SUBMISSION TO THE

NUNAVUT WILDLIFE MANAGEMENT BOARD AND NUNAVIK MARINE REGION WILDLIFE BOARD

FOR

Information: **Decision:** **Recommendation: X**

Issue: Northern (*Pandalus borealis*) and Striped (*Pandalus montagui*) Shrimp Total Allowable Catch levels for the 2014/15 season

Background

Two shrimp species (*Pandalus montagui* and *Pandalus borealis*) occur in the Northern shrimp fishery that takes place in the Davis Strait and eastern Hudson Strait which includes parts of the Nunavut Settlement Area and the Nunavik Marine Region. Total Allowable Catch (TAC) for each species is set for two distinct science assessment zones (East and West), then distributed into management units as per defined sharing arrangements.

The TAC levels for each species of shrimp need to be established for the 2014/15 season. The current TAC levels were based on science data from the 2007 to 2009 surveys and not reconsidered while the shrimp management changes were going through the land claims decision making processes from 2010 to 2013.

A science update on the status of the shrimp stocks in the Eastern Assessment Zone (EAZ) and Western Assessment Zone (WAZ) which incorporates the 2013 survey data has been provided to DFO managers. The science update is attached at Annex 1.

DFO Comments

Options are available for consideration in determining TACs for 2014/15 season. Option 1; uses the two year average of the fishable biomass to ensure TAC fluctuations are more uniform; and Option 2 uses the most recent single survey data point. Where the shrimp resources are healthy, a third option would be to maintain current TAC levels.

Western Assessment Zone

Both shrimp species are healthy. During the development of the new shrimp management regime stakeholders agreed that a 10% exploitation rate (ER) was advisable given the newness of the fishery in this area and the limited data available.

Option 1: The two year average fishable biomass, based on the 2013 and 2011survey data points, is 58,600 t for *P.montagui* and 20,800 t for *P. borealis*. Using the same ER of 10%, the resulting TACs would be 5,860t for *P.montagui* and 2,080t for *P. borealis*.

Option 2: The 2013 fishable biomass was 45,650t *P. montagui* and 22,000 t for *P. borealis*. Using the same ER of 10%, the resulting TACs would be 4,565t for *P.montagui* and 2,200t for *P. borealis*.

Option 3: Maintain current TAC levels (5,000t for *P.montagui* and 1,500t for *P. borealis*) given the newness of the fishery in this area and the limited data available. The potential ER would be approximately 11% for *P. montagui* and 7% for *P. borealis.*

DFO recommends Option 3. Given the preliminary nature of this fishery, it would be advisable to maintain current harvest levels to see how the resource reacts.

Eastern Assessment Zone– *P. borealis*
Survey results indicate that *P. borealis* is healthy. This stock has been managed at an ER of around 15%.

Option 1: The two year average fishable biomass, based on the 2013 and 2012 survey data points, is 55,000t. Using the same 15% exploitation rate, the resulting TAC would be 8,250t for *P. borealis*.

Option 2: The 2013 fishable biomass was 49,637t for *P. borealis.* Using the 15% exploitation rate, the resulting TAC would be 7,445t.

Option 3: Maintain the TAC at the current level of 9000t. The resulting ER would be 18% which would be acceptable given the stock is healthy and a longer time series is available.

DFO recommends Option 3. Since the resource is healthy and the potential ER of 18% is acceptable, there is no firm rationale to reduce the TAC and impact individual quotas.

Eastern Assessment Zone – *P. montagui*

The shrimp management changes in the north were put in place in part to address conservation concerns around *P. montagui* in the EAZ. At the onset of that exercise, the *P. montagui* biomass estimates available were from the 2008/09 surveys which are at the higher end of recent biomass estimates. Since the 2008-09 survey, the *P. montagui* biomass continued to be on a declining trend. However, the TAC was not adjusted despite the decline in resource biomass to allow time for the land claims decision making processes to be completed. The shrimp management changes in the north have been implemented and the TAC can be adjusted based on more recent biomass information.

During the development of the new shrimp management regime both Boards agreed that a 15% ER was acceptable. Given the declining trend for *P. montagui* in the Cautious Zone for a few years, a lower ER would also be advisable.

Option 1: The *P. montagui* biomass increase seen in 2012 is considered to be unreliable in the time series and cannot be used for TAC calculations. Thus the two year average fishable biomass is based on the 2011 and 2013 survey data points and comes to 5,600t. Using the 15% exploitation rate, the resulting TAC would be 840t, a reduction of 1,410t from the current 2,250t TAC. If the existing split between the Davis Strait West and Nunavut/Nunavik East management units is maintained, the share for Inuit will be 429t.

Option 2: The 2013 *P. montagui* fishable biomass estimate is 3,534t. Using the 15% ER, the resulting TAC would be 530t, a reduction of 1,720t from the current 2,250t TAC. If

the existing split between the Davis Strait West and Nunavut/Nunavik East management units is maintained, the share for Inuit will be 271t.

Option 3: Maintaining the current TAC level of 2,250t is not a viable option given the potential ER would be 64% and would present a significant conservation concern.

DFO recommends Option 1. While a TAC reduction is required for conservation reasons, this option represents the least impact to stakeholders and the resulting TAC would be reasonably acceptable.

The science update was provided to Nunavut and Nunavik industry and the Government of Nunavut on January 31, 2014. Views of industry, governments and other key stakeholders on TAC levels for 2014/15 will be obtained at a teleconference planned for March 7, 2014. An update on stakeholder views can be provided at the Board meetings.

The advice of the Boards and stakeholder views will be provided to the Minister for consideration in determining the 2014/15 TAC levels. Once the 2014/15 TACs have been set, the TACs will be distributed into the shrimp management units consistent with the joint Nunavut and Nunavik shrimp management arrangement approved by the Minister in July 2013 for the three year term (2013 to 2016).

Request

Fisheries and Oceans is seeking the advice of the Nunavut Wildlife Management Board and the Nunavik Marine Region Wildlife Board on the TAC levels for *P. montagui* and *P. borealis* in the EAZ and WAZ for 2014/15.

Prepared by: Resource Management, Fisheries and Oceans Canada

Date: February, 2014