



Integrated Fisheries Management Plan for Narwhal in the Nunavut Settlement Area

Nunavut Community Consultations
March 2012



Discussion Topics

- Why changes are needed to narwhal co-management
- How narwhal are currently managed
 - Management Issues
- Objectives for the narwhal fishery
- Proposed changes to the current management system
- Review of the draft Narwhal Management Plan



Why do we need changes to the Narwhal Management System?

Increased national and international interest in how the narwhal fishery in Nunavut is managed.

Strengthen narwhal co-management consistent with;

- NLCA wildlife harvesting and management provisions such as
 - Establishing Total Allowable Harvest (TAH), Basic Needs Level (BNL)
 - Increased roles for Regional Wildlife Organizations (RWOs) and Hunters and Trappers Organizations (HTOs)
- Available scientific and Inuit knowledge
- Sustainable harvesting
- International trade requirements



Why do we need changes to the Narwhal Management System?

International Exports

- Must conform to the Convention on International Trade in Endangered Species (CITES)
- Canadian CITES Export Permits require a Non-Detriment Finding (NDF)
- In 2010 and 2011, exports of narwhal products from some areas were not allowed
- CITES Parties will meet in spring 2013, and may request a review of narwhal trade
 - If trade is deemed harmful to the survival of the species, trade restrictions or bans could be imposed.
 - Important that the Narwhal Management Plan is approved and implemented by January 2013



Importance of Improving the Narwhal Management System

- Improvements to the narwhal management system will assist
 - Co-management organizations to clearly demonstrate that narwhal harvesting is sustainable
 - Continued sustainable harvest for future generations of Inuit
 - Continued trade/export of narwhal tusks and products from Canada
- A formal Management Plan will outline the management objectives for narwhal and the measures to achieve sustainable harvesting.
- This will help to demonstrate that narwhal exports are from legally harvested whales.



How Narwhal are Currently Managed

1. Regulatory controls, e.g. narwhal quotas, management measures
 - *Fisheries Act* and its regulations (*Fishery General Regulations*, *Marine Mammal Regulations*)
 - Deemed to have been established by the Nunavut Wildlife Management Board (NWMB)
2. Non-quota limitations established by the NWMB
3. Narwhal Hunting Rules enacted by some HTOs



Current Management Measures

Quota Management

- Community quotas are in place (MMR s. 23)
- A Marine Mammal Tag is required to hunt narwhal (males and females) (MMR s. 5)
- When the community quota is reached, no further harvesting is allowed (MMR s. 23)
- Tag transfers within a population/stock are sometimes used
 - To reconcile community quota over-harvests
 - With prior NWMB approval, to authorize additional hunting



Current Management Measures

Management measures are designed to:

- Promote hunting efficiency (MMR s.9, s.19)
- Reduce hunting losses and wastage (MMR s.10(1) (2))
- Promote animal welfare (MMR s.8)
- Protect narwhal calves, and narwhal accompanied by calves (MMR s.18)
- Ensure legal harvests (MMR s.14, s.24)
- Ensure complete and timely harvest reporting (MMR s. 17, 24; NLCA s. 5.7.43)



Current Management Measures

- HTO Hunting rules in some communities
- Compliance Monitoring
 - Harvest levels and reporting
 - Tusk trade activities



Community Based Management

- Participating HTOs agreed to
 - Establish and enforce Narwhal Hunting Rules to control local harvesting
 - Establish a reporting system to accurately record numbers of narwhal struck, landed and lost (struck-sunk, wounded-escaped) every year
- Special management measures were introduced:
 - NWMB harvest limits replaced the original regulatory quotas
 - A Flexible Quota System was implemented (2003-2009) to allow more flexibility in local annual harvest
- All of the other existing management measures remained in place



Regulatory Quotas and Community Based Management (CBM) Harvest Limits

	Settlement	Annual Quota	CBM Limit
1.	Arctic Bay		130
2.	Qikiqtarjuaq		90
3.	Cape Dorset	10	
4.	Clyde River	50	
5.	Coral Harbour	10	
6.	Creswell Bay	12	
7.	Gjoa Haven	15	
8.	Grise Fiord	20	
9.	Hall Beach	10	
10.	Igloolik	25	

	Settlement	Annual Quota	CBM Limit
11.	Iqaluit	10	
12.	Kimmirut	10	
13.	Pangnirtung	40	
14.	Kugaaruk		35
15.	Pond Inlet		130
16.	Repulse Bay		72
17.	Resolute Bay	20	
18.	Taloyoak	15	
19.	Rankin Inlet	10	
20.	Chesterfield Inlet	5	
21.	Whale Cove	5	



Narwhal Management Issues

- Improvements to some aspects of narwhal management are needed to demonstrate sustainable harvesting.
 - Updated abundance estimates
 - Ensuring harvests are within quota
 - Improved harvest reporting
 - Reduced hunting losses
 - Protecting narwhal habitat
 - Improving tusk traceability



- Should other management issues be added to this list?



Management Issues – Abundance Estimates

- Up-to-date abundance estimates and stock assessment are lacking for some Baffin Bay narwhal stocks
- Accurate abundance information needed to monitor trends and ensure that local harvests are sustainable



Management Issues – Quota Over-Harvests

- In past years, there have been over-harvests of some community quotas
- Over-harvests, whether compensated for or not, may jeopardize the ability to demonstrate sustainable domestic management of narwhal and may affect international export (e.g. CITES)



Management Issues –Harvest Reporting

- Harvest reporting is inconsistent and incomplete across the narwhal fishery
- Weakens the ability to demonstrate sustainable harvest across the fishery
- Timely, accurate harvest reporting is essential to provide evidence of sustainable local management



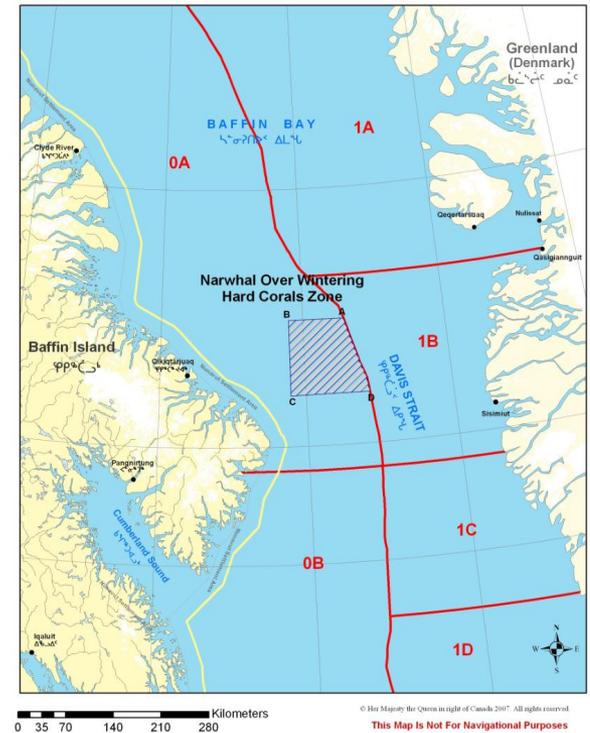
Management Issues – Loss Rates

- Some hunting loss is inevitable
- Loss rates should be minimized to the extent possible,
 - To ensure conservation of stocks
 - To demonstrate sustainable harvesting practices
- Total Hunting Mortality = Narwhal Landed
 - + Wounded & Escaped
 - + Struck and Lost
- Accurate estimates of total hunting mortality and measurable reduction in loss rates will result in recommendations for increased harvest levels in the future



Management Issues – Oceans & Habitat

- Need to protect critical narwhal habitat from harm
- Narwhal overwintering area provides critical feeding and breeding area
- Commercial ground-fishery occurs near the narwhal overwintering area





Management Issues – Tusk Traceability

- DFO has identified compliance issues that pose risks to continued domestic and international trade of narwhal tusks
 - Marine Mammal Tag irregularities and untagged tusks are common in the fishery



Management Issues-National and International Issues

- Species at Risk Act (SARA)
 - In 2004, Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed narwhal as “Special Concern”
 - Nunavut communities were consulted about this in 2006
 - SARA listing process will begin once the SARA agreement with Nunavik Inuit has been finalized
- CITES - Narwhal trade requires a Canadian Non-Detrimental Finding for international export of narwhal tusks



Long-Term Objectives for the Fishery

- 1) Maintain vital, healthy narwhal populations capable of sustaining harvesting needs
- 2) The protection of narwhal habitat
- 3) To improve harvesting methods and equipment to reduce stuck and lost
- 4) Continue to document Inuit Traditional Ecological Knowledge of narwhal
- 5) Maintain access to international markets for ivory export
- 6) Manage narwhal consistent with the wildlife harvesting and management provisions under the Nunavut Land Claims Agreement
- 7) others?



Proposed Changes to Narwhal Management

- 1) Manage narwhal harvest by known summering aggregations
 - Each summering area would be a separate Management Unit
 - Some Management Units would have seasonal harvest conditions



Proposed Changes to Narwhal Management

2) Harmonize narwhal management with the Nunavut Land Claims Agreement

- Replace community quotas with Total Allowable Harvest (TAH) and Basic Needs Level (BNL) established by NWMB
- Increase roles for Regional Wildlife Organizations (RWOs) and Hunters and Trappers Organizations (HTOs)
 - BNL allocation, tag transfer decisions

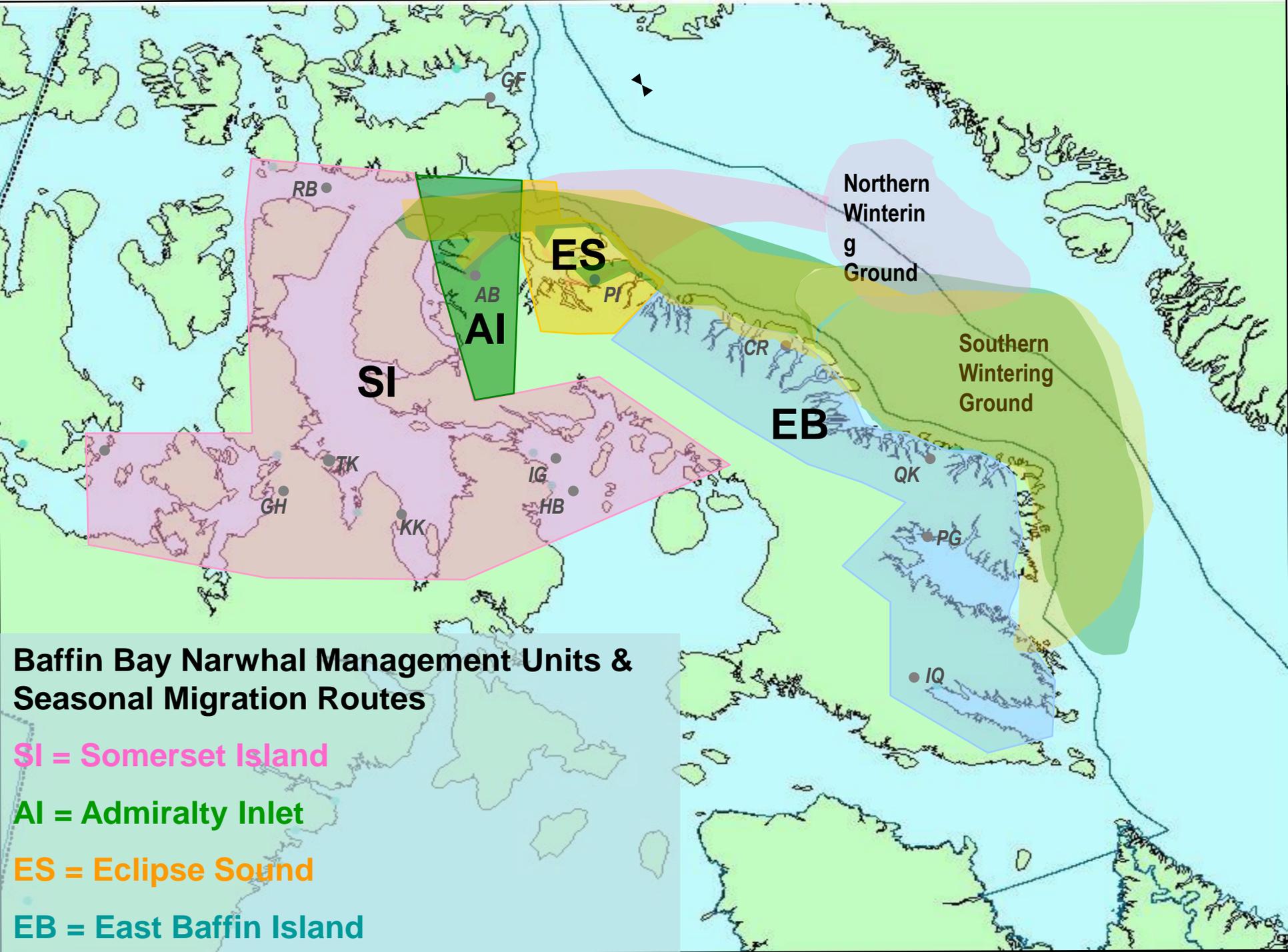


Proposed Changes to Narwhal Management

- 3) Existing management measures would stay in place (Marine Mammal Tags, harvest reporting, etc.) while co-management organizations further develop the narwhal management regime.

Implement additional measures and actions to strengthen co-management of the fishery

- Harvest Allocation Model for recommending harvests for Baffin Bay Management Units
- Changes to Marine Mammal Tags
- Tag Transfer Policy
- Operational Procedures (tag distribution, harvest reporting and tusk certification)
- Measures to reduce harvest losses
- Increased Inuit involvement in surveys
- Community information booklets





Proposed Boundaries for Narwhal Management Units



Baffin Bay Population

SI – Somerset Island

AI – Admiralty Inlet

ES – Eclipse Sound

EB – East Baffin

SJP – Parry Channel, Smith and Jones Sound

Northern Hudson Bay Population

NHB – Northern Hudson Bay



<u>Management Unit</u>	<u>Harvesting Community(s)</u>	<u>Management Unit</u>	<u>Harvesting Community(s)</u>
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Somerset Island	Resolute Bay Taloyoak Gjoa Haven Kugaaruk Cambridge Bay Igloolik Hall Beach Kugluktuk	Northern Hudson Bay	Repulse Bay Coral Harbour Chesterfield Inlet Rankin Inlet Cape Dorset Kimmirut Hall Beach Arviat Baker Lake Whale Cove
Admiralty Inlet	Arctic Bay	East Baffin Island	Clyde River Qikiqtarjuaq Pangnirtung Iqaluit
Eclipse Sound	Pond Inlet		
Parry Channel, Jones, Smith Sounds	Grise Fiord		



Recommended Harvest Levels (Total Allowable Landed Catch)

Population	Management Unit	Abundance Estimate	Total Allowable Landed Catch (TALC)
Baffin Bay	Somerset Island	45358	532
	Admiralty Inlet	18049	233
	Eclipse Sound	20225	236
	East Baffin Island	10073	122
	Smith/Jones/Parry	None	None
Northern Hudson Bay	Northern Hudson Bay	5053	57

TALC= Total Allowable Landed Catch



2) Harmonize Narwhal Management with NLCA - Total Allowable Harvests

- Total Allowable Harvest (TAH)
 - TAH is the amount of wildlife that can be lawfully harvested from a stock or population
 - In establishing a TAH for each stock/population, NWMB will consider;
 - Traditional Ecological Knowledge
 - Total Allowable Landed Catch (TALC) recommendation
 - DFO Science advice on the total number of narwhal that can be sustainably harvested from a Management Unit
 - Prior to setting TAH, NWMB must take into consideration;
 - Whether narwhal in each stock/population are harvested outside the Nunavut Settlement Area by others
 - Domestic inter-jurisdictional agreements or international agreements pertaining to narwhal
- Therefore, Total Allowable Harvest does not always equal Total Allowable Landed Catch



2) Harmonize Narwhal Management with NLCA - Basic Needs Level

- NWMB will set a Basic Needs Level (BNL) for Nunavut Inuit, for each Total Allowable Harvest level it establishes for each narwhal stock/population
- BNL is not exclusive to Nunavut Inuit
 - Inuit of Northern Quebec
 - other Aboriginal Peoples
 - NWMB must establish a separate BNL for others based on available evidence of their harvesting of wildlife inside the Nunavut Settlement Area

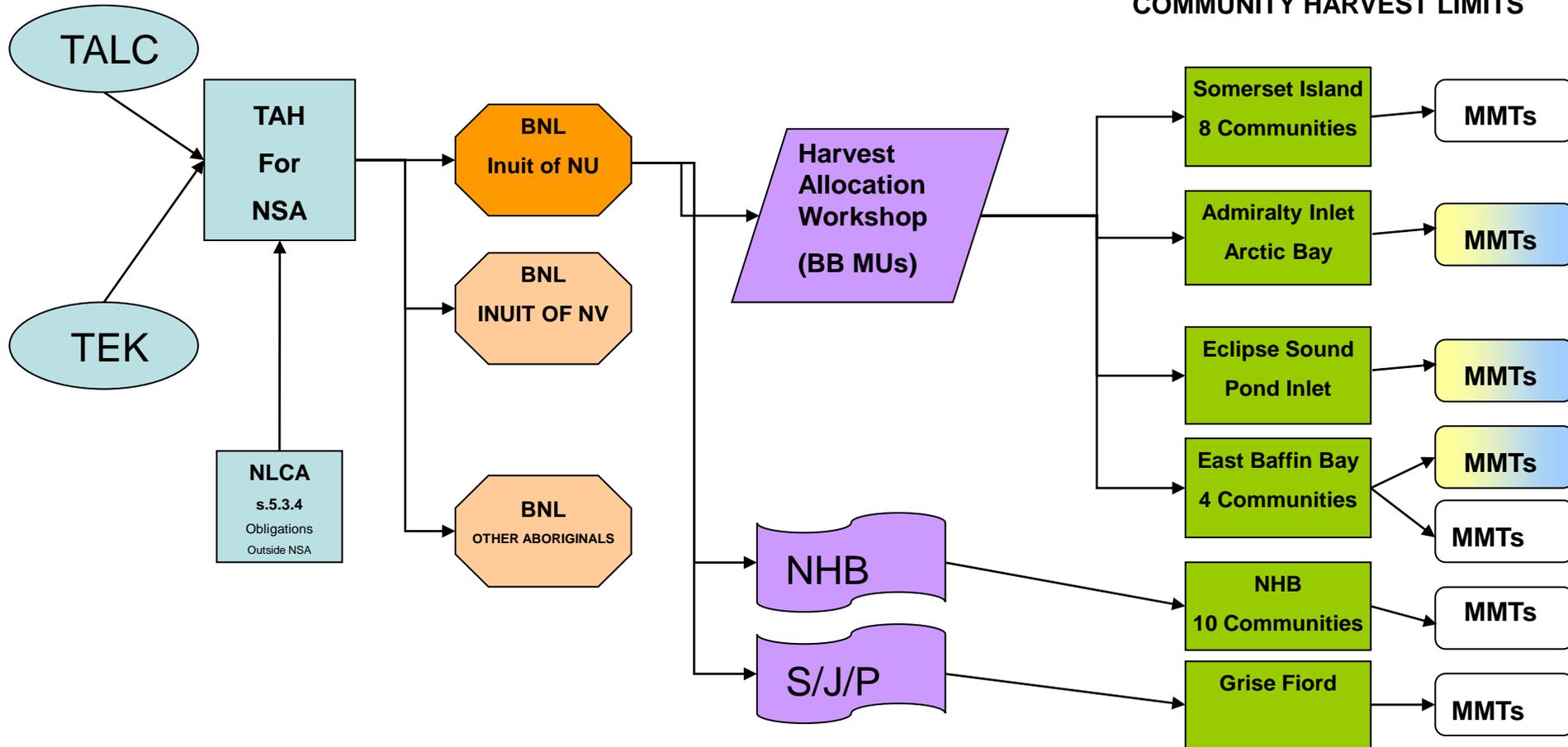


2) Harmonize Narwhal Management with NLCA - Community Harvest Limits

- RWOs will allocate the Regional BNL amongst HTOs within their regions, in the form of Community Harvest Limits
- HTOs will allocate the Community Harvest Limits amongst its members, in the form of Marine Mammal Tags



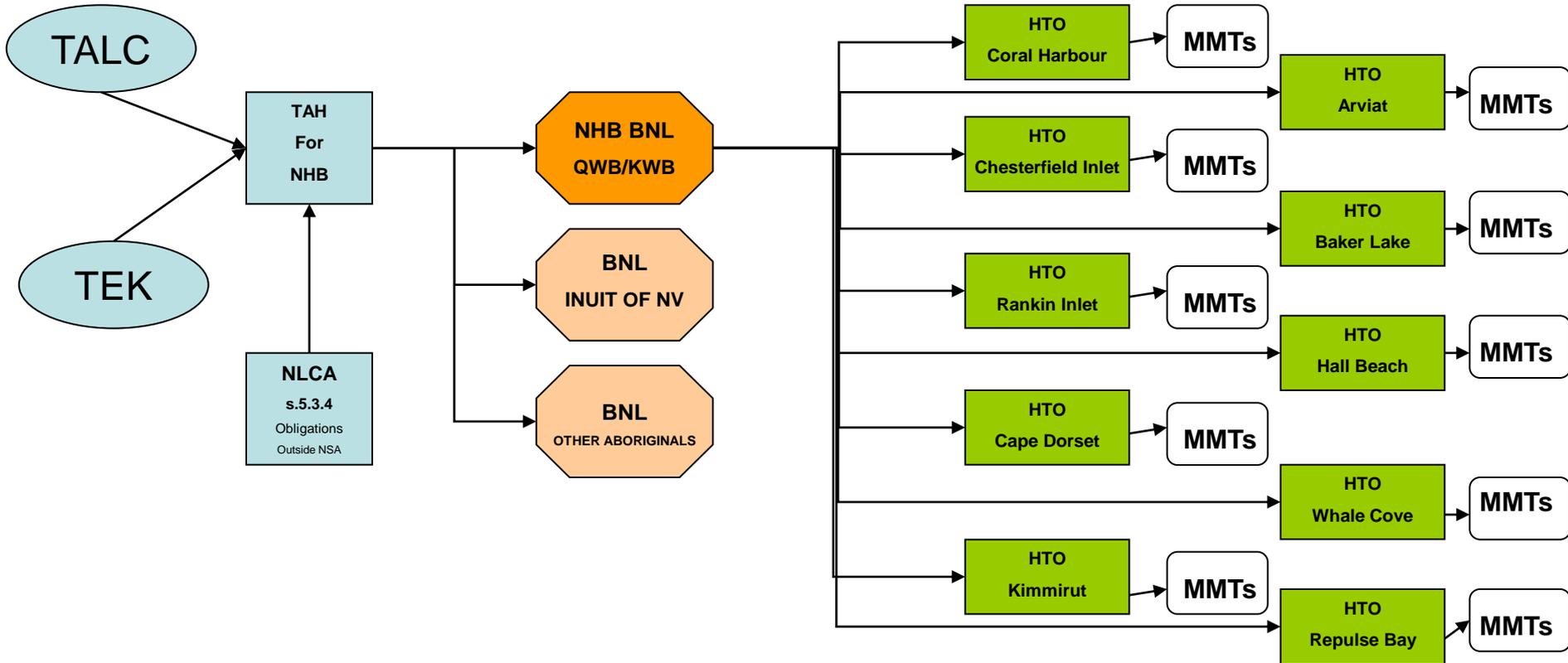
Harvest Allocation for each Narwhal Management Unit





Narwhal Harvest Allocation-Northern Bay Management Unit

COMMUNITY HARVEST LIMITS



SUM Community Harvest Limits = NHB Basic Needs Level



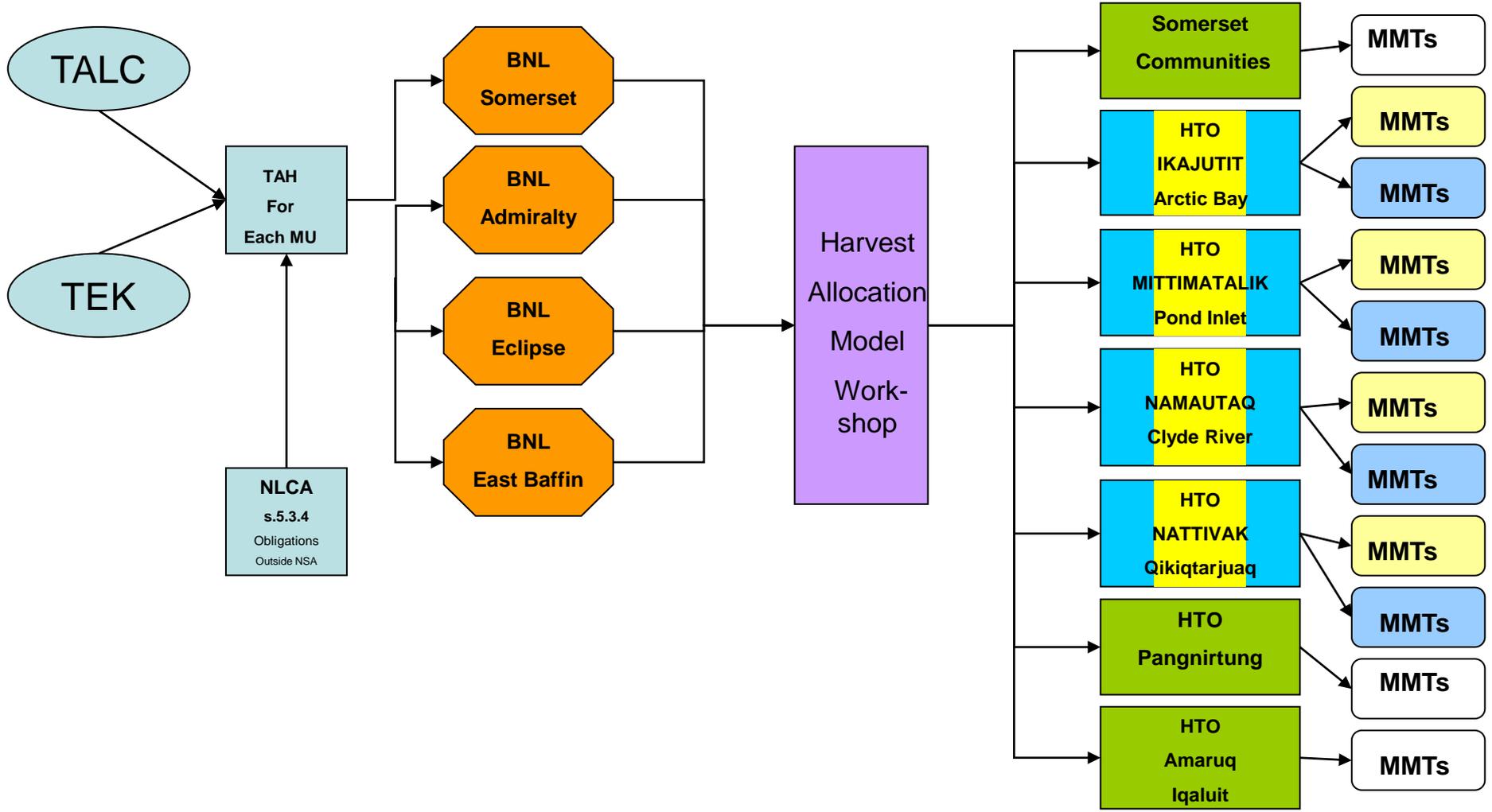
Narwhal Harvest Allocation – Baffin Bay Stocks

- Annual workshop for RWOs to make allocation decisions for the 4 Baffin Bay Management Units
- HTOs in Arctic Bay, Pond Inlet, Clyde River and Qikiqtarjuaq each advise their RWO :
 - The proportion (%) of their total harvest that will be taken in each season (e.g. migratory [spring and fall], summer) the following year
 - The dates that will apply to these hunting seasons
- RWOs use information provided by HTOs to determine Community Harvest Limits, using a computer model



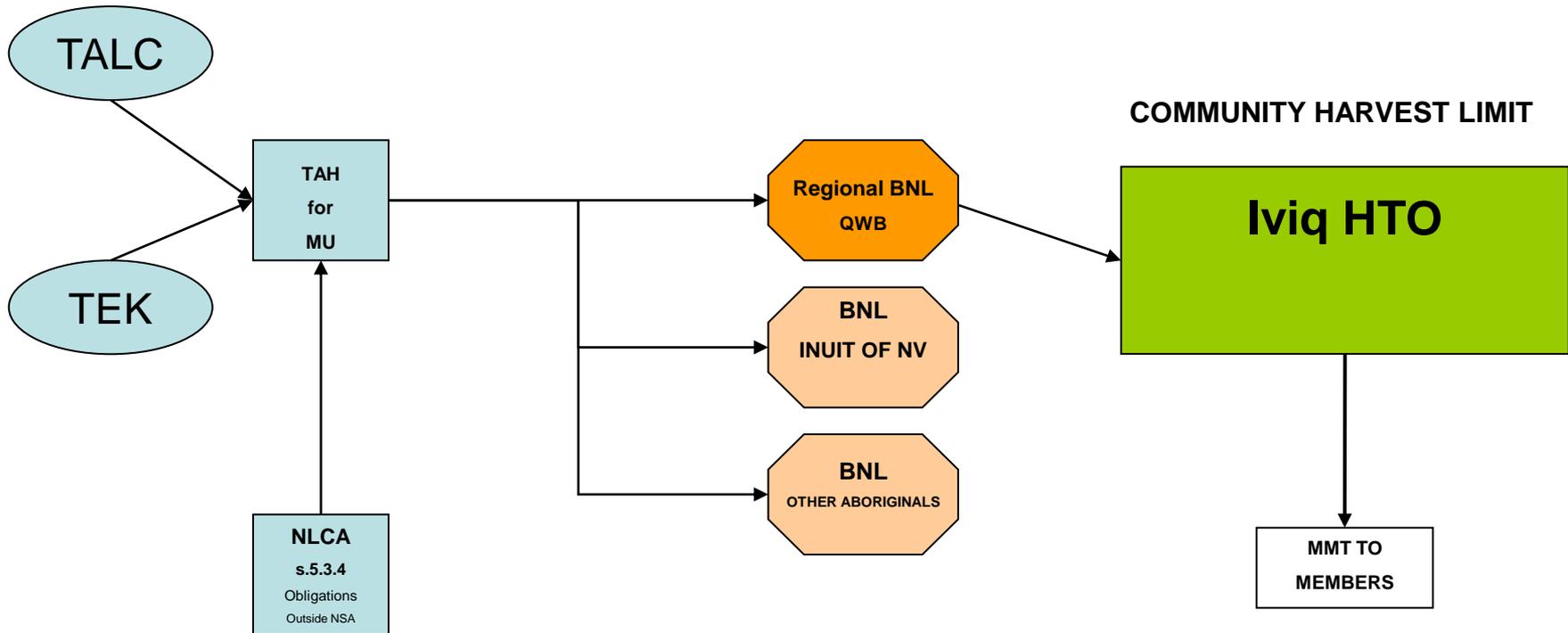
Narwhal Harvest Allocation – Baffin Bay Stocks

COMMUNITY HARVEST LIMITS





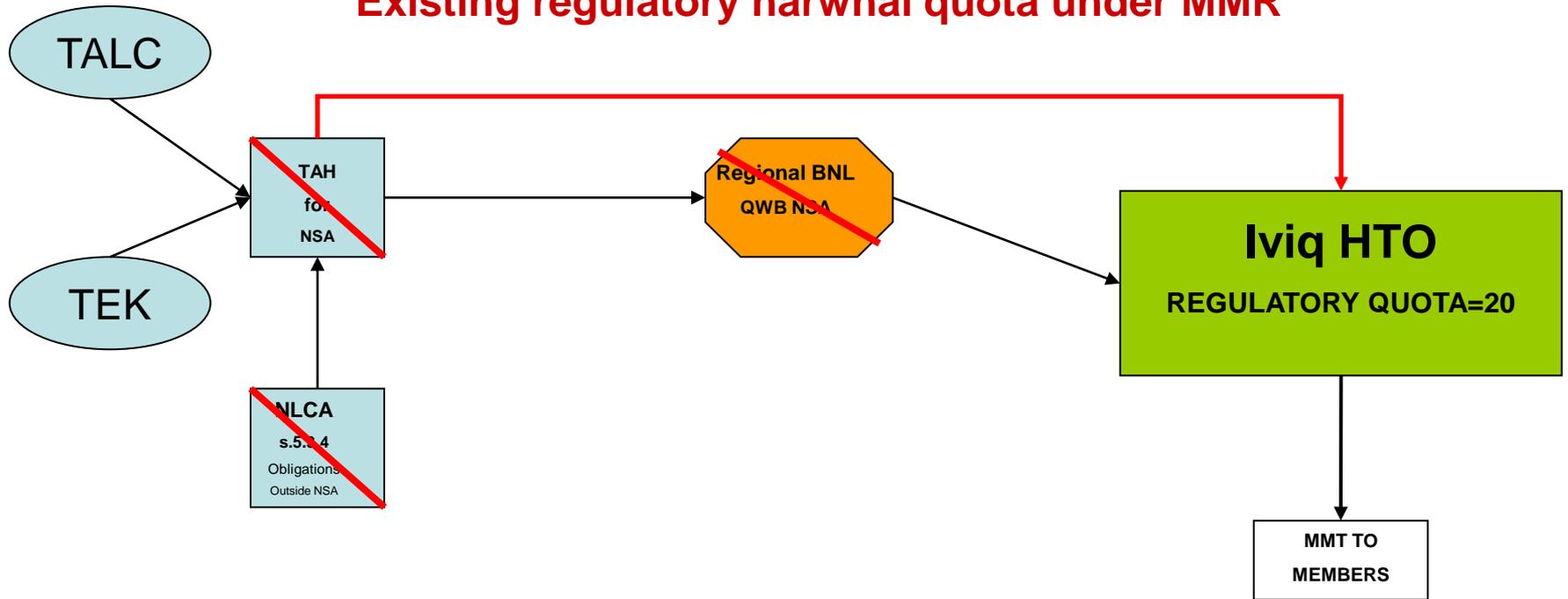
Narwhal Harvest Allocation-Parry Channel/Jones Sound/Smith Sound Management Unit





Narwhal Harvest Allocation - Parry Channel/Jones Sound/Smith Sound Management Unit

Existing regulatory narwhal quota under MMR





3) Narwhal Management Measures

Management Measures:

- Are those controls or “rules” that are put in place to ensure conservation of stocks, and ecosystems that narwhal rely on
- Many measures are already in place
- Additional measures and actions are needed to address management issues in the fishery



Narwhal Management Measures

How will implementation of management measures benefit hunters?

- Help to ensure healthy narwhal stocks for future harvesting
- Demonstrate community commitment to the management of the fishery
- Help to demonstrate that narwhal harvesting is sustainable
- Support continued trade and export of narwhal tusks



Management Measures

- Marine Mammal Tags
- Reducing Loss Rates
- Protection of calves
- Animal Welfare
- Quota
- TAH, Community Harvest Limits
- Tag Transfers
- Fishery Closures
- Harvest Reporting
- Tusk Traceability
- Habitat/Ecosystem Protection
- Others



Management Measures – Marine Mammal Tags

Regulatory Measures Retained:

- A Marine Mammal Tag is required to hunt each narwhal (MMR s. 5)
- Hunters shall attach the Marine Mammal Tag securely to the tusk of the narwhal, or where there is no tusk, to the carcass of the narwhal (MMR. s. 24)



Management Measures – Marine Mammal Tags

Plus New Management Measures:

- A Marine Mammal Tag can only be used in the Management Unit it was issued for
- Two different types of Marine Mammal Tags will be issued in communities that harvest migrating narwhal from different stocks during spring/fall (Arctic Bay, Pond Inlet, Clyde River, Qikiqtarjuaq)
 - For the summer period hunt and
 - The migratory period (spring & fall) hunts



Management Measures – Reducing Loss Rates

Regulatory Measures Retained:

- Hunters that kill or wound a narwhal shall make all reasonable efforts to retrieve it without delay, and shall not abandon or discard it (*MMR s. 10(1)*)
- Hunters shall not waste any edible part of a narwhal (*MMR s.10(2)*)
- Hunters are required to have all necessary equipment on hand to retrieve a hunted narwhal (*MMR s. 9*)



Management Measures – Reducing Loss Rates

- Use of a firearm with the following restrictions (*MMR s. 19*):
 - A rifle and bullets that are not full metal jacketed and produce a muzzle energy of not less than 1,500 foot pounds
 - A shotgun and rifled slugs that produce a muzzle energy of not less than 1,500 foot pounds
- Other measures?



Management Measures – Calves & Females

Regulatory Measures Retained:

- A narwhal calf or an adult narwhal accompanied by a calf cannot be hunted (*MMR S18*)



Management Measures – Animal Welfare

Regulatory Measures Retained:

- Hunters shall only kill a narwhal in a manner that is designed to kill it quickly (MMR s.8)



Management Measures – Quota

Regulatory Measures Retained:

- If the NWMB is unable to establish a TAH for a management unit, the existing regulatory quota will remain in effect in the interim
- Once the regulatory quota is reached, no further narwhal hunting is allowed (MMR s.23)



Management Measures - TAH

Plus New Management Measures:

- Where a TAH is established for a stock/population, it cannot be exceeded
- Community Harvest Limits
 - Once a Community's Harvest Limit (summer, migratory, all season) has been reached, no further hunting is allowed, unless approved by the RWO, under the Marine Mammal Tag Transfer Policy



Purpose of Marine Mammal Tag Transfers

Marine Mammal Tag transfers will assist RWOs to:

- 1) Cover off over-harvest by a community by exchange of tags within the Management Unit, within the current year
- 2) Plan for and allow transfers of tags between communities within a Management Unit, within the current year, to maximize harvests
- 3) Reconcile overharvests within the Management Unit, by reducing the following year's allocations and harvests from the community that overharvested



Marine Mammal Tag Transfer Policy (draft)

Why is a Policy Needed?

- Formalized tag transfer procedures need to be in place, so that all communities know what the “rules” are
- A formal policy will help to ensure that narwhal harvesting practices are sustainable



Marine Mammal Tag Transfer Policy (draft)

Phase One – tag transfers allowed for narwhal harvesting when stocks are not mixed, upon RWO approval

- In the 4 Baffin Bay management units, stocks are not mixed when whales are in their summering areas
- In Northern Hudson Bay management unit, the stock is not mixed throughout the entire year

Phase Two – *subject to science advice* - tag transfers allowed for harvesting from unmixed and mixed stocks, upon RWO approval

Phase Three – *subject to science advice* - tag transfers allowed for harvesting from unmixed and mixed stocks, and flex quota system, upon RWO approval

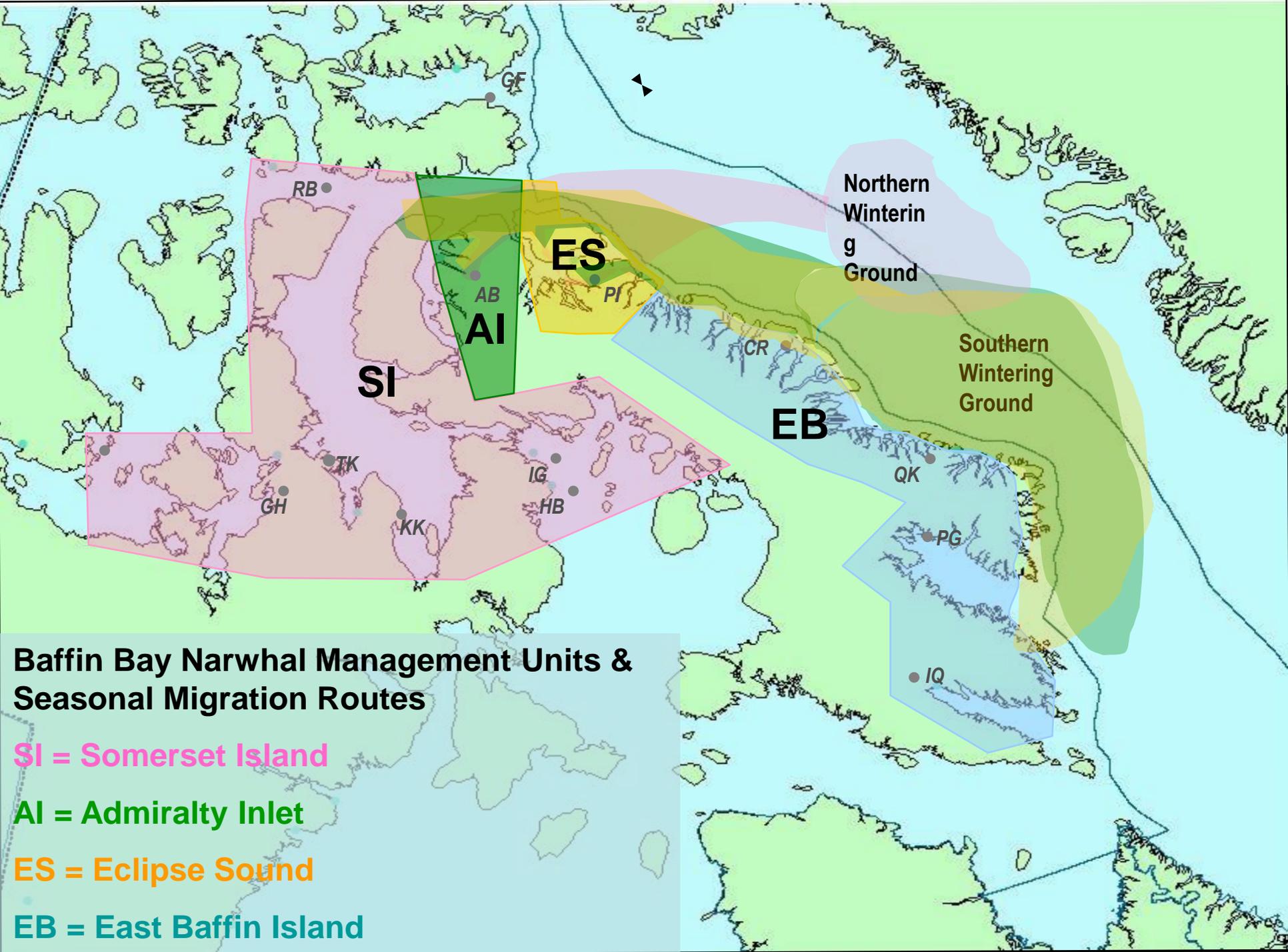


Tag Transfer-Phase 1 Northern Hudson Bay Management Unit

Communities may include:

Repulse Bay, Coral Harbour, Chesterfield Inlet, Rankin Inlet, Cape Dorset, Kimmirut, Whale Cove, Baker Lake, Arviat, and Hall Beach

- Subject to RWO approval, each of these communities can transfer its unused Marine Mammal Tags with each other:
 - To cover off over-harvest of an HTO Community Harvest Limit anytime during the harvest year
 - To maximize harvests up to the Sum of Community Harvest Limits for the Management Unit
- If the RWO cannot cover off an over-harvest of an HTO's Community Harvest Limit with available unused Tags for this Management Unit, it will compensate by decreasing that HTO's Community Harvest Limit for the following year by an amount equal to the over-harvest





Tag Transfer-Phase 1 Somerset Island Management Unit

Communities may include:

Resolute Bay, Taloyoak, Gjoa Haven, Kugaaruk, Igloolik, Hall Beach, Cambridge Bay, Kugluktuk

- Subject to RWO approval, each of these communities can transfer its unused Marine Mammal Tags with each other:
 - To cover off over-harvest of an HTO Community Harvest Limit anytime during a harvest season
 - To maximize harvests up to the Sum of Community Harvest Limits for that Management Unit.
- If the RWO cannot cover off an over-harvest of an HTO's Community Harvest Limit with available unused Tags for this Management Unit, it will compensate by decreasing that HTO's Community Harvest Limit for the following year by an amount equal to the over-harvest



Tag Transfer-Phase 1 Admiralty Inlet Management Unit

- **Arctic Bay** is the only community in the Management Unit
- Arctic Bay cannot transfer its unused Marine Mammal Tags with another community because it is the only community that harvests from this Management Unit in summer
- If the Community Harvest Limit for Arctic Bay is exceeded, it can only be addressed by compensatory reduction. The RWO will decrease Arctic Bay's Community Harvest Limit for the following year by an amount equal to the over-harvest



Tag Transfer-Phase 1 Eclipse Sound Management Unit

- **Pond Inlet** is the only community in the Management Unit
- Pond Inlet cannot transfer its unused Marine Mammal Tags with another community because it is the only community that harvests from this Management Unit in summer
- If the Community Harvest Limit for Pond Inlet is exceeded, it can only be addressed by compensatory reduction. The RWO will decrease Pond Inlet's Community Harvest Limit for the following year by an amount equal to the over-harvest



Tag Transfer-Phase 1 East Baffin Management Unit

Communities include: **Clyde River, Qikiqtarjuaq**

- Within the summer hunting season defined by the HTO, these two communities can transfer their unused 'Summer' Marine Mammal Tags with each other, subject to RWO approval
- If the RWO cannot cover off an over-harvest of an HTO's Summer Community Harvest Limit with available unused Tags from the other community, it will compensate by decreasing that HTO's Summer Community Harvest Limit for the following year by an amount equal to the over-harvest
- Migratory season over-harvests to be compensated by a decrease in the next year's Migratory Community Harvest Limit



Tag Transfer-Phase 1 East Baffin Management Unit

Communities include:

Pangnirtung and Iqaluit

- Subject to RWO approval, each of these communities can transfer its unused Marine Mammal Tags with each other:
 - To cover off over-harvest of an HTO Community Harvest Limit anytime during a harvest season
 - To maximize harvests up to the Sum of their Community Harvest Limits
- If the RWO cannot cover off an over-harvest of an HTO's Community Harvest Limit with available unused Tags from these two communities, it will compensate by decreasing that HTO's Community Harvest Limit for the following year by an amount equal to the over-harvest



Tag Transfer-Phase 1- Parry Channel/Smiths Sound/Jones Sound Management Unit

- **Grise Fiord** is the only community in the Management Unit
- Grise Fiord cannot transfer its unused Marine Mammal Tags with another community because it is the only community that harvests from this Management Unit
- If the regulatory quota (or Community Harvest Limit) for Grise Fiord is exceeded, it can only be addressed by compensatory reduction. The RWO will either recommend a decrease in Grise Fiord's regulatory quota to the NWMB or, when a TAH is established for this Management Unit, the RWO will decrease the Community Harvest Limit for the following year by an amount equal to the over-harvest



Northern Hudson Bay Management Unit - Fishery Closed

The narwhal hunt in the Management Unit is closed when either of the following conditions is reached;

- The sum of the Community Harvest Limits (for all Northern Hudson Bay communities) is reached, or
- The hunt season is over



Somerset Island Management Unit - Fishery Closed

The narwhal hunt in the Management Unit is closed when either of the following conditions is reached;

- The sum of the Community Harvest Limits (for all Somerset Island communities) is reached, or
- The hunt season is over



Admiralty Inlet Management Unit – Fishery Closed

Management Unit	Community	Season*	Community Harvest Limit
Admiralty Inlet	Arctic Bay	Migratory	A
		Summer	B

The **migratory season hunt** will be closed when the migratory Community Harvest Limit is reached (spring + fall = migratory Community Harvest Limit) OR the season established by the HTO is over.

The **summer hunt** will be closed when the summer Community Harvest Limit is reached OR the season established by the HTO is over.

* Season dates will be determined by HTO



Eclipse Sound Management Unit – Fishery Closed

Management Unit	Community	Season*	Community Harvest Limit
Eclipse Sound	Pond Inlet	Migratory	A
		Summer	B

The **migratory season hunt** will be closed when the migratory Community Harvest Limit is reached (spring + fall = migratory Community Harvest Limit) OR the season established by the HTO is over.

The **summer hunt** will be closed when the summer Community Harvest Limit is reached OR the season established by the HTO is over.

* Season dates will be determined by HTO



East Baffin Management Unit – Fishery Closed

For Clyde River and Qikiqtarjuaq

- The summer hunt will be closed when either of the following conditions is reached;
 - The sum of Clyde River and Qikiqtarjuaq's summer Community Harvest Limits is reached, or
 - The season established by the HTOs is over



East Baffin Management Unit – Fishery Closed

For **Clyde River**

- The **migratory season hunt** will be closed when either of the following conditions is reached;
 - When Clyde River's migratory Community Harvest Limit is reached (spring + fall = migratory Community Harvest Limit), or
 - The season date established by the HTO is over



East Baffin Management Unit - Fishery Closed

For Qikiqtarjuaq

- The **migratory season hunt** will be closed when either of the following conditions is reached;
 - Qikiqtarjuaq's migratory Community Harvest Limit is reached (spring + fall = migratory Community Harvest Limit), or
 - The season established by the HTO is over



East Baffin Management Unit - Fishery Closed

For **Pangnirtung and Iqaluit**

- The narwhal hunt will be closed when either of the following conditions is reached;
 - The sum of the Community Harvest Limits for Pangnirtung and Iqaluit is reached, or
 - When the hunt season is over



Management Measures - Harvest Reporting

Regulatory Measures Retained:

- Harvest reporting for landed narwhal is required (NLCA s.5.7.43; MMR s.17 and s. 24)
- Once a narwhal is landed, the hunter is required to return the harvest information portion of the Marine Mammal Tag as soon as possible to whomever issued the tag (MMR s.24)



Management Measures - Harvest Reporting

Plus New Management Measures:

- HTOs notify RWO and DFO when Community Harvest Limit (Summer, Migratory, All Season) is reached
- RWOs notify DFO when the Sum of the Community Harvest Limits (Summer, Migratory, All Season) is reached in each Management Unit



Management Measures - Harvest Reporting

Plus New Management Measures:

AI, ES, EB

- HTOs notify RWO and DFO when Community Harvest Limit (Summer, Migratory, All Season) is reached
- RWOs notify DFO when the Summer, Migratory, and All-Season hunts are over in the Management Units.



Management Measures - Harvest Reporting

- HTOs to provide DFO with a completed summary of Marine Mammal Tag returns from their members (monthly and at end of each hunt season)
- Reporting of all other harvested narwhal is required (NLCA s.5.7.43), such as
 - Narwhal caught in fishing nets,
 - Narwhal humanely harvested in entrapments



Management Measures - Tusk Traceability

Regulatory Measures Retained:

- Hunters shall attach the Marine Mammal Tag securely to the tusk of the narwhal, or where there is no tusk, to the carcass of the narwhal (*MMR s. 24*)
- Possession of untagged tusks is illegal (*MMR s. 14*)
- A Marine Mammal Transportation licence is required to transport narwhal or narwhal parts from one province to another (*MMR S. 16(1)*)



Management Measures - Tusk Traceability

Plus New Management Measures:

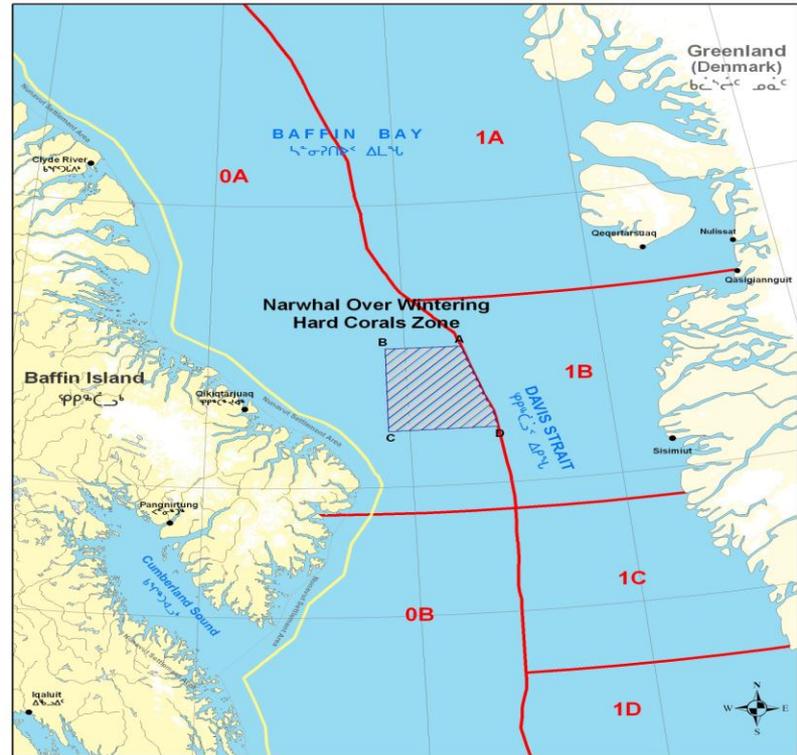
- New operational procedures to assist in tusk certification
- New attachment mechanism to permanently attach the Marine Mammal Tag to the tusk



Management Measures –Habitat & Ecosystems

Regulatory Measures Retained:

- Greenland Halibut fishing is not allowed in the NAFO Division 0A closure area



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Information for Communities and HTOs

- Annual information package for HTOs on tag distribution and harvest reporting procedures
- Annual Community Information Booklet on;
 - Community harvest limits
 - Management measures
 - Harvest reporting and
 - Tusk certification



Management Measures – Others?

- Could HTOs develop Community Hunting Plans and rules to regulate narwhal harvesting practices and techniques among their members.
 - Practical measures to reduce struck & lost
- Others?



Integrated Fisheries Management Plan Layout

1. Overview of the Fishery
2. Stock Assessment, Science and Traditional Knowledge
3. Economic, Social and Cultural Importance
4. Management Issues





Integrated Fisheries Management Plan Layout

5. Objectives
6. Harvest Levels and Allocation
7. Management Measures
8. Compliance Plan
9. Performance Review





1) Overview of the Fishery

- History
 - Narwhal have been harvested by Inuit for generations
 - Importance of narwhal harvesting to Inuit
 - History of hunt regulation, establishment of quotas
 - Community Based Management



Overview of the Fishery

- Type of Fishery and Participants
 - Narwhal are harvested by Inuit for economic, social and cultural purposes
 - Inuit of Nunavut Settlement Area are the only harvesters in Canada
- Location of Fishery
 - Throughout Nunavut



Overview of the Fishery

- Governance
 - Narwhal fishery co-managed by Inuit, NWMB and DFO
 - *Fisheries Act*
 - *Fisheries General Regulations*
 - *Marine Mammal Regulations*
 - Sustainable Fisheries Framework, Integrated Aboriginal Policy Framework
 - *Species At Risk Act (SARA)*



Overview of the Fishery

- Governance
 - Nunavut Land Claims Agreement
 - Created priority access and harvesting rights to Inuit and others
 - Roles and Responsibilities of co-management organizations - NWMB, Regional Wildlife Organizations and Hunter and Trapper Organizations



Overview of the Fishery

- Fishery Characteristics
 - Current management regime
 - How the narwhal hunt is conducted
 - Harvest information
 - New management approach based on summering stocks
 - Six Management Units
 - Communities in each Management Unit



2) Stock Assessment, Science and Traditional Knowledge

- Biology
 - Narwhal distribution, growth rates, age determination, age at sexual maturity, calving intervals, habitat selection and migration



Stock Assessment, Science and Traditional Knowledge

- Stock Delineation
 - Two narwhal populations in the Eastern Canadian Arctic - Baffin Bay and Northern Hudson Bay
 - Within the Baffin Bay population, four stocks have been identified based on known summering areas
 - Smiths Sound/Jones Sound/Parry Channel – relationship to other Baffin Bay stocks to be determined



Stock Assessment, Science and Traditional Knowledge

- Ecosystem Interactions
 - Climate change is being studied; may lead to changes in narwhal distribution and abundance
 - The role of killer whales in narwhal predation and ongoing work with HTOs
- Traditional Knowledge
 - Knowledge has been collected through workshops, interviews, community consultations and questionnaires
 - Inuit recognize different narwhal stocks
 - Inuit have observed that there are fewer whales in some places – ship traffic, exploration, noise
 - A detailed summary of Inuit and scientific observations used to delineate narwhal stocks in Nunavut in Richard 2010/022



Stock Assessment, Science and Traditional Knowledge

- Stock Assessment and the Precautionary Approach
 - Abundance estimates are produced from aerial surveys
 - Potential Biological Removal is used to determine Total Allowable Landed Catch for each Management Unit
 - Total Allowable Landed Catch recommendations discussed earlier today



Stock Assessment, Science and Traditional Knowledge

- Harvest Allocation Model
 - Assists co-management decisions about allocating the Basic Needs Level for the four known summering stocks within Baffin Bay (Somerset Island, Admiralty Inlet, Eclipse Sound and East Baffin Island)



3) Economic, Social and Cultural Importance

- Cultural Importance
 - For centuries, narwhal have been used as a traditional food for Inuit and have supplied materials for day to day living
 - Significant source of food and income
- Food Source
 - Maktaaq – highly nutritious
 - Narwhal meat is more commonly used as food for dogs
- Ivory
 - Ivory tusks are a valuable by-product of the hunt
 - International trade
- Tourism
 - Whale watching, cruises, photography



4) Management Issues

- Current issues in the fishery, including those narwhal management and ecosystem concerns.
- Includes management issues discussed at the start of this presentation

Abundance Estimates	Habitat & Oceans
Quota Over-Harvest	SARA & CITES
Harvest Reporting	Tusk Traceability
Loss Rates	



5) Objectives for the Fishery

- Long Term Objectives
 - Discussed earlier today
- Short Term Objectives
 - To address specific management issues over the next 3 to 5 years



Short-term Objectives for the Fishery

1. Conduct surveys of each narwhal management unit on a 5 year cycle.
Secure funding for these surveys
2. Incorporate community and hunter information into the design, implementation and reporting of narwhal surveys
3. Establish TAH, BNL and required NQLs for each narwhal management unit and complete necessary regulatory changes to implement management by summering stock
4. Develop or improve tools and implement processes for accurate and timely harvest reporting



Short-term Objectives for the Fishery

5. Develop/enhance monitoring programs and training for inexperienced hunters to reduce struck and lost narwhal
6. Implement measures to improve tusk traceability
7. Maintain narwhal over-wintering closure area in NAFO Sub-area 0A
8. Increase public awareness of the importance of narwhal to Inuit
9. Promote economic activities related to narwhal related to this activity
10. Others?



- Comments or questions?



6) Harvest Levels and Allocation

- Outlines the harvest levels and allocations among users.
- Harvest levels and allocations discussed earlier today.



7) Management Measures

- Outlines the “controls” for the fishery to ensure sustainable harvesting, including conservation and ecosystem management measures.
- Management measures were discussed earlier today.



Management Measures

- Marine Mammal Tags
- Quota/TAH/Community Harvest Levels
- Harvest Reporting
- Protection of calves
- Animal Welfare
- Reducing Loss Rates
- Tusk Traceability
- Habitat/Ecosystem Protection
- Other



8) Conservation and Protection

Fishery Officers achieve compliance by:

- Promoting shared stewardship and education of user groups and stakeholders
- Monitoring and patrolling fisheries and trade in fish or marine mammals (ex. whale bones or tusks) and conducting investigations
- Compiling information for the evaluation of compliance and management needs to provide direction and priorities for program delivery



Conservation and Protection

Fishery Officers

- Monitor narwhal harvest activities
- Monitor the trade of narwhal tusks in Nunavut and across Canada
- Inspect narwhal products from harvest to export
- Promote compliance with regulations to hunters, the ivory industry, and other stakeholders



Conservation and Protection

- Fishery Officers work collaboratively with resource managers, user groups and other stakeholders to resolve compliance issues
- Compliance Focus
 - Monitoring harvest and enforcing regulations
 - Harvest reporting and quota compliance
 - Tusk trade and traceability



- Comments or questions on these sections?



9) Performance Review

- Identifies the consultative process for developing the Narwhal Integrated Fisheries Management Plan
- Meetings will be conducted with co-management organizations to monitor progress in achieving objectives and implementation of the management measures to ensure sustainable harvesting



- Questions on these sections?



Next Steps

- Evening meeting – seek further community views
- Develop a “what we heard document”
- NWMB public hearings and decision process
- Approve Narwhal Management Plan by January 2013
- Implement Management Plan by hunters and co-management organizations
- Continue improvements to narwhal management