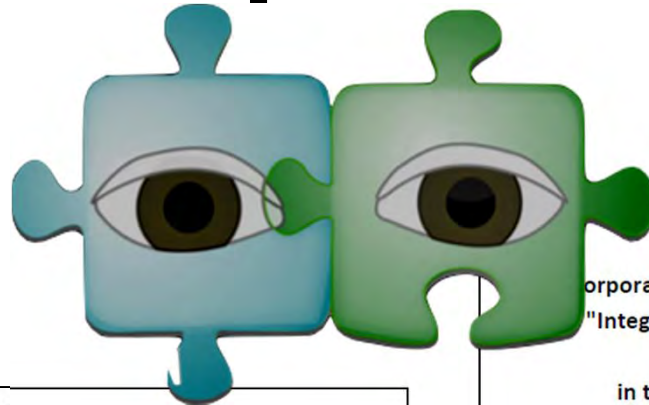


### Aboriginal Traditional Knowledge

PRESENTATION FOR APC FISHERIES WORKSHOP  
 5-6 FEBRUARY 2013, MONCTON, NB



# our 2013 final report to APC



Atlantic Policy Congress  
Of First Nations Chiefs Secretariat  
[www.apcfn.ca](http://www.apcfn.ca)

Roadmap for  
Incorporating Aboriginal Traditional Knowledge (ATK) into  
"Integrated Fisheries Management Plan" planning process  
for the Commercial Snow Crab Fishery  
in the Southern Gulf of St. Lawrence (Area 12)

## BRINGING ATK INTO DFO'S FISHERIES MANAGEMENT PLANNING CYCLE FOR SNOW CRAB (GULF MANAGEMENT AREA 12)



### Murdena & Albert Marshall

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**Aboriginal Traditional Knowledge**

PRESENTATION FOR APC FISHERIES WORKSHOP  
5-6 FEBRUARY 2013, MONCTON, NB



FINAL REPORT (APC Contract #2013-008 and Project #4125)  
submitted to the Atlantic Policy Congress of First Nations Chiefs  
Penultimate Draft - 20 MARCH 2013

Project Team / Report Authors  
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Albert Marshall, Elder, LLD  
Murdena Marshall, Elder, LLD

## **include ATK, GOAL and CHALLENGE:**

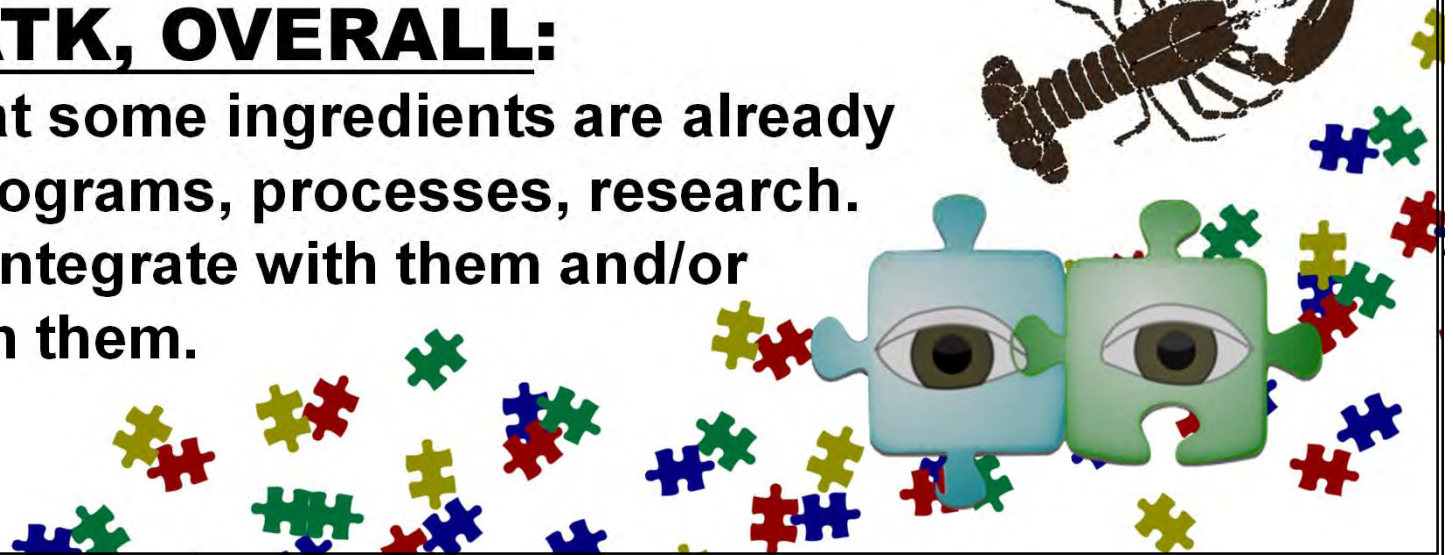
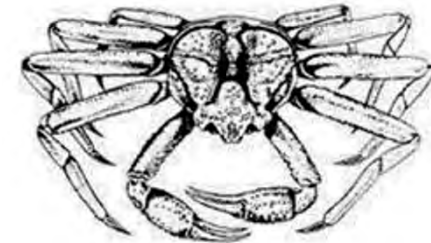
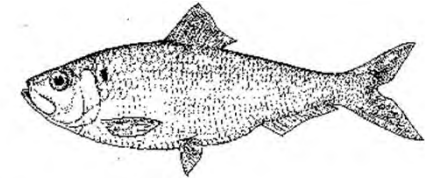
We need to navigate our way forward using input from both ATK and DFO's western science.

## **include ATK, STEPS:**

We need to elevate the consciousness about ATK for DFO and also among L'nu. We all need to understand that ATK is based in *Netukulimk*.

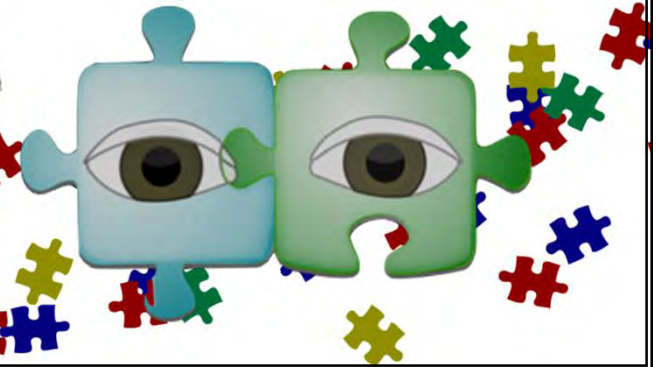
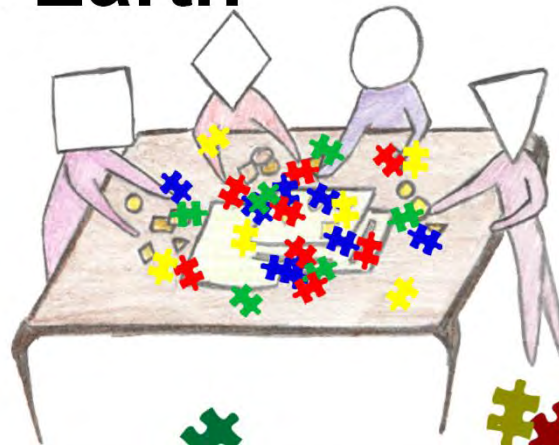
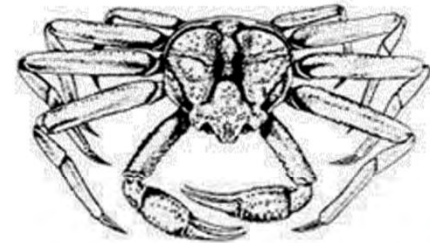
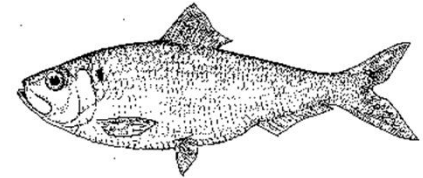
## **include ATK, OVERALL:**

We know that some ingredients are already in place – programs, processes, research. We need to integrate with them and/or expand upon them.

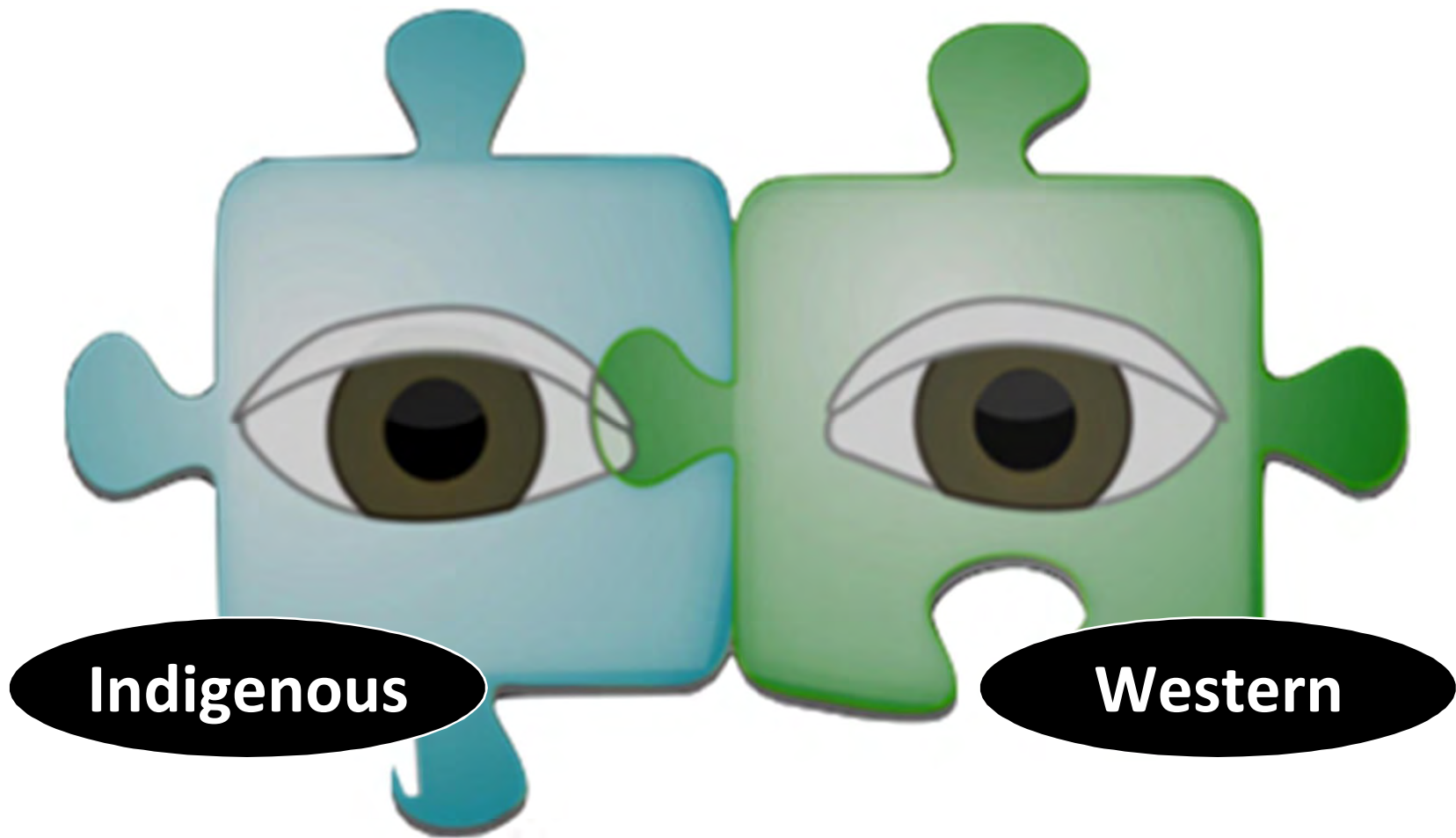


# THE BIGGEST CHALLENGE

is to bring together  
the strengths from both  
science and ATK so as  
NOT to compromise the  
ecological integrity of  
Mother Earth



**include ATK, using TWO-EYED SEEING**



**ETUAPTUMUK**



# **TWO-EYED SEEING**

## **a Guiding Principle**

**LEARN ... to see from one eye with the best in the Indigenous ways of knowing, and from the other eye with the best in the Western (or mainstream) ways of knowing ... and LEARN to use both these eyes together for the benefit of all.**

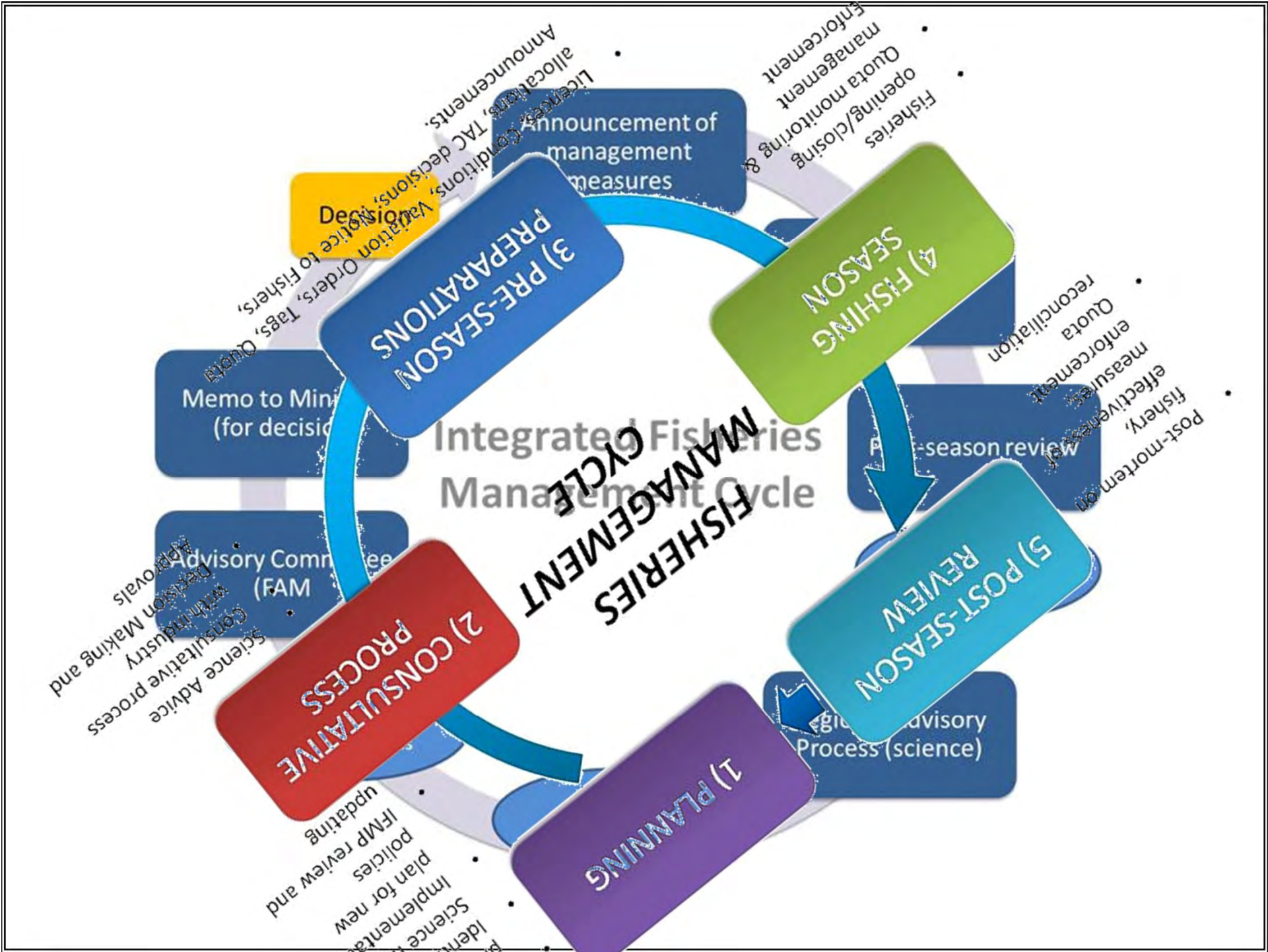
*(words of Mi'kmaw Elder Albert Marshall)*

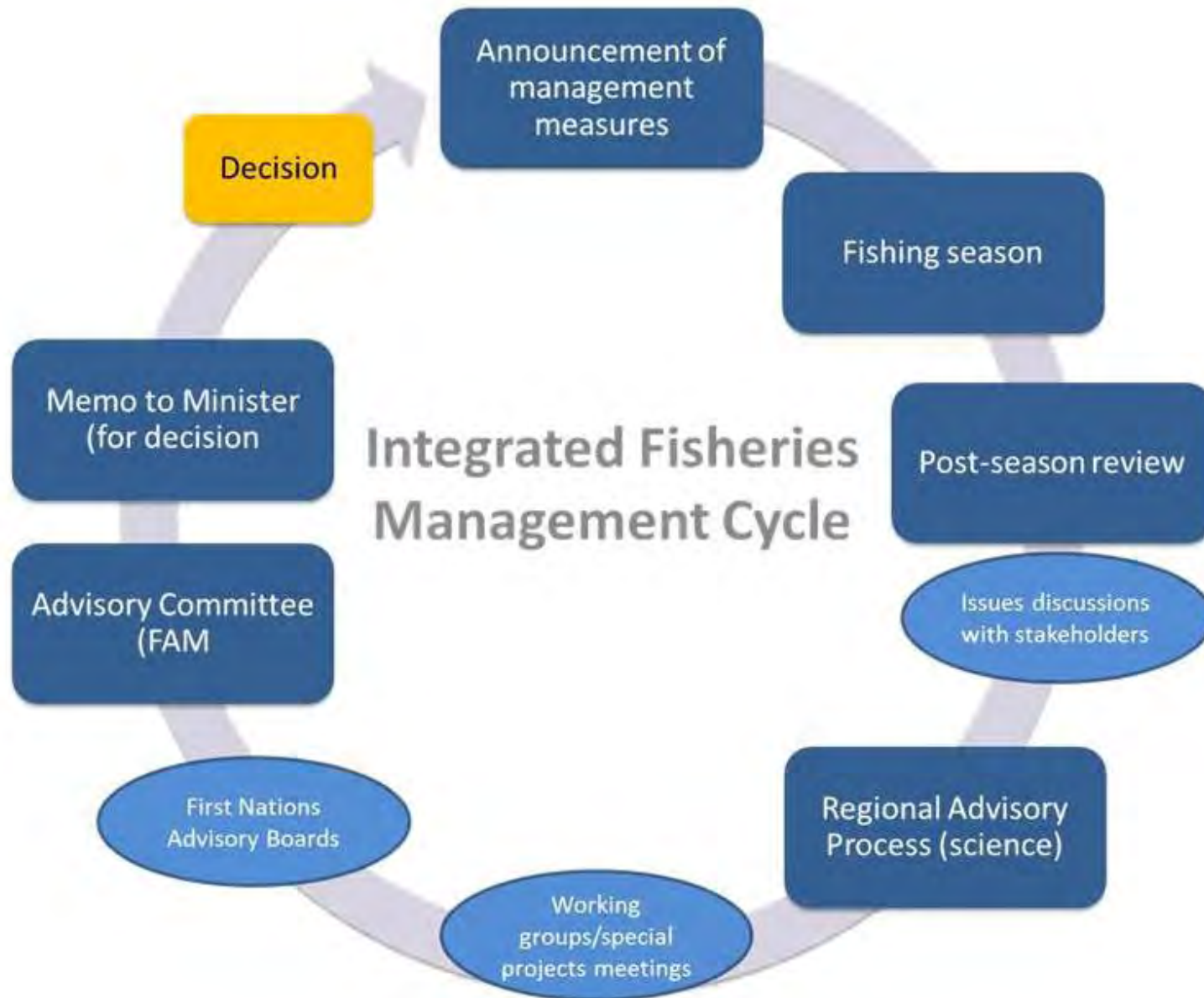
**to get there ... we need to do this together, we need to **CO-LEARN****

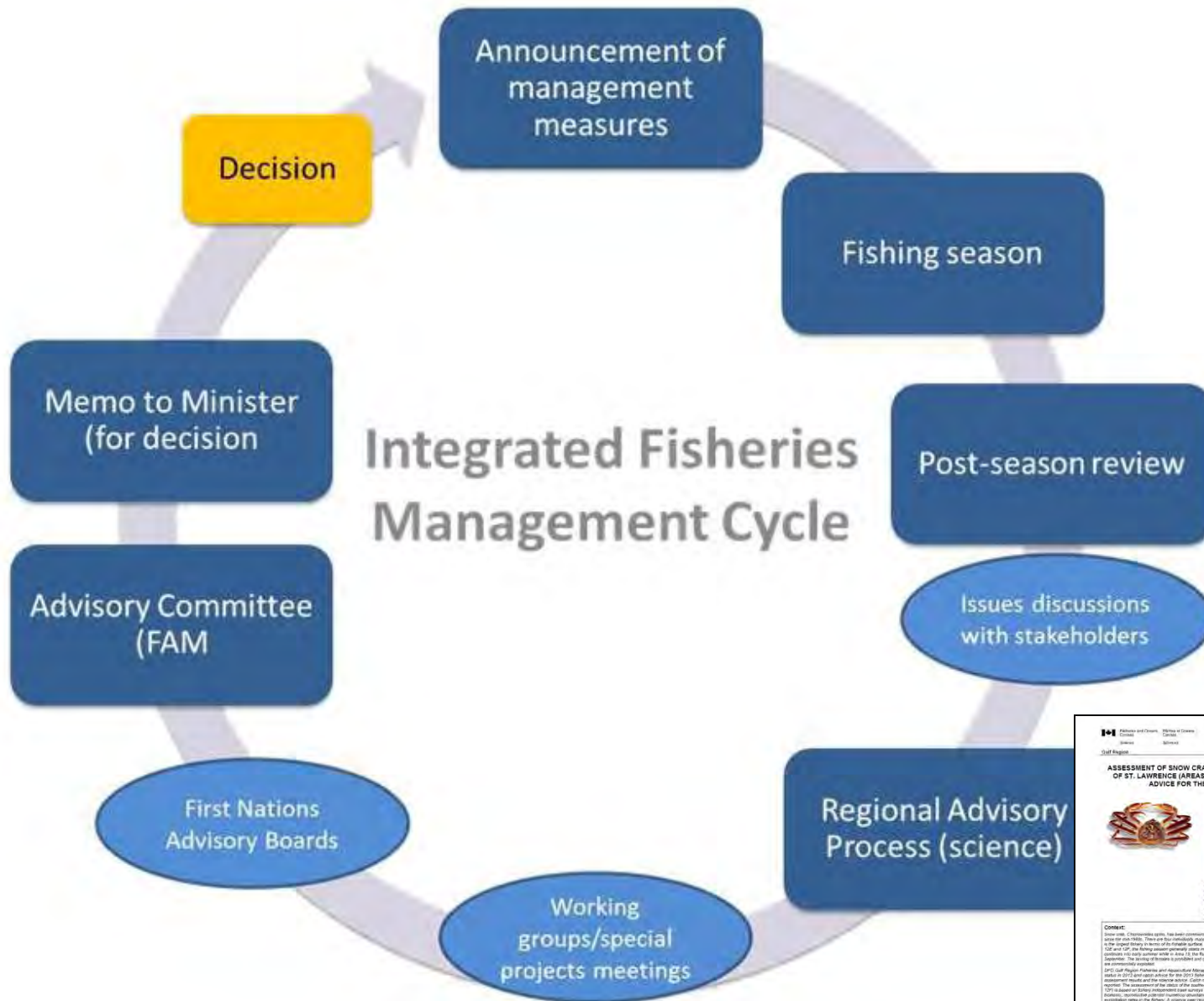












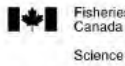
**ASSESSMENT OF SNOW CRAB IN THE SOUTHERN HALF OF ST. LAWRENCE (AREAS 12, 19, 12B AND 12P) AND ADVICE FOR THE 2013 FISHERY**

**COVER:** Commercial snow crabs have been commercially harvested in the southern half of St. Lawrence since the early 1970s. This report provides an assessment of the snow crab fishery in the southern half of St. Lawrence (Areas 12, 19, 12B and 12P) and provides advice for the 2013 fishery. The report is published by the Canadian Science Advisory Board and is dated February 2013.

**CONTENT:** Commercial snow crabs have been commercially harvested in the southern half of St. Lawrence since the early 1970s. This report provides an assessment of the snow crab fishery in the southern half of St. Lawrence (Areas 12, 19, 12B and 12P) and provides advice for the 2013 fishery. The report is published by the Canadian Science Advisory Board and is dated February 2013.

February 2013

# Canadian Science Advisory Secretariat Science Advisory Report 2013/002



Science Sciences

Canadian Science Advisory Secretariat  
Science Advisory Report 2013/002

Gulf Region

## ASSESSMENT OF SNOW CRAB IN THE SOUTHERN GULF OF ST. LAWRENCE (AREAS 12, 19, 12E AND 12F) AND ADVICE FOR THE 2013 FISHERY



Figure 1: Map of the southern Gulf of St. Lawrence showing the Crab Fishing Areas (CFAs), fishing grounds and management buffer zones (shaded area). Fishing grounds are labeled as follows: 1 Chaleur Bay, 2 Shediac Valley, 3 Orphan Bank, 4 Bradelle Bank, 5 Magdalen Channel, 6 Cape Breton Corridor, 7 Laurentian Channel, and 8 American Bank.

### Context:

Snow crab, *Chionoecetes opilio*, has been commercially exploited in the southern Gulf of St. Lawrence since the mid-1960s. There are four individually managed fishing areas among which Area 12 (Figure 1) is the largest fishery in terms of its fishable surface, number of participants and landings. In Areas 12, 12E and 12F, the fishing season generally starts in April-May as soon as the Gulf is clear of ice and continues into early summer while in Area 19, the fishery opens after June 30 and usually ends in mid-September. The landing of females is prohibited and only hard-shelled males  $\geq 95$  mm of carapace width are commercially exploited.

DFO Gulf Region Fisheries and Aquaculture Management requested an assessment of the resource status in 2012 and catch advice for the 2013 fishery. This document provides an overview of the assessment results and the science advice. Catch rates and other fishery performance indicators are reported. The assessment of the status of the southern Gulf snow crab resource (Areas 12, 19, 12E and 12F) is based on fishery independent trawl surveys that provide indicators of abundance (commercial biomass), reproductive potential (numerical abundance of mature females), recruitment, and to estimate exploitation rates in the fishery. A science peer review meeting was conducted January 30-31, 2013 in Moncton, NB. Participants at the science review were from DFO Science, DFO Fisheries Management, fishing industry, provincial governments, from universities, and Aboriginal organisations.

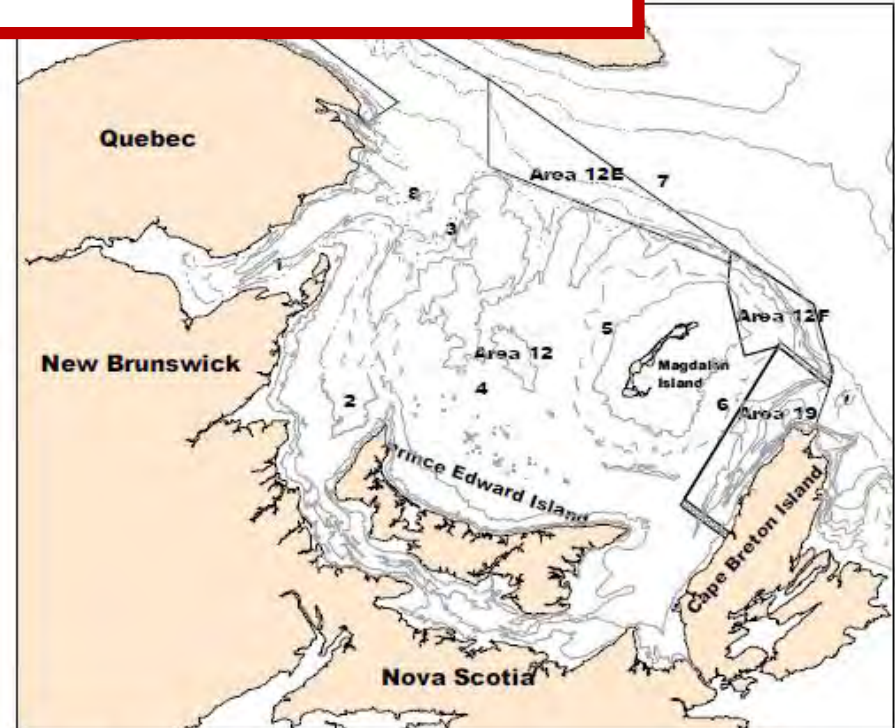
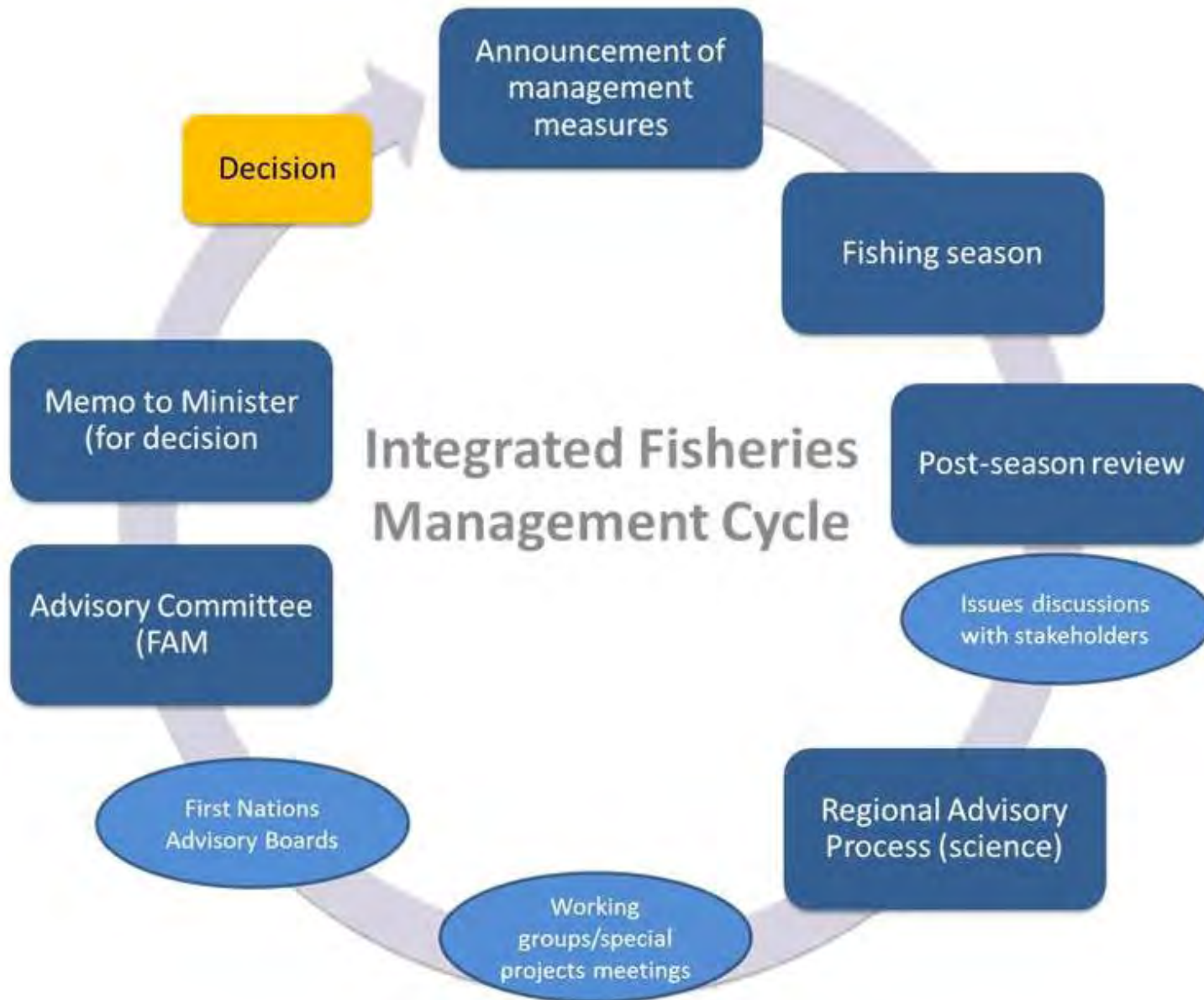
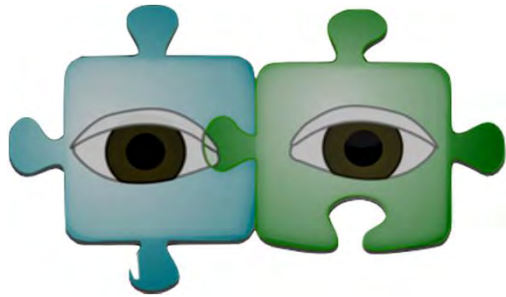


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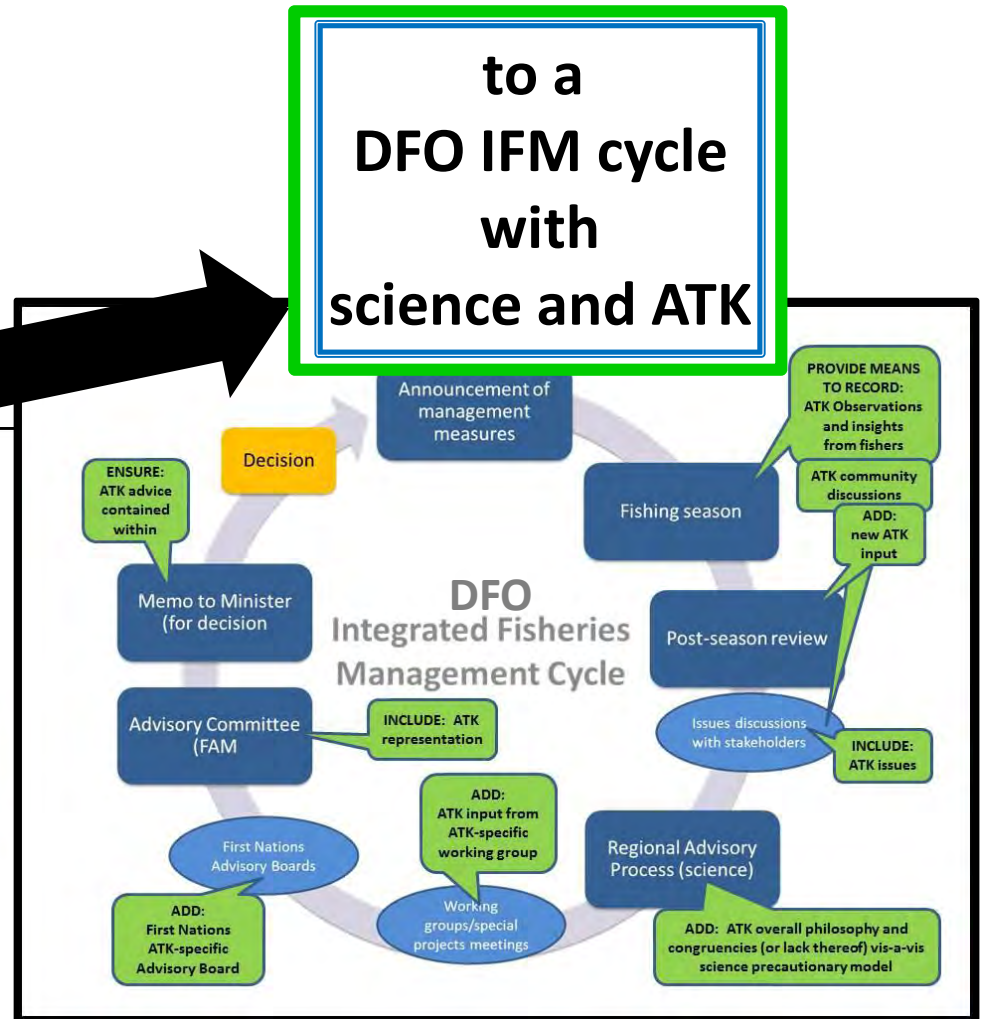
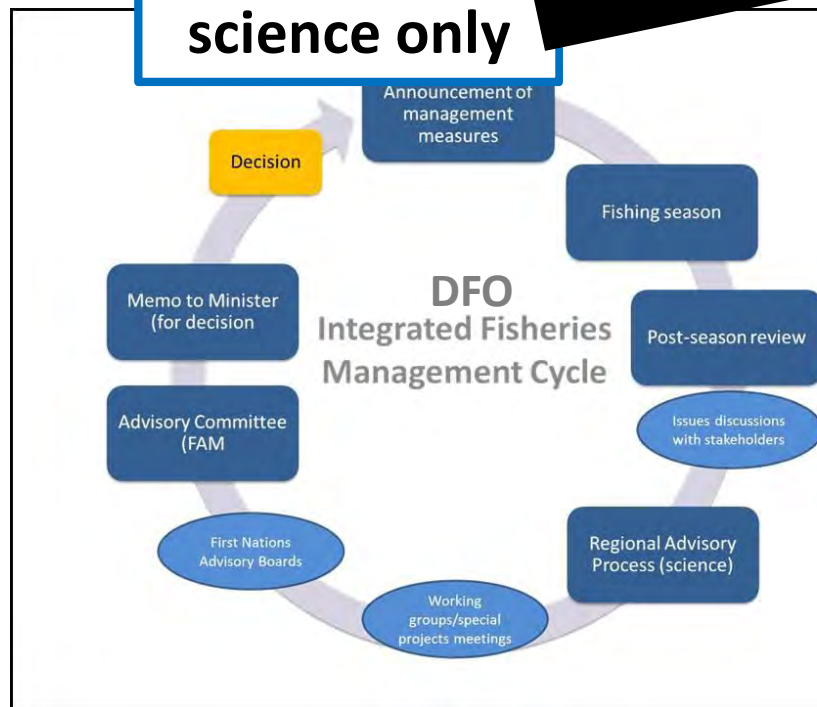


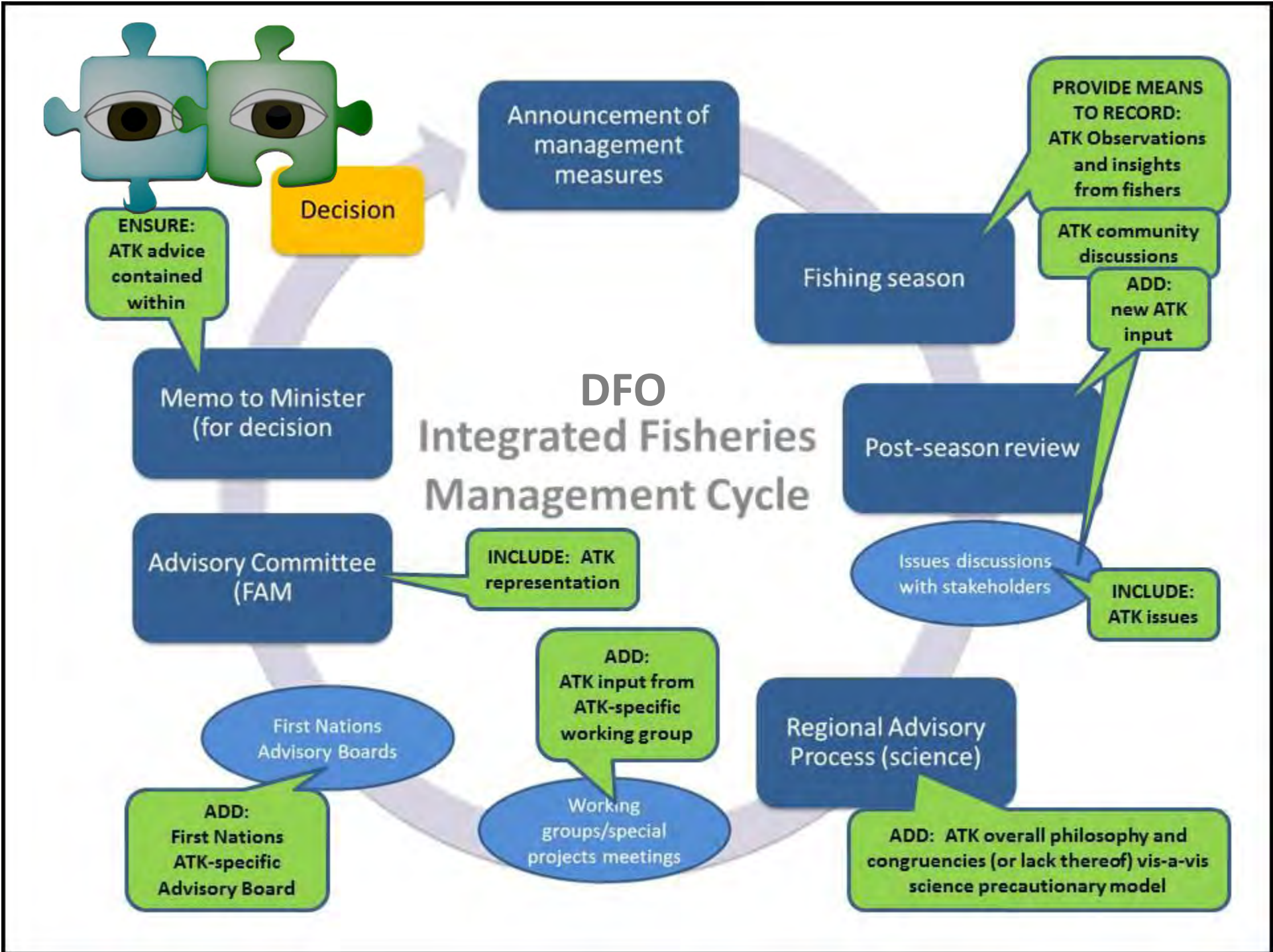


# our 2013 final report to APC

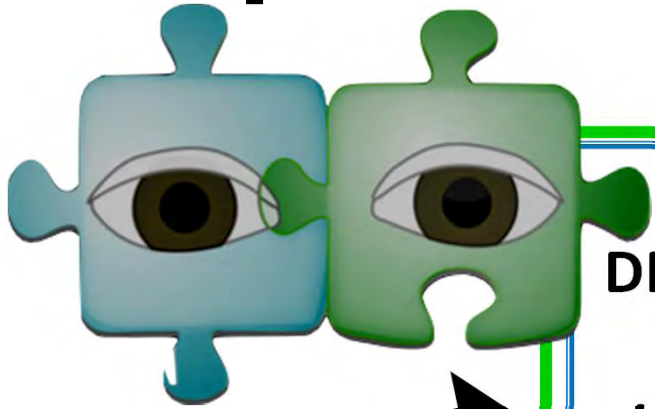
move from a  
DFO IFM cycle  
with  
science only

to a  
DFO IFM cycle  
with  
science and ATK



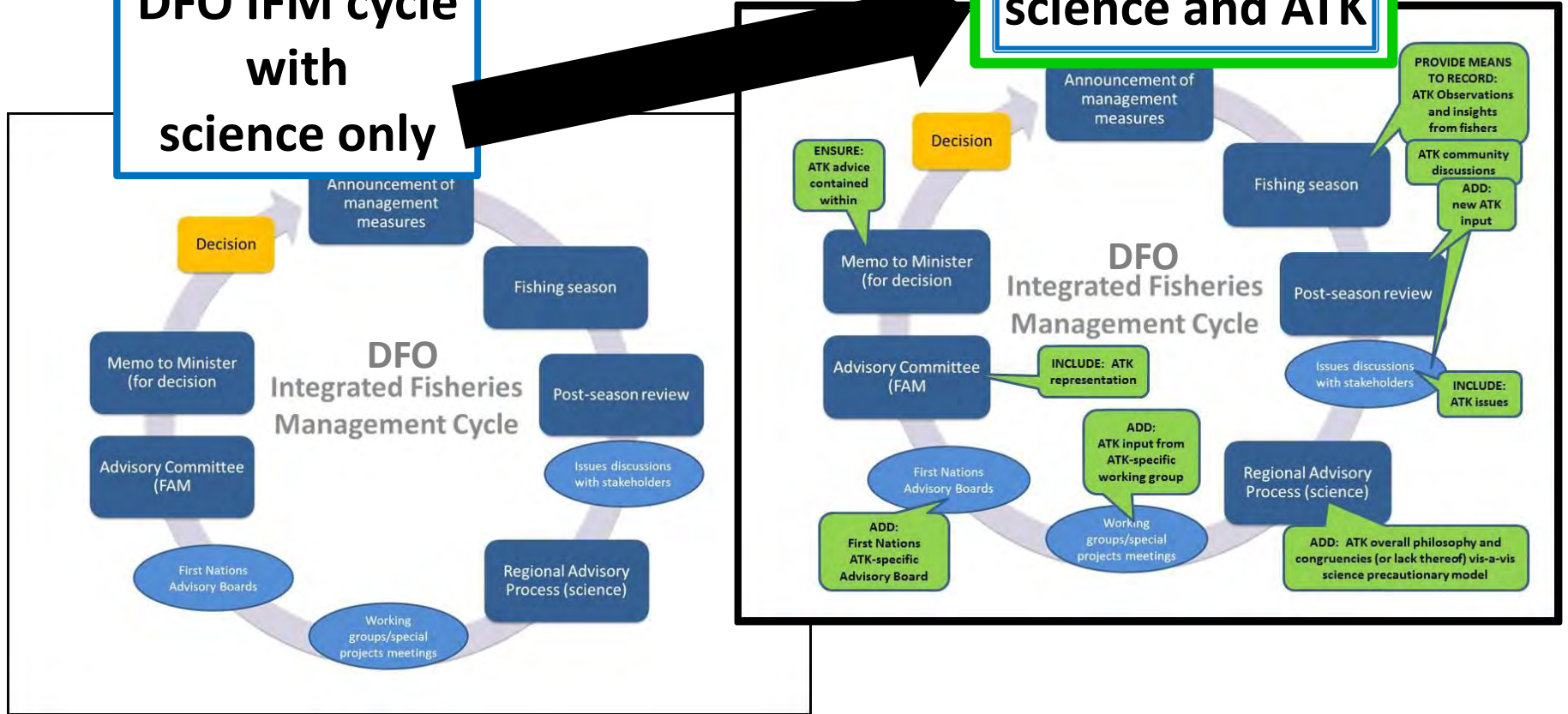


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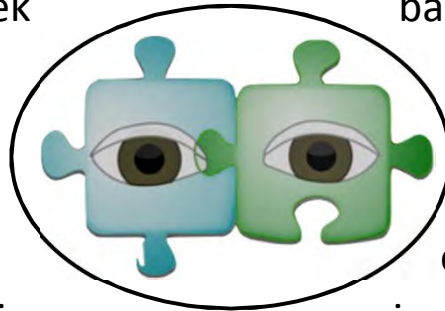
to a  
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## words of Elder Albert Marshall, LLD, Eskasoni First Nation

Ntua'q kinuk me'ki kina'masultinew aq wli nstmnew eptuaptasimkewey. Nuta'q wla etuapmkewey ankite'tm nej kulaman wen pipanikkesij kisi apoqnuatisnu nsitmnew. Ta'nik teto'qi msitmu'k miamuj kekinamu'kik ta'n koqowey. Etuaptimkewey, miamuj weji kmitu'tij mimajik, ta'n telukwek aq kepmite'tasin. Kejitu tetpaqi ewekasi'k wsitqamu ajiknatew kinuk keji'tuk mu wen newtite'lsin ta'n tijiw weji ka'qa'tun aq pasik nekm wtapesin. Nuta'q iknaq, pitui knajan aq wsitkamuk siawasinm nutaq elt kinamuan wulo'tmnew wsitqamu wjit na nemowk.



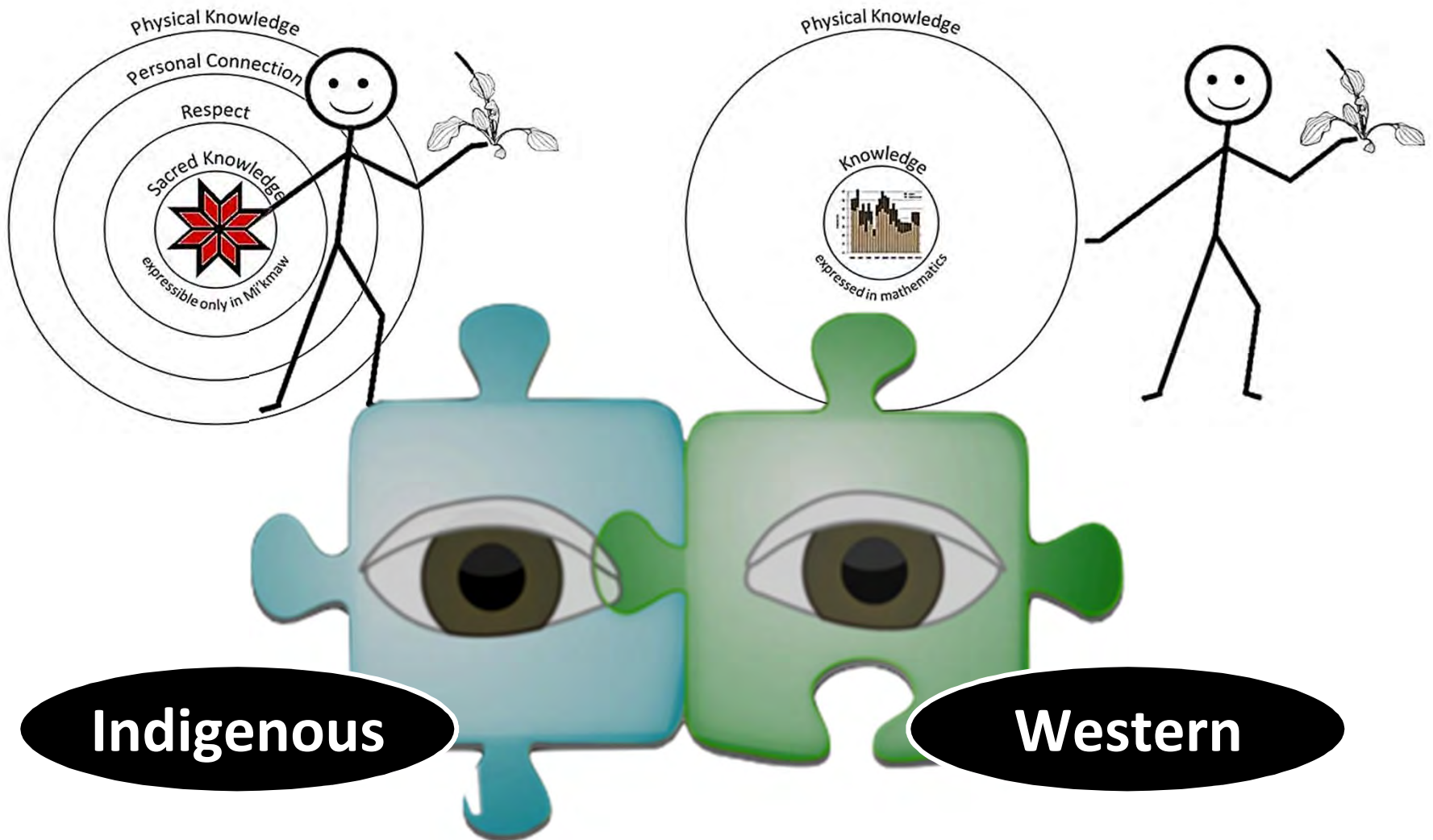
We need to embark on a co-learning journey of Two-Eyed Seeing in which our two paradigms will be put on the table to be scrutinized. We need to honestly be able to say that the essence, the spirit of our two ways, has been respected as we work to balance the energies of those ways.

We need to put the two together, such that we have something so profound that we can sustain ourselves and at same time be very cognizant that our actions of today do not jeopardize the ecological integrity of area. Our actions have to be seen to be beneficial for people of the next generations.

to get there ... we need to do this  
together, we need to **CO-LEARN**

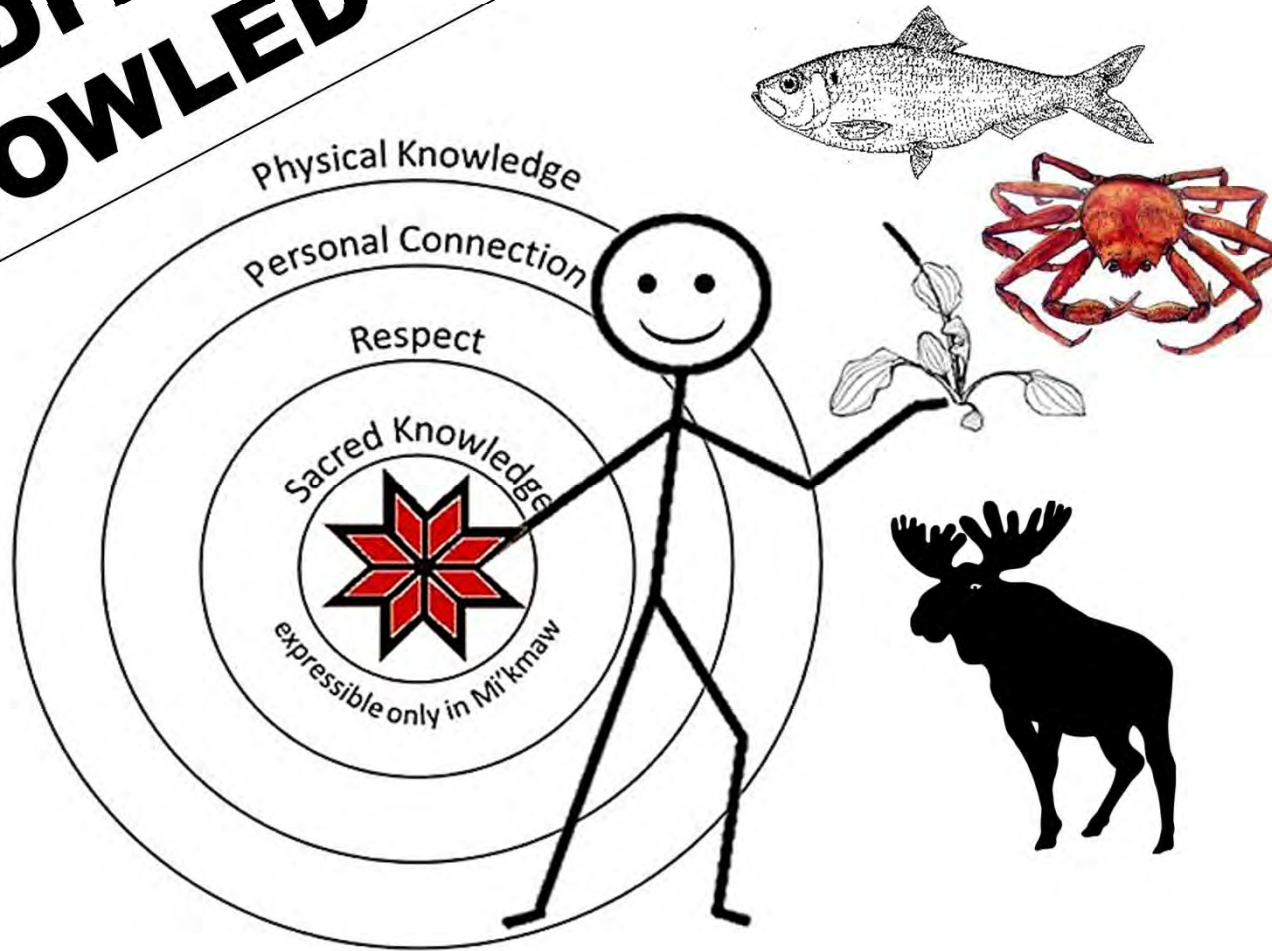


**The challenge is to bring together  
the strengths from both so as  
not to compromise the integrity of Mother Earth.**



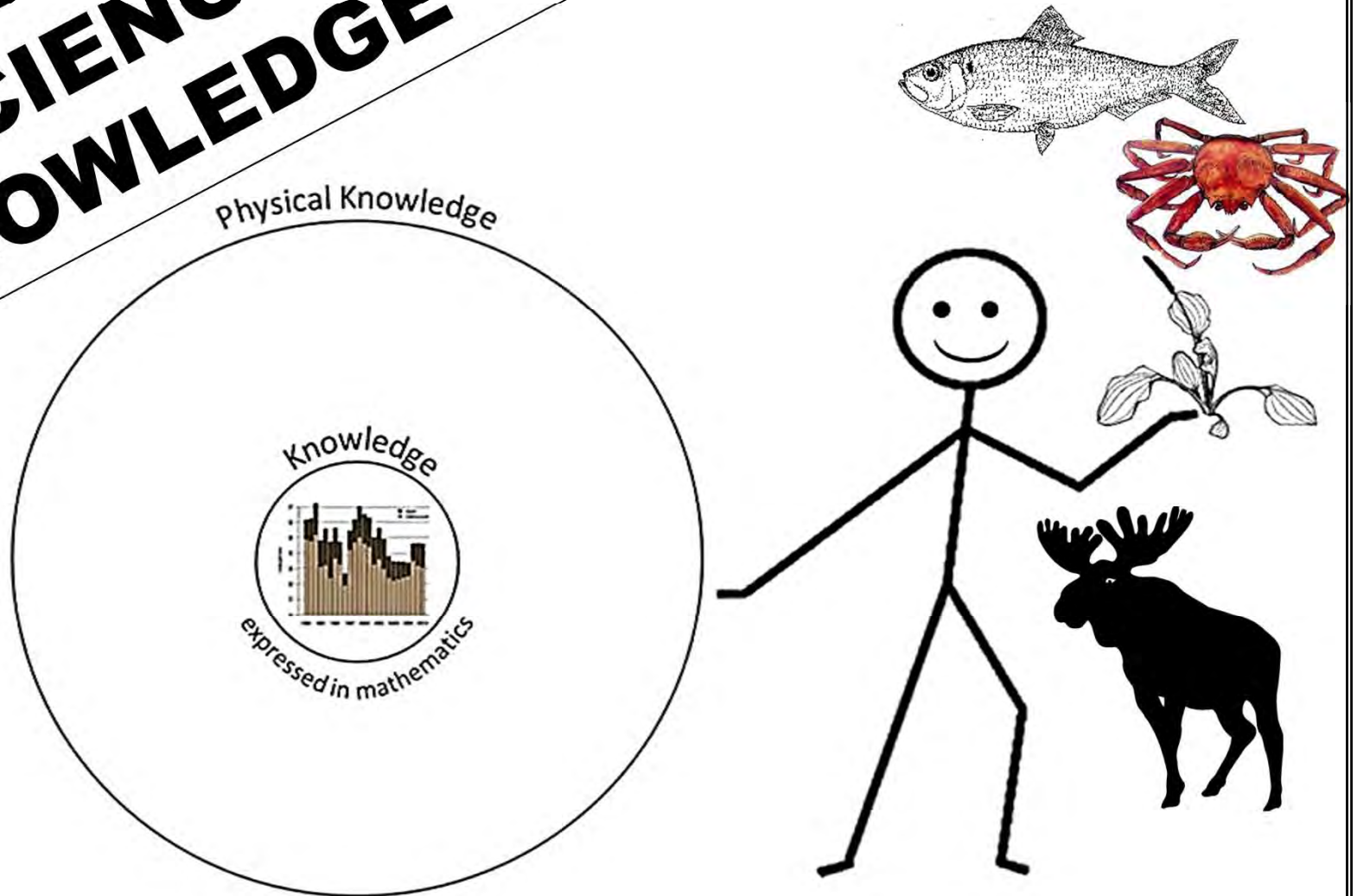
# ABORIGINAL TRADITIONAL KNOWLEDGE

Concentric Circles Model for ATK / MTK  
adapted from Elder Murdena Marshall



# WESTERN SCIENCE KNOWLEDGE

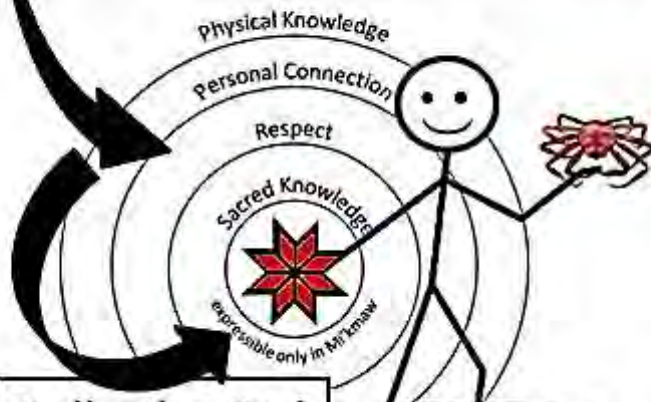
Model for Western Science patterned after  
"Concentric Circles Model for ATK / MTK"  
by Elder Murdena Marshall



Day-by-Day Fishing Experiences



Personal Observations & Stories



Collective Oral Knowledge

ATK / MTK

Knowledge Rooted in Long Time Occupancy in Specific Ecosystems

Fishing Trawls

Working Document 2013/00X

J.-F. Landry, E. Wade, M. Moriyasu and M. Hébert

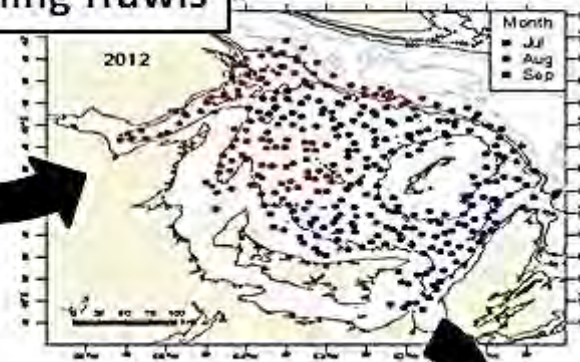
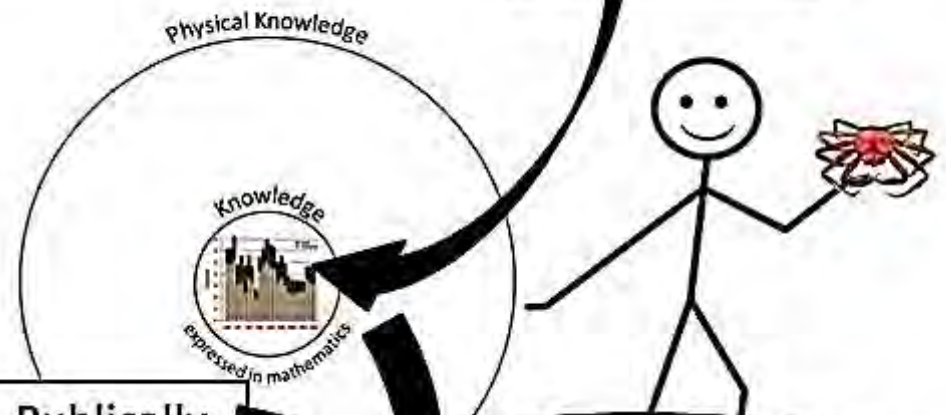


Figure 8. Monthly geographic distribution of salmon trawls during the 2012 survey

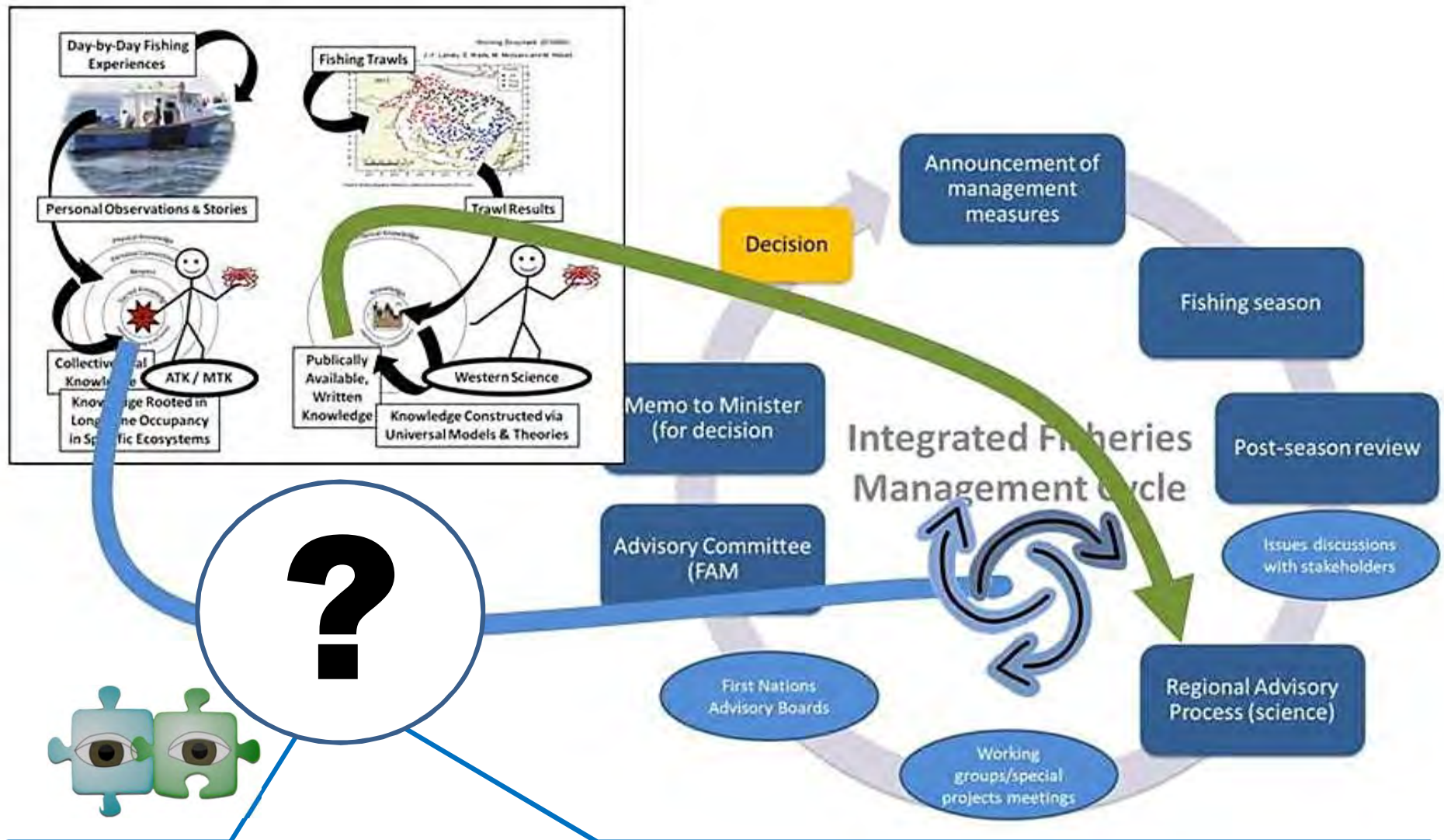
Trawl Results



Publicly Available, Written Knowledge

Western Science

Knowledge Constructed via Universal Models & Theories

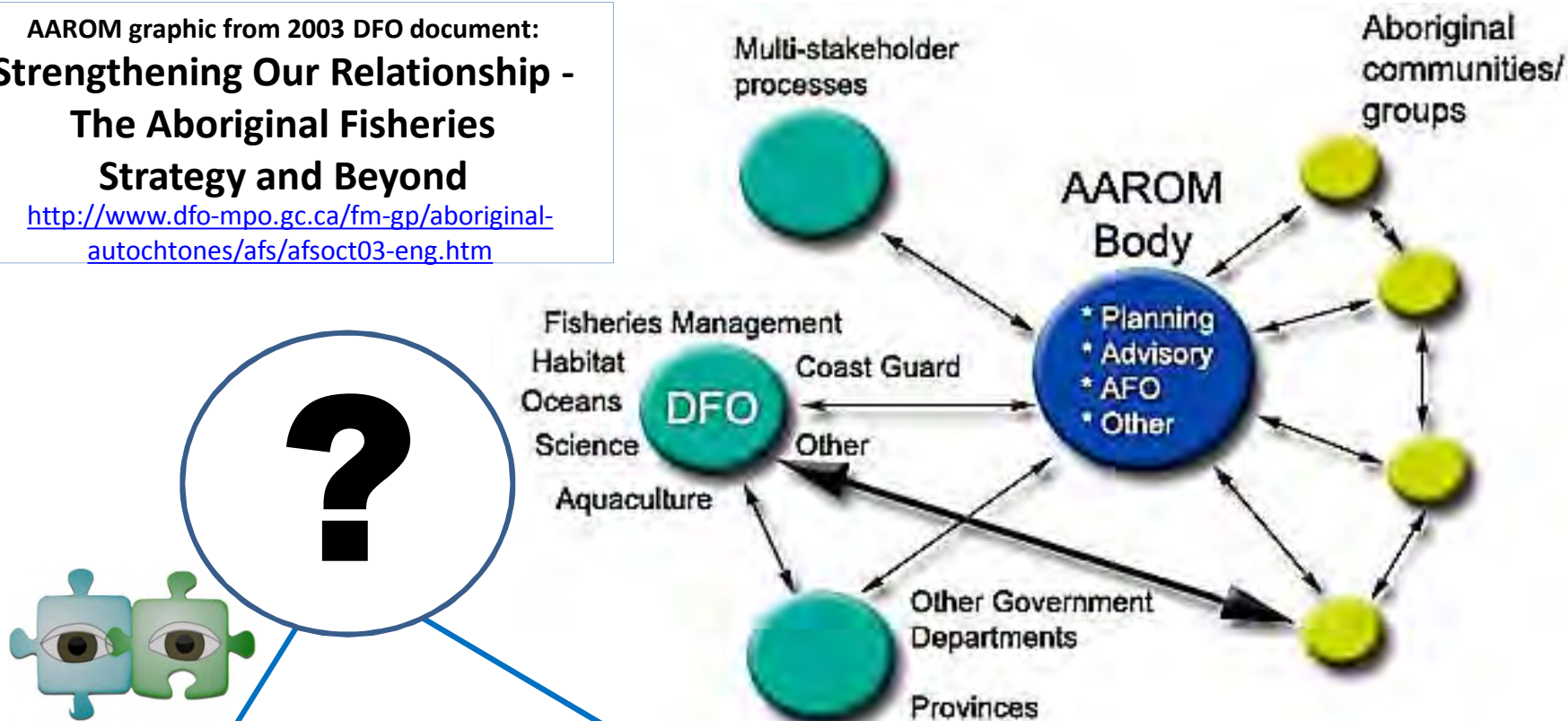


**Can the AAROMs begin to serve this role of "Partner Helpers" to bring ATK into DFO process?**

# JOURNEY OF CO-LEARNING

will be co-developed by FISHERS and COMMUNITY MEMBERS (especially ELDERS) working with DFO and PARTNER HELPERS

AAROM graphic from 2003 DFO document:  
**Strengthening Our Relationship -  
The Aboriginal Fisheries  
Strategy and Beyond**  
<http://www.dfo-mpo.gc.ca/fm-gp/aboriginal-autochtones/afs/afsoct03-eng.htm>



**Can the AAROMs begin to serve this role of “Partner Helpers” to bring ATK into DFO process?**

# **JOURNEY OF CO-LEARNING**

**will be co-developed by FISHERS and COMMUNITY MEMBERS (especially ELDERS) working with DFO and PARTNER HELPERS**

Aboriginal Aquatic Resource and Oceans Management Program

## **DFO's current objectives for AAROM program\***

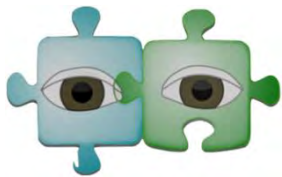
- to assist Aboriginal groups in acquiring the administrative capacity and scientific/technical expertise to facilitate their participation in aquatic resource and oceans management;
- to encourage the establishment of collaborative management structures that contribute to integrated ecosystem/watershed management and planning processes;
- to enhance existing collaborative management structures, where appropriate;
- to facilitate sound decision making in advisory and other processes related to a number of areas of DFO responsibility;
- to strengthen relationships through improved information sharing among Aboriginal communities, DFO and other stakeholders and among Aboriginal communities; and
- to contribute to the federal government's broader objective of improving the quality of life of Aboriginal people.



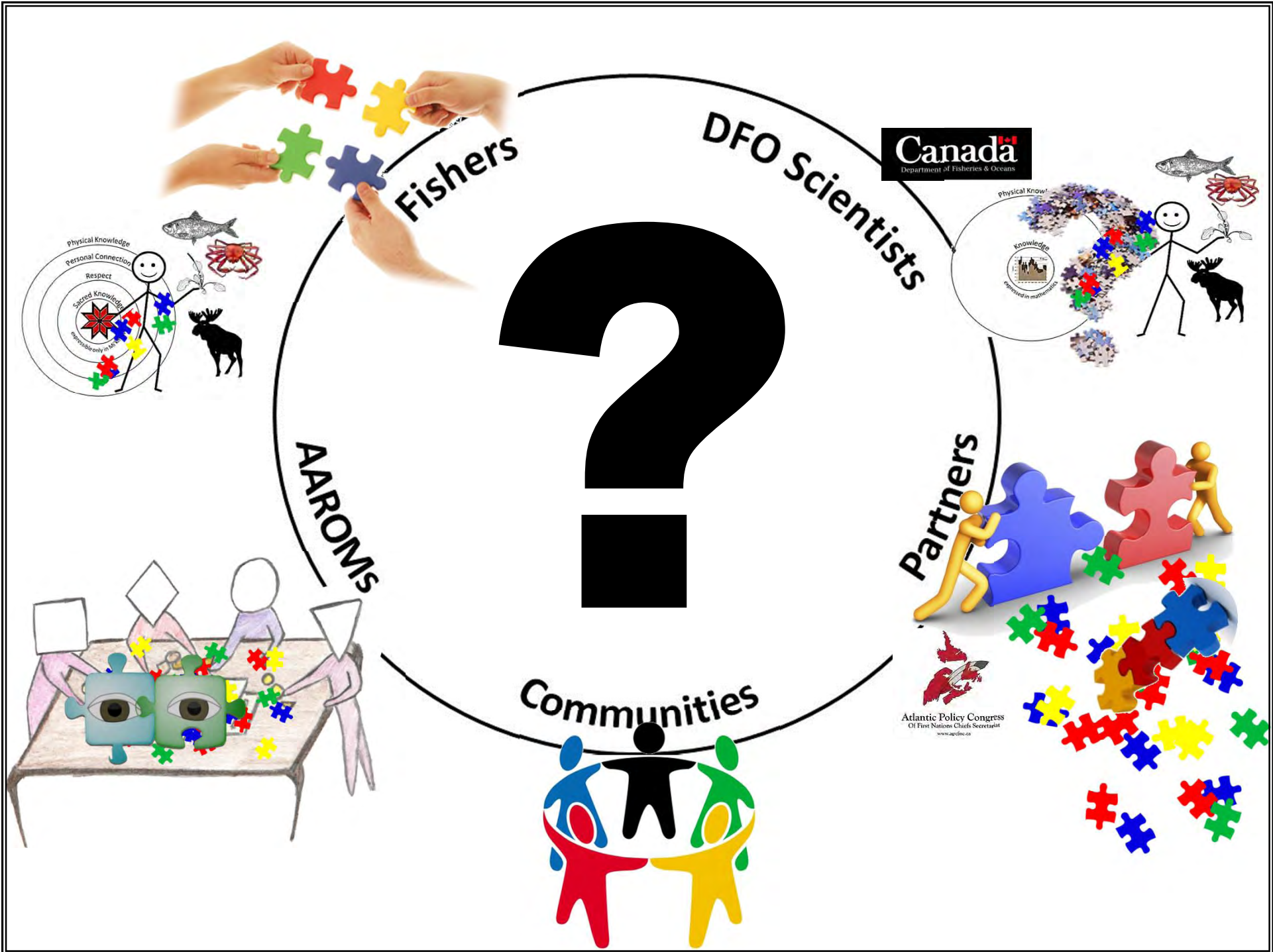
\* <http://www.dfo-mpo.gc.ca/fm-gp/aboriginal-autochtones/aarom-pagrao/index-eng.htm>

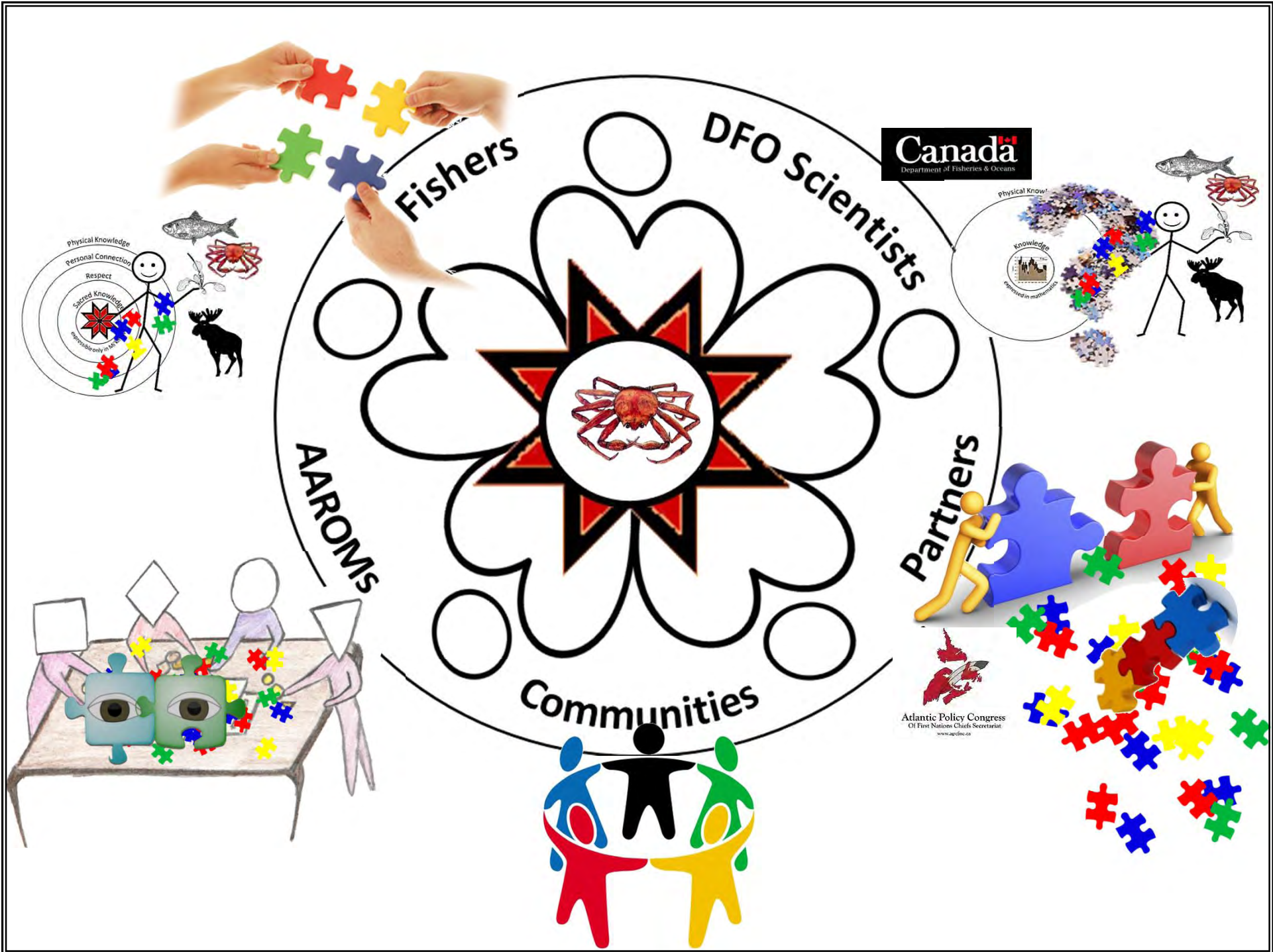
**Can the AAROMs begin to serve this role of “Partner Helpers” to bring ATK into DFO process?**

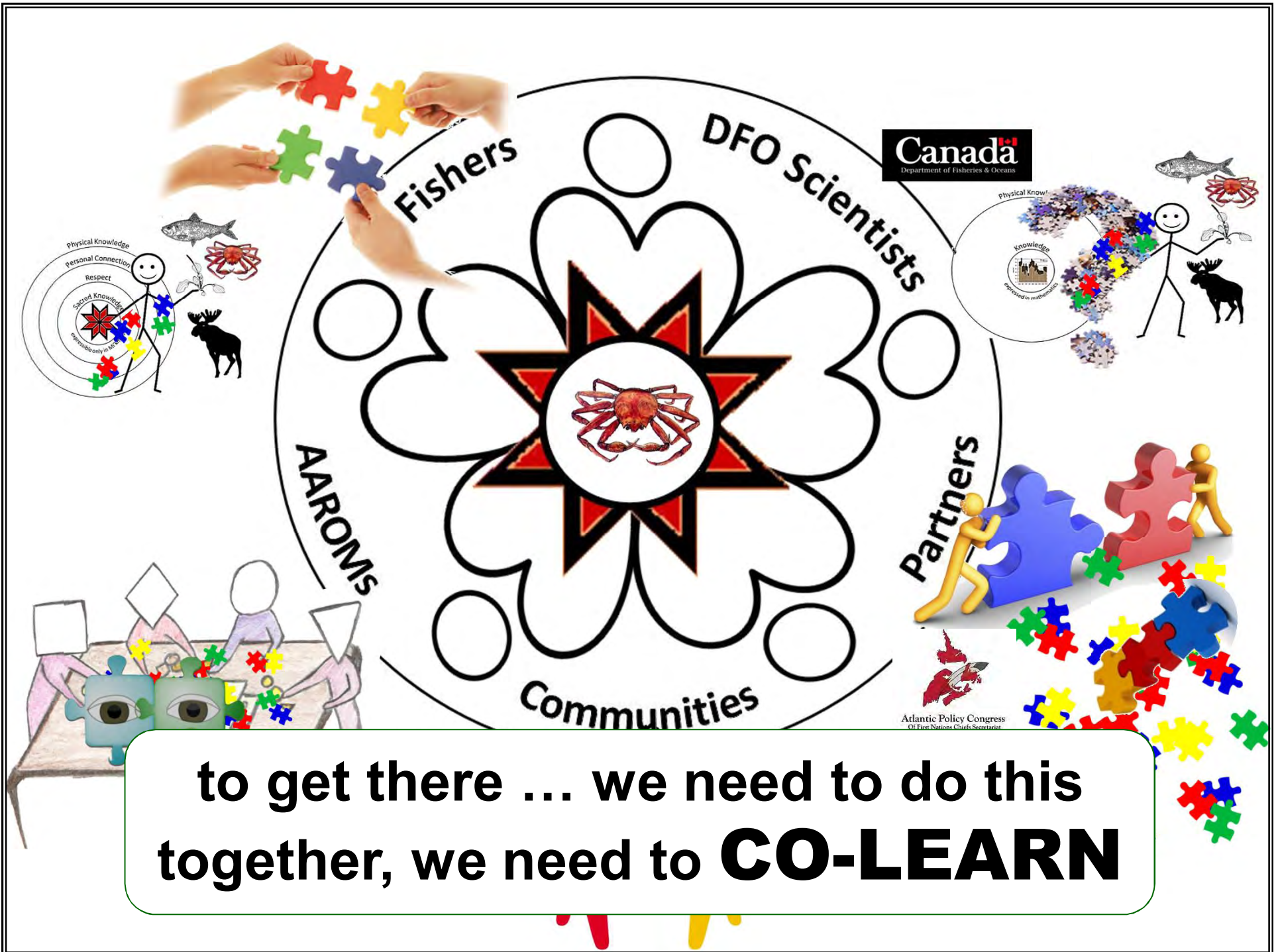




**2014: design a methodology for community involvement & engagement**



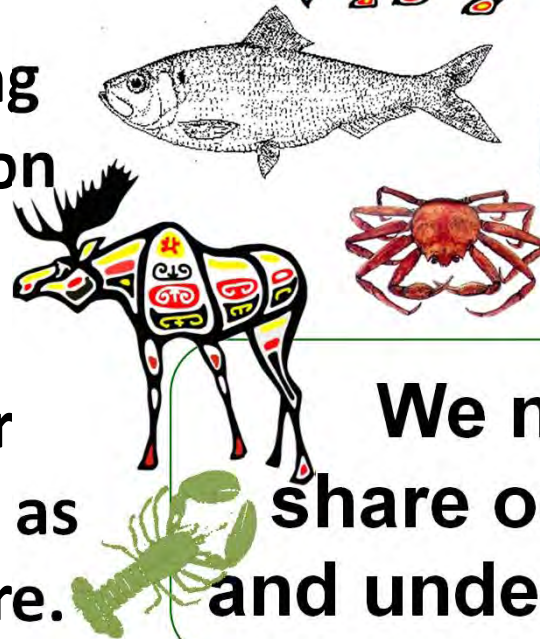
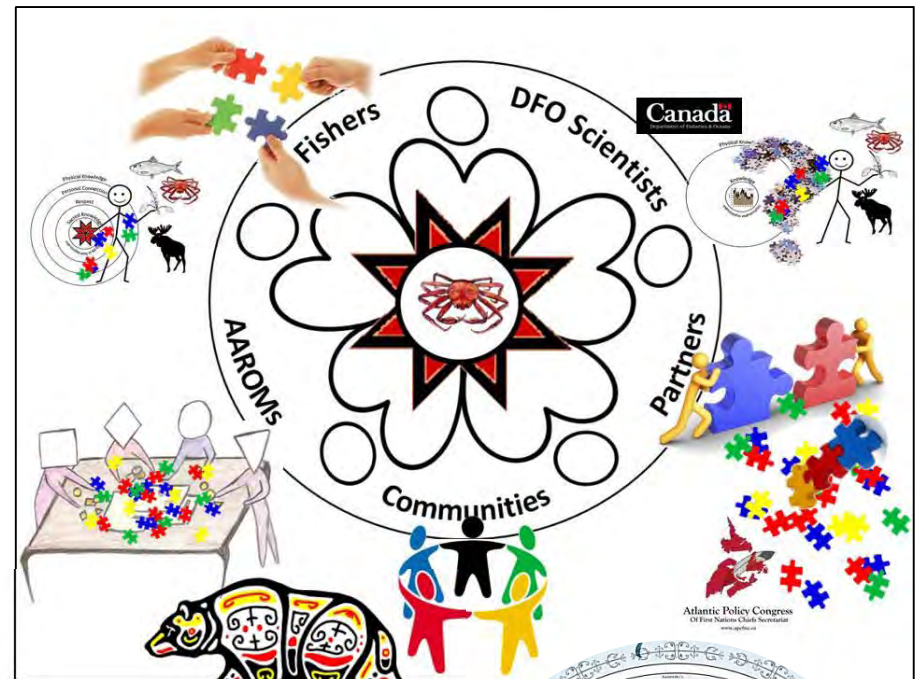




to get there ... we need to do this together, we need to **CO-LEARN**

**words of Elder Albert**

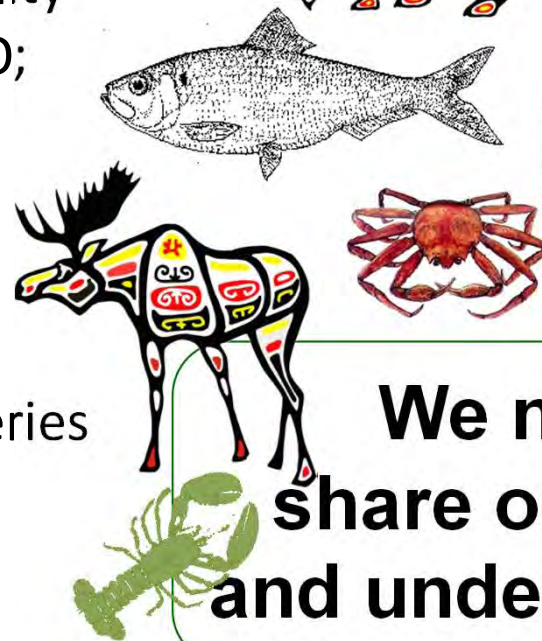
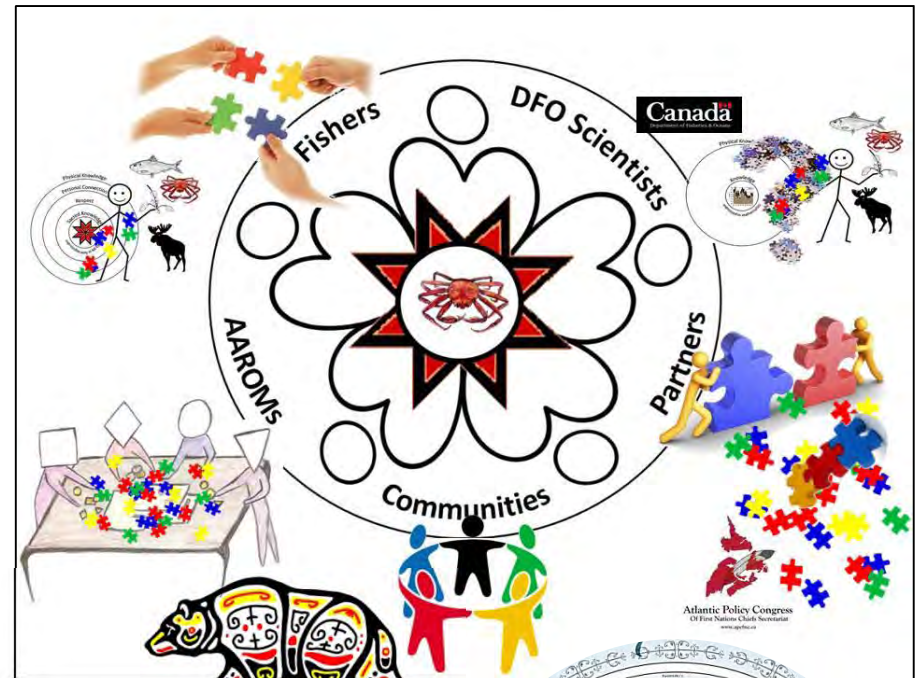
**We are re-entering an era in which what we had once considered to be obsolete is now coming back, and this is our understanding of the natural world as having kinship relationships and interconnectivity. The remembering and relearning will be a total transformation of understanding. We will have to invite the spirit of consciousness back into our daily lives so we are guided as per the way we initially were.**



**We need to share our stories and understandings.**

## Key conversations:

- 1) creating broader understandings of Netukulimk within communities;
- 2) gathering of ATK by community fishers and subsequent consideration by community Elders and appropriate others;
- 3) enabling meaningful community co-learning together with DFO;
- 4) implementing ATK-informed fisheries management for communities, especially the setting of quotas; and
- 5) expanding the context of fisheries into healthy and sustainable communities.



**We need to  
share our stories  
and understandings.**



**We need to remember and reconnect with  
our traditional stories and ceremonies.**

<http://www.fourdirectionsteachings.com/transcripts/mikmaq.html>

**words of Elder Albert Marshall, LLD, Eskasoni First Nation**

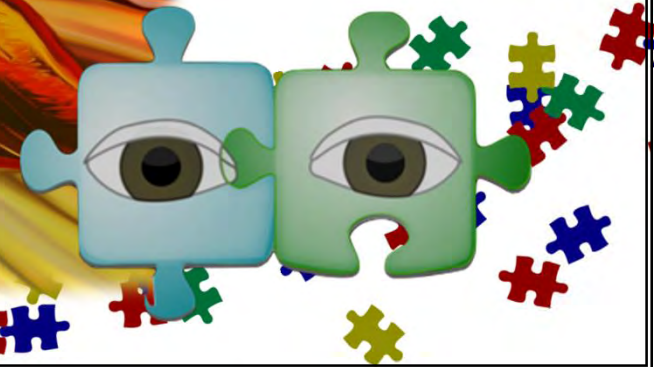
**We will need to do a lot of inner reflection.**

**We have for too long been in a period of disconnect from our natural world and from our traditional ways.**

**We have lost a lot of the stories that would normally flow as to how we would go about sustaining ourselves.**



*artwork by  
Gerald Gloade*





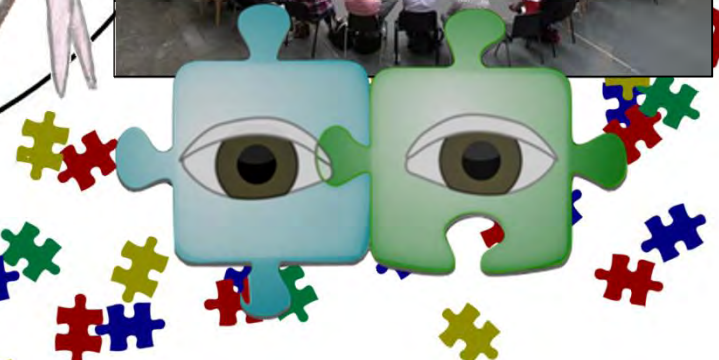
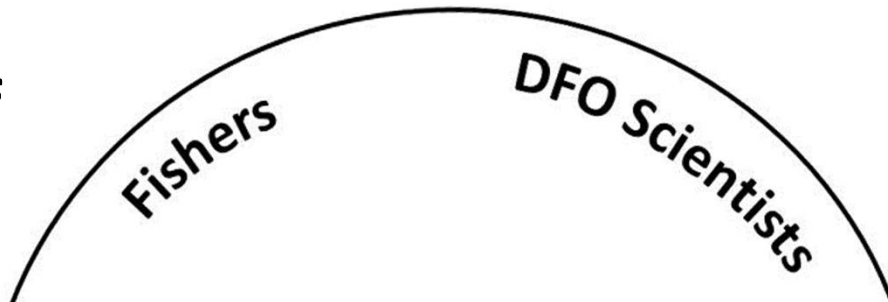
# JOURNEY OF CO-LEARNING

will be co-developed by FISHERS and COMMUNITY MEMBERS (especially ELDERS) working with DFO and PARTNER HELPERS

The essence of CO-LEARNING is that the

## SPIRIT OF COLLABORATION

has been energized.



**words of Elder Albert Marshall, LLD, Eskasoni First Nation**

**We need to come to see that with respect to the mainstream way of harvesting ... that somewhere along the line, we somehow got the idea that these gifts of aquatic resources are inexhaustible. This is where it will require a lot of reflection to change that mindset back to our traditional way which is one where we can sustain the gifts and they sustain us.**



# **ATK – Netukulimk**



**words of  
Elder Albert Marshall,  
Eskasoni First Nation**

**We need to remember and reconnect with  
our Traditional Knowledge.**

# ATK – Netukulimk



Our culture is built  
on long term vision  
and our decisions  
were made with the  
next Seven Generations in mind.

*(words of Elder Albert Marshall)*

# ATK – Netukulimk



This is what we truly believe  
... this is what reinforces  
our spirituality:

that no one being is greater than the next,  
that we are part and parcel of the whole,  
we are equal, and that each one of us has a  
responsibility to the balance of the system.

*(words of Elder Albert Marshall)*

# **ATK – Netukulimk**

**We need to put our understandings such  
that they are not so abstract.**

(words of Elder Albert Marshall)

**Indigenous people invariably contend that the attitude  
and philosophy involved, rather than the technology,  
are what makes a practice traditional.**

(words of Indigenous scientist and scholar Raymond Pierotti)

Pierotti, R., 2011, p. 14, in: Indigenous Knowledge, Ecology, and Evolutionary Biology. Routledge, New York

# ATK – Netukulimk



Humans possess responsibilities.

**ALL OTHER SPECIES  
POSSESS RIGHTS.**



*(words of Elder Albert Marshall)*

# **ATK – Netukulimk**

**is living  
knowledge  
and  
adaptive  
knowledge.**

**RESPECT  
REVERENCE  
RESPONSIBILITY  
RECIPROCITY**



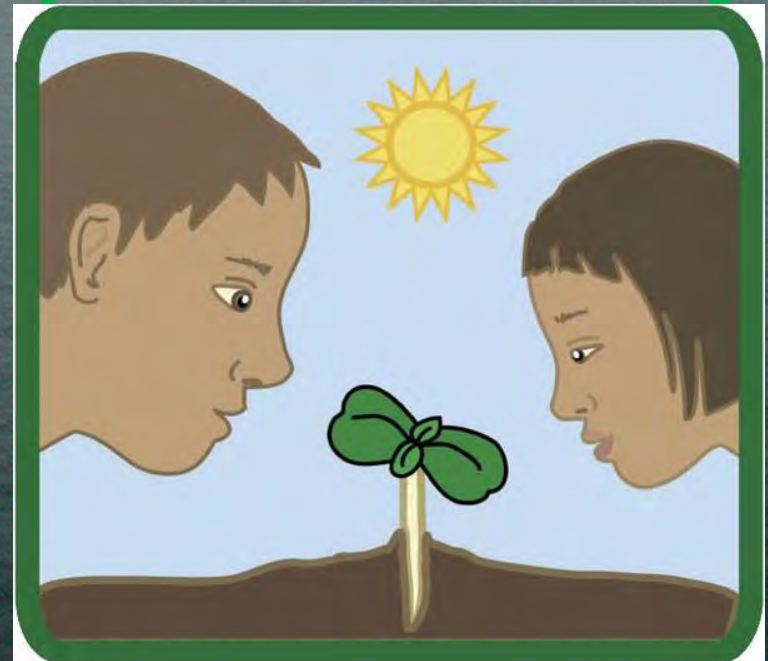
# ATK – Netukulimk

**“sustaining ourselves”  
... yes ... but really is a  
much richer concept:  
it is wholistic.**

... it takes you into a place where  
you are very conscious of how  
the human two-leggeds are  
interdependent and interconnective  
with the natural world ... this  
philosophy / ideology is so  
ingrained in your subconscious  
that you are constantly aware of  
not creating an imbalance.

(words of Elder Albert Marshall)

**RESPECT  
REVERENCE  
RESPONSIBILITY  
RECIPROCITY**



# ATK – Netukulimk

**The laws of nature  
will need, in some  
cases, to supersede  
the man-made laws.**  
(words of Elder Albert Marshall)

Indigenous thought defines politics  
and ethics as existing in the realm  
of ecological communities and  
ecosystems. Following this logic  
it makes no sense to limit the  
notion of politics and ethics  
to human beings.

(words of Raymond Pierotti,  
Indigenous scientist & scholar)

Pierotti, R., 2011, pg. 8-9 in: Indigenous Knowledge,  
Ecology, and Evolutionary Biology. Routledge, New York

**Co-existence**

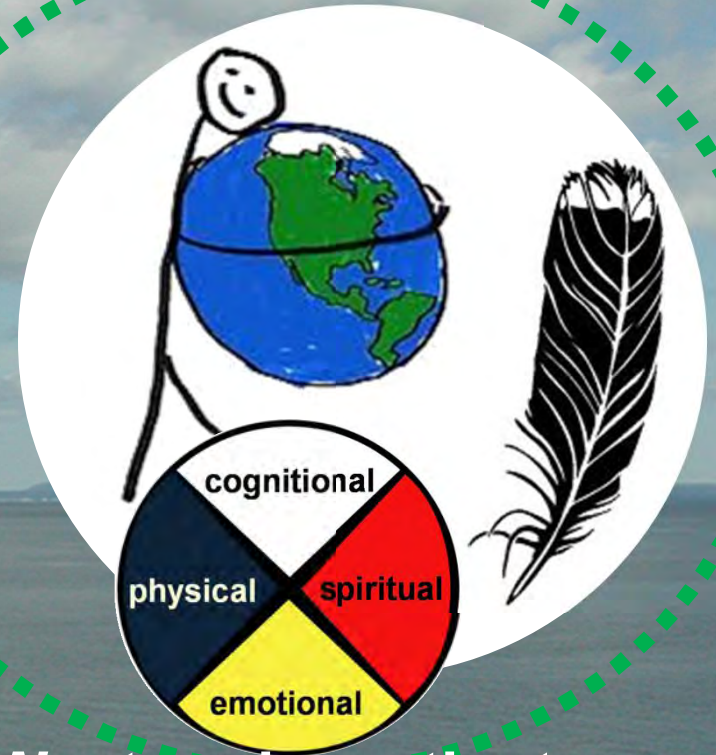
**Inter-dependence**

**Community Spirit**



# ATK – Netukulimk

**We need to use the tools from the man-made laws to assist the laws of Mother Earth ... that is the best we can do ... then we are living out our responsibilities.  
(words of Elder Albert Marshall)**



**One point consistently missed by Western investigators of TK is the significance of honor and responsibility in Indigenous traditions.**

**Western science typically fails to consider the responsibility scientists owe toward study organisms. There is also little, if any, discussion of the obvious reciprocal relationship between investigator and subject.**

**(words of Indigenous scientist and scholar Raymond Pierotti)**

Pierotti, R., 2011, pg. 15 & 17 in: Indigenous Knowledge, Ecology, and Evolutionary Biology. Routledge, New York

# ATK – Netukulimk

**We are all connected.**  
(words of Elder Albert Marshall)

**We live within interconnectivity.**  
(words of Elder Murdena Marshall)

Humans did not descend as angelic beings into this world. Nor are we aliens who colonized Earth. We evolved here, one among many species, across millions of years, and exist as one organic miracle linked to others. The natural environment we treat with such unnecessary ignorance and recklessness was our cradle and nursery, our school, and remains our one and only home. To its special conditions we are intimately adapted in every one of the bodily fibers and biochemical transactions that gives us life.

**This is ... the guiding principle of those devoted to the health of the planet. But it is not yet a general worldview ...**  
(words of mainstream scientist / biologist Edward O. Wilson)

Wilson, E.O., 2002, p. 40 in: The Future of Life, Vantage Books, New York



# ATK – Netukulimk

## All Our Relations



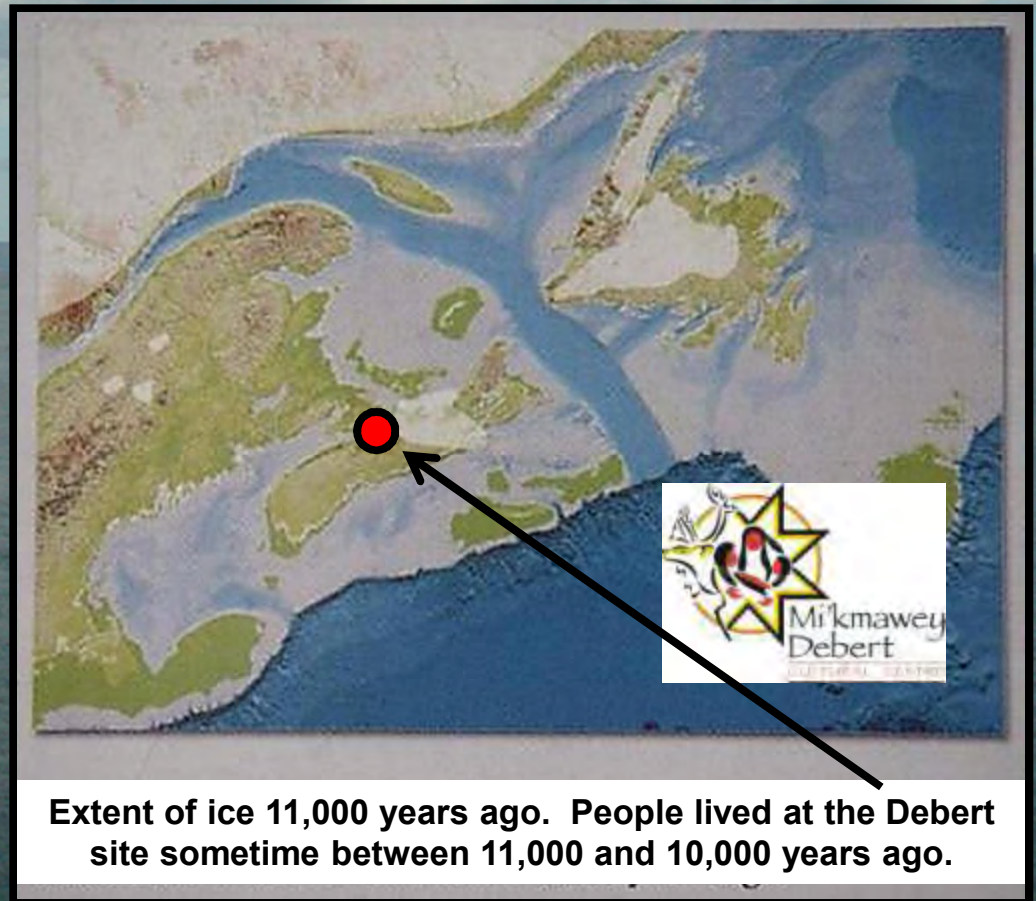
Indigenous knowledge emerges from careful long-term observations of natural phenomena. The data collected are basically an understanding of relationships between specific biological entities (plants, mammals, birds, insects, fish) and among biological and physical entities (rocks, bodies of water), landforms (mountains, isolated hills, unusual rock formations), and meteorological phenomena. This knowledge encompasses practical, empirical, and ideological aspects of understanding and is both the information itself and a way of knowing.

(Indigenous scientist and scholar Raymond Pierotti 2011 citing Barsh 2000 and various other authors)

# ATK – Netukulimk

**We have  
been here  
a long time ...  
sensitivities to  
eco-patterns and  
eco-relationships  
have developed  
over millennia**

**Indigenous knowledge emerges from  
careful long-term observations of  
natural phenomena.**



**Extent of ice 11,000 years ago. People lived at the Debert site sometime between 11,000 and 10,000 years ago.**

information source: signage on Milkawey Debert Interpretive Trail

**QUESTIONS  
AND  
SUGGESTIONS**



**Wela'lioq  
Thank you**

## **Ken Paul, Director of Fisheries**

[Ken.Paul@apcfn.ca](mailto:Ken.Paul@apcfn.ca)



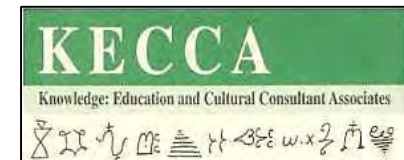
Atlantic Policy Congress  
Of First Nations Chiefs Secretariat  
[www.apcfn.ca](http://www.apcfn.ca)

## **Albert Marshall, Elder, LLD**

## **Murdena Marshall, Elder, LLD**

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