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Canadian Science Advisory Secretariat

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Proceedings Series 2005/002

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Proceedings of the RAP Meeting on Kipisa Arctic Char

Compte rendu de la réunion du PCR sur l'omble chevalier de Kipisa

March 23 - 24, 2005 Lr' 23-24, 2005 23-24 mars 2005

Auyuittuq Lodge, Pangnirtung,Nunavut ⊲⊳ ≺∆ʿɔ́< ⊃∢ʿՐል∿し, <∿☞'ɔ̀⁵ ഛ๛⊅ິ Auyuittuq Lodge, Pangnirtung (Nunavut)

> Kathleen A. Martin ర∩డా ∟ో Chairperson దిగి≪⊳్ présidente de réunion

Central& Arctic Region / Région du Centre et de l'Arctique / ÞየÞ^ቈር^ቈጋ୮ ᡧL ÞየÞ^ቈ(^ቈ)< ՙՙՙՠՈኦۍ ՙbኦኦኣና ልና Fisheries and Oceans Canada / Pêches et Océans Canada / ΔLՙℾኦ(ᢏ᠊ᡵᢣᡃݸᡝ ᡠᢩᡄᢉℾ Government of Canada / Gouvernement du Canada / ხຼርኦና ႱペL∿ 501 University Crescent, Winnipeg, Manitoba, R3T 2N6

> March 2005 Lr 2005 mars 2005

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Proceedings of the RAP Meeting on Kipisa Arctic Char

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Kathleen A. Martin ⊌∩ー゛ ட்℃ Chairperson Δ^ιィペ▷ℂ[®] présidente de réunion

Central& Arctic Region / Région du Centre et de l'Arctique / ÞPÞʰ(ʰጋ୮ ᡧL ÞPÞʰ(ʰጋˊ ነዋ∩Ϸۍ ኄϷ≻Ϟና ልና Fisheries and Oceans Canada / Pêches et Océans Canada / ΔLነΓϷ(ᢏ_^ኑຢິ ບໍ່໑(Γ Government of Canada / Gouvernement du Canada / ຟ໑(Ϸ< ຟ<LՆ 501 University Crescent, Winnipeg, Manitoba, R3T 2N6

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ΔL'ΓΡ(<<>>>'0' RAP bnLσኄ'በ`_) የ የለኣΓ' PPP°(°) Γ. ΔL'ΓΡ(<<>>>'0' βρ>\\'C' bpp\\'C' bop\\'C' b

SUMMARY	v
SOMMAIRE	vi
INTRODUCTION	1
STOCK STATUS REPORT DISCUSSION	3
Image of the Species	3
Map of the Area	4
CONTEXT	4
DESCRIPTION OF THE ISSUE	4
Rationale for assessment	4
Species Biology	5
Resident char	8
The Fishery	9
ASSESSMENT	15
Key Indicators	15
Stock trends	16
Sources of Uncertainty	18
ADDITIONAL STAKEHOLDER PERSPECTIVES	19
CONCLUSIONS AND ADVICE	20
Table 1: Results of the NWMB harvest study from 1996 to 2000	22
Recommendations for further research	24
OTHER CONSIDERATIONS	26
SOURCES OF INFORMATION	27
PUBLICATIONS	28
ACKNOWLEDGEMENTS	28
APPENDIX 1. PROPOSED AGENDA	30
APPENDIX 2. PARTICIPANTS LIST	34

TABLE OF CONTENTS

ᡆᠴᡆ᠋᠘ᡃᢣ᠘ᠠ᠘᠊ᡟ᠋᠘ᠴ᠆᠋ᡩᢪᠣ	┍╺┕
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ᡆ᠘ᡄᡩ᠘᠊ᠯᡃᡃ	v
ᡆ᠋ᠴᡆ᠘ᡃᡝ᠊ᠯᡃ	1
᠕ᢗᡃ᠋᠖ᡃᠣ᠘᠆᠋ᡃᡉ᠋᠊ᡃᡫ᠊᠌᠌ᠵ᠆ᢣᠣ᠆ᡧ᠉᠋ᢄ᠖ᡔ᠋ᢂ᠋ᡔ᠘᠆᠋	3
ᢉ᠈᠋ᠫᠰ᠂᠆᠋ᡝᢣ᠋ᡤ᠂᠁᠁	3
ᠴ᠌᠌ᡄ᠋᠋᠋᠊᠋᠋ᡶ᠆ᡦ᠊ᡃ᠘᠁᠁᠁᠁᠁᠁᠁᠁᠁	4
ზ_∆ ლ ზ ლ ზ	4
ᡆ᠋ᠴᡆ᠘ᡃ᠋ᢞᡟ᠘ᠳ᠋ᡩ᠕᠆᠋ᡅ᠊᠋ᡏᢩ᠕᠆᠋ᡕ᠊᠋᠋ᠺᡏ	4
᠋᠋᠋᠆᠋᠋᠋᠋᠆᠋᠋᠋᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆	4
ᡔ᠋᠋᠄ᢣ᠋ᢂ᠋ᢄ᠆᠋᠋᠋᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆	5
۵۵-۵۴ـــــــــــــــــــــــــــــــــ	8
Δ ీు $-$ ్ చరి	9
᠋᠖᠔᠋ᡔᢣ᠋᠋ᠮᠣ᠊᠉᠁᠁	15
ݠݐݠ᠘ᡝᢗ ^ᡄ ᠴᡏᢗᠲᡕ	15
᠕ᢗᡃ᠋᠖ᡃᠣ᠋᠋ᡩ᠆᠋ᢆᢧ᠋᠘᠆᠋ᡫᠣ᠋ᡩ	16
୰ୖ୰୶ଽ୷୰୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷୷	18
ᡄᢩ᠘᠆᠋ᡦ᠈᠋ᠿ᠖ᡃᢐ᠆᠉᠋᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆	19
°Եՙ൳Ն ՎL ϷՆϷ产ՐՎՙԺ՞	20
ᡣ᠋ᡣᠺᡃ᠋᠋ᡥᠠ᠘᠊ᡧᡑ᠋᠋᠋᠋᠋᠊᠆᠋ᢣ᠖᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆	
ჼ⊎⊳≻५σჼ⅃ჼ 1996-ℾ 2000-⅃	22
᠕ᡃ᠋ᡝ᠋ᡰᢣ᠋᠌ᢂᡔ᠋ᢄ᠆ᡩ᠘ᢞᢐᠣ᠋᠂ᠳᡗᡗ᠁᠁᠁᠁᠁᠁᠁	24
	26
᠂᠋᠕ᢣ᠋᠋ᡤ᠋᠋᠋ᢉ᠋ᡗ᠂᠋ᡗ᠙᠘ᢞᠣᢂᢞ᠊ᡅ᠋ᡗ᠁᠁᠁᠁	27
፟፟፟፝፝፝፝፝└₽₽Ĺ₳。```````````````````````````````````	28
Jᠻᡷ᠌ᡆ᠋᠆ᠰᢩᡔᡅ᠌?(ᡅᡄᡅᡅ+>	28
Δሬቴ ምህ 1. Δ/ሬቦኦኦሩ ሀበሬላበኑ	32
᠘ᡄ᠋᠋ᡰ᠊᠋᠋ᠣ᠊᠋᠘ᢣ᠋ᡝ᠘᠊᠋᠋᠋᠆ᡗ᠖ᠺ᠋ᢣᢉ᠁᠁᠁᠁	34

SUMMARY

A Regional Advisory Process (RAP) meeting was held in Pangnirtung, March 23-24, 2005 to determine the status of the Kipisa Arctic char stock. The stock status was based on a review of the scientific information and traditional knowledge available for this stock. A committee consisting of members of the Pangnirtung Hunters and Trappers Organization (HTO), local fishers, representatives from Government of Nunavut - Department of Environment, representatives from Fisheries and Oceans Canada, Science and Fisheries Management Sectors, the Pangnirtung Wildlife Officer, and the Pangnirtung Economic Development Officer participated in the discussions. The committee reviewed a draft Stock Status Report (SSR) for the Kipisa Arctic char. This stock is one of a number of important stocks fished in the Pangnirtung area and the first one, to be assessed through the RAP process. The Kipisa stock is important to the local people as a source of subsistence harvest and over the years has provided fish for commercial purposes harvested under an exploratory licence. Sustainable harvest rate, in the context of the basic needs level and total allowable harvest, was discussed. The committee agreed on a total allowable harvest level that was considered reasonable in terms of historical harvest levels and which should lead to a stable and sustainable fishery.

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>bት/ብ \dot{h} ለኖ-ርብታ ይበLታይሪያ ናንር, するりてしょう 23-24. Ľ٢ ឹلیں مربعہ کو ب 2005∿J∩՟_」J %D7070400 'የΛ५< ΔኄጔÅኈՐር ለርኄ፞፞፞፞፞፞፝፝፝፝ ດ∿Ր՟፞፞፞፝፝፝፝፝፞፝፞፝ ᠳᠴ᠘᠆᠋᠂ᢅᠣ᠋᠂ᢕ ᠕ᢗᡃ᠋ᡃᡠ᠋᠊᠋ᡊᢣ᠋᠂ᡗᢗ ۲۹٫۹۲ ᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋ [٬]۵۵۶۲٬۵۰۲٬ ጋዮረር ላን በረዮ ገን ዓር ᠔᠆᠂ᡃᡆᡗᡃ᠂᠔ ჅႦჂႠ๛ႦჃႮჀ ᡏ᠐ᢞᡆᢩ᠘ᢗ᠙ ر مار م ح∟∿ $b \cap L > s \subset D$ ለርቴ ምሌታ የሮው. $\Box a \subset \Gamma^{*} \Delta^{*}$ ᠘᠘᠋᠋᠋ᡗᡏ᠌᠌᠈᠋᠋ᢗᡄ᠋᠋᠕᠆᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕ $\langle \dot{\sigma}^{5} \rangle^{5}$ >L $\langle \dot{\sigma}^{5} \rangle^{5}$, $\langle \dot{\sigma}^{5} \rangle^{5} \rangle^{5}$, $\langle \dot{\sigma}^{5} \rangle^{5} \rangle^{5} \rangle^{5}$, $\langle \dot{\sigma}^$ ᠋᠄ᡃ᠘᠔ᢣ᠘ᡁ ₽₽₽₽₽₽ ᡝᢞᡄᡃᡬᡃ᠋ᡃᠴᠥ, ⊳∻⊶ ᢉ᠂ᠳᡗ ⊲⊔ Δ Δ Δ ᠕ᡃ᠘ᡣᢂ᠊᠋ᠯ᠘ᡨ 'የለኣ' ለርቴ^ነσ_ヘ৮ህ ላሥL_ヘካ ____≻` ∆_∿^__` ᠕ᢟ᠆᠆᠊᠋᠊ᡐᢧ᠋᠊ᡃᡷ᠕ ອ^ເຍຽ⊳້⊇∩[⊾] ⊲⊔_⊇ √۲٫۷۴۲۲۵ ላትዾ፞፞፝፝፝፝፞ዾኯ፟፟፟፟፟፟፟፟፟፟፟፟ ᠘ᡃ᠋ᡰᠴᠾᢞᢗᢂᡃ᠖ᢗ᠋ᡝ᠘ᡗ᠆᠋᠋᠆ᡣ ᠕ᢣ᠌᠋᠋ᢂ᠋ᠴ᠒ᡃ $\forall P \subset J^{\circ} \subset J^{\circ}$

SOMMAIRE

Une réunion du processus de consultation régionale a eu lieu à Pangnirtung le 23 et 24 mars 2005 afin de déterminer l'état des stocks des ombles de la région arctique de Kipisa. L'état des stocks s'est fait à partir de la révision des renseignements informatiques et des connaissances disponibles sur les stocks. Un comité formé des membres de l'Association des chasseurs et trappeurs (HTO) de Pangnirtung, des pêcheurs locaux, des représentants du gouvernement du Nunavut - le ministère de l'Environnement, les représentants de Pêches et Océans Canada, les secteurs des sciences et de la gestion des pêches, l'agent de protection de la faune de Pangnirtung et l'agent du développement économique de Pangnirtung participant aux discussions. Le comité a révisé une ébauche du Rapport sur l'état des stocks (RÉS) sur les ombles de la région arctique de Kipisa. Le stock est l'un des nombreux stocks importants pêché dans la région de Pangnirtung et le premier à être évalué grâce au processus de consultation régionale. Les stocks de Kipisa sont importants pour la population locale comme source de subsistance et au cours des ans il fourni du poisson à des fins commerciales selon la licence de sondage. Le taux de prise durable, dans le contexte du niveau des besoins essentiels et du total de prise permise, a fait objet de la discussion. Le comité s'est mis d'accord sur le taux de prise permise qui peut être considéré comme raisonnable en termes de taux de prise traditionnels et qui devrait mener à une pêche stable et durable.

INTRODUCTION

The Regional Advisory Process (RAP) meeting to evaluate the status of the Kipisa Arctic char stock was held at the Lodge Pangnirtung, Auyuittuq in Nunavut on March 23 and 24, 2005. Participants included representatives from the Pangnirtung Hunters and Organization (HTO), Trappers Fisheries and Oceans Canada (DFO) Science, DFO Fisheries Management, Government of Nunavut, Department Participants also of Environment. included the local Wildlife Officer. Economic Development Officer and local fishers. The meeting was carried out in English and Inuktitut with translation simultaneous and interpretation services.

The meeting began at 9:00 a.m. with opening prayer by Manasee an Maniapik. Kathleen Martin (chair), the RAP Coordinator, welcomed participants. She then provided a brief description of the principles, guidelines, objectives, and intended products of the RAP. The information, contained in the document "What is RAP?" was provided, along with a remit and a draft Stock Status Report, to participants prior to the meeting. Following the meeting, a Stock Status Report (SSR), Proceedings Document and a а Research Document detailing the results of our discussions, will be published on the Canadian Science Advisory Secretariat (CSAS) website. Both the SSR and Proceedings documents would be written for a general audience although the Research document would incorporate more scientific terminology. All participants were

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۹۲۹۲ ۲۰۱۳ ۵۲۹۲ ۵۲۹۹ ۹۲۹۹ ۹۲۹۹ Ĺᡆᠡ Ľᠳᡏᠰ Ľᡅᡗ᠘ᡃᡝᡄ᠌᠌᠈ᡃᡝᠯᡏ᠑ᡒ. ὑ∩΄- Ĺ'℃ (Δ^ιイペ▷℃), Ϥ&𝔅)'ΥLՎΓ ᠕ᡗ᠊᠋ᡏᡃᠺ᠆᠆ᡐᠣ᠋ᡃ᠘ᢧ >%) $\forall P \subset P$. $\forall P \in P$. ∿∟∿∟∿ ᠳ᠋ᠣᡆ᠘ᡃᡗ᠊᠕ᡃᢋᡄᢂᡃᢔ ჼხ_∆෮෮ඁඁඁ෮ඁඁ∿Ⴑඁ෮෦ඁ, L<u>_</u> ር ፈ_ ይ د∟∿ ᡃᠳᠴ᠘᠆ᢂ᠆᠕᠆᠆᠆᠆᠆ ᡃᡖ᠋᠕᠆ᢂ᠂ᡆᢕ᠈ᡆ᠕ するりビート >%) ᠕ᢟ᠆᠆᠆ᡏ᠆᠆᠂ するいでした ᠕ᢟ᠆᠆᠊᠋᠆ᡏ᠆᠈᠆᠉ ᠋᠋ᡔᠣᢣᢀ᠋ᡃᡆᢣᢀᠴ᠋᠋ᢕᡃ᠂᠋᠆᠘ ᠋ᡔᠳᢣ᠌᠌᠋᠆᠋ᡔ᠖ᡃᠯ᠉, Ċd_o~b ᠕᠋ᡃ᠋᠖ᢕᢣ᠋᠋ᠴ ⊳σb^c. ഺ഻ഀഀഄ ᠇ᡃ᠌ᡷᠳ᠊᠋᠋᠊᠋ᡗᡃ. PUT-2024 ᡰ᠋ᡣ᠘ᡃᠵ᠋ᡬ᠋᠋᠆ᠴᡗᡃ, ᠕ᢗᡃᡃ᠋ᡃᠣ᠋᠂᠋ᡗ᠆ᠴ ∿م∠ر،م DobcdrLt. ⊲-۲⊃ ᠕ᢟ᠆᠆ᡐᡔᡃᠫ᠕ U ℅₽₽₳₰₽₽₽ 00%ᡆ᠋ᠴᡆ᠘ᡃᢣ᠘ᠠ᠘ᡃᢅᠴᠣ ᢞ᠋᠔᠘᠘᠘ᡩ ᢣ᠋ᡃᠻᡃᢗ᠌᠌ᠵ᠋᠊᠋᠆᠋ᡗᡃᡝᡃ ⊳%%ՈՐ՟ԺՙՈ⅃ՙ ⊳℃∽ ᡖᡄᢗ᠋᠋᠋᠆᠆᠙᠖᠆᠆᠘᠂ᡨ᠘᠕᠂᠆᠆᠘ Ხ∟≻∿ႱႠ ᡃᡖᡲᢣ᠋᠌ᠵᢣᡃᡆ (ፈ∠⊳∪ւՍՉՆԲՆ CLṗ⊾ C94 ᠕ᢗᡃ᠋ᡃᡠ᠋᠊᠋ᡊᢣ᠋᠋᠂ᡗᢗ ᡃᢐ᠋ᠴ᠘᠆᠋ᡃᢛ᠋᠂ᡗ᠆ᠴ᠋᠈ᡔᢑᡠ᠆ᡐ᠋᠋᠋ᡕ᠘᠆᠉ ᠕ᢟ᠆᠆ᡐᡔ᠋᠋ᠿ UU ᡣ᠋᠋ᡣ᠋᠄ᡣ᠘ᠴᠧᡙ᠕᠘ᠴ᠘ᡁ᠖ᠴ᠘ᡁ᠖ᠴ᠘ᡁ᠖ᠴ᠘ᡁ

encouraged to ask for clarification if they did not understand any of the terminology being discussed.

Participants were asked to introduce The Chair then outlined themselves. the agenda for the day and encouraged all participants to All participate in the discussion. participants were encouraged to express their opinions regarding resource status freely as experts. lt was important to have consensus with the fishers about the advice given in the assessment of this stock. The intention was to proceed through each section of the Stock Status Report sequentially in the hopes of completing the major part of the document in the first day and finalizing the remaining sections on the second day. As all required simultaneous discussions translation it was felt that trying to keep to a rigid schedule was not realistic. It was also decided that to ensure that all views were incorporated accurately into the documents, drafts in Inuktitut would be provided to the HTO for review prior to finalizing both the Proceeding and the Stock Status Report documents.

Ross Tallman led the discussion through each section of the draft Stock Status Report. The draft report was developed using the scientific information available both from the literature and from the recent sampling program carried out in the area. The meeting was a "working meeting" where the scientific information was discussed and interpreted with the

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addition of local knowledge provided by the Pangnirtung participants.

At the end of the meeting, Michael Nowinski, the Pangnirtung Fisheries, fish plant manager joined the meeting to add the economic perspective to the discussion.

STOCK STATUS REPORT DISCUSSION

At the start of the discussion, it was confirmed that the name of the lake should be spelled Kipisa and not Kipisha. Kipisa had been used up until 1999 at which point Kipisha was used in the published harvest reports, however the committee agreed that it should be go back to the original spelling.

Image of the Species

One of Tracey Loewen's photographs of a fish collected during the scientific sampling near the Kipisa River mouth was presented to the committee for their consideration for inclusion in the SSR. All those who had fished the stock agreed that the photograph provided an example of a "typical" Kipisa char, which was broad or deepbodied and having the outer skin whiter in colour than other stocks in the area. The fishers agreed that the Kipisa fish were quite distinct from some of the other Pangnirtung area stocks.

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∆د∿ل ላካትብብብ JYVL ∴°ి ∆∿∟∿ປ⊲∾ ۲٬۹⊃۵)ک⊂ ᠋ᠳ᠘ᢓ᠘ ᠋ᡃᢐᠣᢉᡃᢞ᠋ᡫᠣ᠄᠙᠕᠋᠋᠋ᢣᢂ᠅᠂ᢆᡠᡫᠣ᠋᠋ᢕ᠋᠋᠋᠋ᠵᢣ᠌ᢄᡄᢂᡃᢅ᠋ᢧ᠍ᡃ ᠘᠘᠘᠘᠘᠘᠘᠘᠘ ه۱۲۶، ۹۳ ـــ۵۴۵۲٬۵۳٬۵۳ SSR. ۵۴ـال√۵۴٬۵۳ ב ᠋᠋ᡃᠻ᠕ᢣᢩᢂ᠋᠘᠖ᠴ᠕᠋ᡃᡶ. ᡏ᠋ᡩ᠆ᠴᠳ᠊ᢂ᠋᠂ᢞᡄᡱᡃᡠᡃ ᡣ᠋ᡗ᠋ᡥᡆ᠋᠋ᠫ᠆ᠴᠣ᠆ᢩᡏ᠋᠘᠂᠋ᠮᠺᡲᡃ᠋ᡶ᠂᠋ᢐ᠋᠋ᡰᡠᡃᠳᢣᢩ᠌᠈᠆ᠴᠥ $\forall d^{*}f^{*}\sigma \Delta b \ b \ c \ e^{c}\sigma^{c}$. $\Delta b \ b \ c \ e^{c}$ √∿പറുറ Ç₽q∆ 'የለ \ ▷ < ∆∿പം∿് ᠆ᡴ᠋ ፈ_ንሥውሀላፋ ᠕ᢅ᠆ᡨ ᡃ᠋ᡃᢐᠣᢉᡃᠵᡃ᠋ᡰᠣ᠂᠘ᡃᢐᠴᡅᢇᡃᢉᢈ᠋ᢀᢞᠶᠣᡃ.

Map of the Area

A basic map of the Kipisa area was presented to the committee. The committee decided that the map should be extended to include an area further upstream of Kipisa Lake as the entire river system is guite long and was not included in the original map. Kipisa Lake was identified on the map, as was the area typically fished in the summer open-water season. The lake and fishing areas should be marked on the map and the proper name Qaggiluktug for Kangilo Fjord should be used. The review of the map led into a discussion of the river system, which is detailed under the species biology section.

CONTEXT

The Kipisa char stock was first identified in 1997 by the Pangnirtung HTO as an important stock for the community as it contained an abundance of fish. large In consultation with the HTO, this stock has consistently been identified for further study. Although it is only one of a number of stocks fished by the community, there was a general desire to convert the exploratory licence for this area to a regular commercial As a result, DFO began a licence. scientific sampling program to assess this stock. Following six years of sampling this is the first Cumberland Sound area stock with sufficient data to analyze and provide advice on the fishery.

DESCRIPTION OF THE ISSUE

Rationale for assessment

The assessment of the Kipisa Arctic char did not come about with a formal

ᠴᡆ᠋ᡃᢣᢦ᠋ᡃ᠋ᡫ᠂ᠴ᠋᠋ᡏᢪᠳ᠋ᡃᡶ ᠔ᠳᢣᡐᡄᡐᡃᡗᡃ᠋᠉ 'የለ५⊳< ݐݸݕݬݛݕ ٥٩٢٢ ٩٢٢ ٩٢٢ ٩٢٢ ٥٦٢٩٩ $\Delta \sim L \sim D^{1}$ ᠣᡆᢞᠡᡐᡃᠠᢣ᠋ᡃ ᠕᠋᠂ᡗ᠆ᡄ᠋ᡗ᠊᠍᠕᠋ᡃ᠖᠘᠉᠆᠘ ለኈተዾበተLኇላኄLና ፞ጏ፟፟፟፝፞፞፞፞፞፝፞፝፝፝፞፞፟ ፟፟፟፟የለ፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟ Ċ₽ĴĽĹŸ ᠳᡄ᠋᠘ᢆ᠋᠆ᢣ᠋᠊ᡶ ∕ĽL ∧ୋ୵⊳∩୵L⊂⊳∿Ր^ւL° __ୁ୰⊲୮. ੰ₽∧∖⊳≦ ՀՎൌՐ ᠘᠆ᢣ᠋ᠬᢣ᠋ᢄᡄᢂ᠋᠋᠉ ഫപ~ി∢∟. ∆؈ٵ؈؇ۿػ م⊳≁۹۵ ィሪየታ-ም-ግንግ ርጊ_ው ላ⊦ך ⊽נרין לאידי ᡣᡣ᠋᠋ᡥᠠ᠘ᡃᠵᡅ᠋ᢩ᠕᠆᠂ ചപംചി⊲∟ ⊲L ഄഺാം <u>ხ</u>°Ր%)°Ն__ √∩ درس ᡏ᠋᠋᠕᠆ᡧᢕᢣ᠋᠕᠆᠃ ᠙᠘ᠫᠲ᠕ ___∿_√√Г 26226200 dcLabulo. $a a \Delta F^{*} L L^{*} \Delta c \sigma r^{*} L \sigma A c^{*} b \sigma^{*}$

∿⊿⊂∿৮~∿

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ን⁻⁻ህል`ዠ^c ቴኦኦኣራ፣ጏ ቴኦኦኣራኦላ^ቈ ፑለኣኦ[<] Δቴ₋₋ለኾ⁻ራ ኣ^ኈዮሬኦ^ኊርን^ቈ ለፈኮኦኦ⁻ጋራ

request for advice through Fisheries Science Management. Branch personnel held consultations with the Community that determined а Community desire to have assessments of various Cumberland Sound stocks, including Kipisa, with the aim of progressing to a commercial quota. The timing of the assessment coincides with a change in the fisheries management process for Nunavut stocks. The management of Nunavut fisheries will be changing from the current quota system to a system based on basic needs levels (BNL) and total allowable harvest (TAH). DFO expects that the NWMB will ask for Science advice in determining the level of TAH for Nunavut char fisheries including the Kipisa Arctic char stock.

Species Biology

Anadromous Arctic char from Kipisa are distinct in appearance. A "typical" Kipisa char, is broad or deep-bodied and is whiter in colour than other stocks in the area. The local fishers attending the meeting went further to describe the fish as smelling different and the texture of the flesh is different once they have gone to freshwater.

There are many lakes on the Kipisa river system although there is no information on fish populations in any other than Kipisa Lake. Although local people have only fished Kipisa Lake, the local fishers know that the fish go further up the river system to a higher lake. Levi Evic pointed out that he has found fish congregating in the river just upstream of Kipisa Lake. The fish were red in colour. When asked if he thought the fish spawned in the river, Levi Evic indicated he was not sure but

᠈᠈ᠳ᠘᠘ᢣᢂᡩ ∆່⊎⊃⊂∿ວ່⊥ Ֆ⊳≻հ_ℰՍւ ⊲⊳⊂⁰∩⊸'⅃. ᠘᠋᠋᠋᠋ᢐ᠘ᠴ᠘ᢣ᠉᠋᠓ᡳ ୰ଌ⊳୳୶୵୰ ൭ഁ൳ഺ൛ م⊃م∆[®]۲⊂۵®ک۲ ⊿مر⊂⊳‹ ᠕᠊ᢣ᠘ᡃᢞ᠋᠋ᡫᠳ ᠕᠈ᡝᡩᡩ᠘ ᠆ᡗᡃ᠆ ᠈᠙᠘᠙᠘᠙ ჂናႱႪჼჂႻ ᠕ᢟ᠆᠆᠊᠋᠊ᡐᡅᡗᠣ᠆ᡃᢩ᠆ᡗ ڶ٬ڝ٦٢؏ڝڬ dСГ. ⊲⊳م⁺∽∿ل ᠋ᠳᠵ᠘᠊ᡆᡁ L⊂0[®] ᡏ᠆ᡩ᠘ᠺ ᠘ᡃᡃ᠋᠋᠋᠘ᡃᡃ᠋᠘᠆᠕ᢞ᠆᠆᠕᠆᠋᠘ ∆'b_ిి్ర. ൶ഀ഻ഀ 20C17046 ᠘ᡃᠣᠴ᠆ᡄ᠋᠂᠘ ൶ഀ഻ഽ ᠈ᢕ᠈ᠵ᠆ᠳᡧᡃ᠘ Ľ°a-{Γ ⊲کبرد ለታዾታሒላኄኈጋኇና ነ<u></u>ሳረጉይትሲላቴ የሀርጋር ᠔᠘᠋᠋ᡗᡏ᠔ᢗᡄ᠋᠋᠋ᡊᢣᡃᡃ᠌᠍᠕ $\sigma_{\Delta} \sim \dot{\sigma}_{\Delta} \sim \dot{\sigma} \sim \dot{\sigma}_{\Delta} \sim \dot{\sigma}_{\Delta} \sim \dot{\sigma}_{\Delta} \sim \dot{\sigma}_{\Delta} \sim \dot{\sigma}_{\Delta} \sim \dot{\sigma}$ ᡏ᠕ᡅᠳ᠊ᡏᡑ᠋ ᡃᢐ᠔᠋ᢣ᠆ᠺ᠊᠋᠊ᡦ የግግብ ᡃ᠔ᢞᢇ᠆ᡃᠣ ᠈᠂ᠳ᠘᠘ᢣᡆ PUcou ᠘ᡃᡃᡅᠴᡃᢉᢂᢞ᠆ᡆᡗ ൶ഀ഻ഽ ∿∟∆°ם ለኈተዾበ՟ጔበ 'የለኣዾና ፚኈጔለኈዮና.

᠆᠋᠂ᢣᡣ᠋᠅᠆ᡧᡐ᠍᠉᠋᠂ᡣ

C∽⊳₁¬ ᡣ᠘᠆ᡨ᠑ᡣ ∆∿د_ئ∆ የለհΓ **⊲۶≻⊳∿L**C ርቆጓ⊳ቍዮ. ∆₀لتات ᠋᠋ᡃ᠙᠕ᢣᢩᢂ᠋᠘᠋᠋ᡃ᠘᠋᠋᠋᠘ᡩᡗ᠋᠂᠕ᡩᡗ᠅᠋ᢓ᠅᠘᠖᠆ᡘ᠘᠋᠋᠋᠋ᢧ᠆ᡩ᠋ᡗ ∩Lℯ۹₋¬∪ ⊲₁୮ ۥۥ۹۹۹۵ ୶୮୶∿Ր $\forall \Gamma^{+} \sigma \Delta^{+} \sigma^{-}$. $\rho = -L \Delta^{+} \sigma^{-} \sigma^{-}$ ₽UTՔC⊳հզ ᠈᠂᠋᠖᠘᠕ᡨᢄᡓᡄᢂ᠉ᢕ ∆∿∟ം ՈՆՐ ᠕᠈᠆᠆᠆᠆᠆᠆ ⊲ĽL ᡔᡃᢪ᠋ᡶ ᠕᠈᠆ᡣ᠆᠆᠆᠆ <u>م≁≻۲∿۲۲</u>Г٦ ᢉᠭ᠋᠋ᢄᡩᡗ᠘ᡃ᠘ᢗ

(۲₆ ۲ **ነ**ዋለ ካ ᢥᡃ᠋ᡰᠣ ጋዮረርፈነልርኄዮርጋኈ ∆∿∟∆⁰ ᠕᠘ᠫ᠆᠕ ᠕ᠠ᠋᠋ᡥ᠆ᠳ ₽Λ∽ ርፖ∿სσ. $\Delta \Delta \Delta^{c}$ בפר-גבאנאינאינאינאינאי 'የለ \ ▷ < ∆^بل∟ل∿∆ (۲[°]bσ. %D≻LLC Ç₽q⊲ ∆∿ل∆۲ <▷∿レ▷균ჼჼ└▷ሮჼLC $(\gamma^{i} a^{c})$ $\neg \checkmark \Delta \land \lor$ مےم∆[®]۲⊂⊳[®])[®] CGLLLC dub ∆'لے ႱႮႰႷႻ 'የለ \ ▷ < ᡏ᠕᠕᠆᠘᠘ᡕ ∆طلد⊅٬ل∿ل ∆∿ل∆د ୵୰୰୵୬୫°<୳L∻UC ძ⁰სσ. ⊂ペ∆ ∆∿ $a a \Delta^{*} \prime c D^{*})^{*}$ $b D P L \sigma S^{i} a \sigma P \prime \sigma \sigma \sigma$ ∆∠∟∟⊳∿ົາ ᠘᠊ᡐᡘᠵ᠈᠆ᡣᡐᡐ ᡬᢅᠣ᠋ᡗ᠊᠋ᡐᡃᡉᡃᠣ᠋ᡃ ᡩᡃᡰᠣ.ᢩ᠘ᡃᡃ᠋ᠴ᠘ᡃ᠂ᢩᡄ᠆ᡃᡃᡉᡃᢗᢞᢗᡃ᠋ᡃ

thought that spawning occurred further up the river system. The area where fish were congregating does not freeze over until late winter but prior to freezeup there are many fish congregating in this area. The area may still be open from December to early January but it does freeze over from mid- to late-Other freshwater areas Januarv. typically freeze over around November. Ross Tallman pointed out that there are three major types of habitat important for survival; feeding. spawning and overwintering habitat. The open-water area may provide an overwintering area that is important for the survival of the stock.

Ross Tallman asked the local fishers about the timing of spawning. In late October there are lots of red fish in the lake but the fish retain their red colour for a long time and you would catch fish now (late March) that were still red. Char hold colour pigments most of the winter due to slow metabolism so that colouration is not truly indicative of the time of spawning although after they spawn the colour does change becoming less intense. The local fishers could not provide observations on the timing of spawning based on the egg development. No one had noticed "running ripe" fish. They likely fished after spawning was complete in the lake. Tracey Loewen has found char from Qasgiat and Igalugarriuit spawn in mid-September and Moore (1975a) found spawning occurred from the second week in September up until early October.

Moore (1975b) found the downstream run for two rivers in the Pangnirtung area began in the middle of May and was completed in about two weeks.

ዮረፈው ᠂ᡰ᠕᠂ᢕ᠐᠘ᢌ نا⊲د⊳⊮∩ ۹۵ ک∖۳۵ کړې ۵۳ ک ՙᲫবᲐঀ৽৻৻৻ በተለፈር CĹσ. ᠕ᡗ᠊᠋᠋ᢀᡃᠣ᠋ᡅ ∽⊳م°خٰ Prdoc ʻd⊲bʻC")" ʻP∩∿La a∿J∿La .∧⊳م⁻ڂ ĊL° م∟م∆⊮۲⊂⊳نک⊮ ∧∿ບ∕່⊔LC Ś٢ ᠳ᠊᠋᠆ᢞ᠖ᠿᢪᠣ ذ_√-۲¢ ∽~െം. ᠆ᢞ᠋᠆᠆᠕ᢟ᠘ ⊿ĽL ⊳⊳⊳₽c a ال^عل. ᠂ᠳᡐᡗᢑᠧᢕᢛ ⊳6⊳₀9c ᡆ᠊᠊᠆᠘ᢂ᠆᠆ᢐ᠋᠌᠉ $\Lambda^{L}_{\Lambda} \lor \prec^{*} \dot{\triangleright}_{L} \prec \cap^{c}_{\neg \sigma} \lor \Delta^{t}_{\sigma}_{\neg \sigma}$

ና[\] (L^{*} 4Λ_α 4^{\%} Δ^{\%} Δ^{\%} Δ^{\%} ୵**୯**∆৮[ୃ]<୳L[÷]Სር. ഄഀ഻ഀഀ൳ ⊲∿⊃<⊳∿ $\Delta \Gamma \dot{} b^{\circ} C^{\circ} \Delta b < \Delta b \ \Delta b \ \Delta c^{\circ} \rho \ \sigma \sigma \sigma$ ∆‰_∆⁽ ddr d⊳<%j‰(%)⁽ d^L L^{*}a ∆ئا_م_ری∪ (ഹിപ്ര-ĽY) Z-**⊲⊳<**∿)<℃. ঀ৾৾ঀঀ৾৾৽ঀ৾৾৽ ∆∿ل∆ ᠕ᠠ᠘ᡃ᠋ᡃ᠖ᡃᢗ᠋᠅ᡗ ڡٵٛٶۻؗڬ <u>বি</u>বি Հհ₽∇Ն∟ م⊐م75∪⊳∿ر⊂ر ᠆ᡥ᠘ᢞᡔ᠋᠂ᡗ ᠆ᢞ᠋ᢙᢣ᠋᠋ᡬᡃ᠋ᡥᠠ᠘᠆᠋᠋᠋᠋ᡣ ⊴୮⊲∿Ր ᡏ᠆᠕᠘ᠵ᠕᠘᠆᠉᠘᠘ <u>ላ</u>ረ^ኦሥም. Δ⁶b_υ/ ؎ᡆ᠆ᡃ᠘ ᡆ᠋ᠴᡆ᠘ᡃᡃᠠ᠘ᡃᢆᡆᡄᢂᡩᡗᢗ ᠌ᡔᠡ᠍᠋ᢙ᠋ᡔ᠋ᡝᡃ᠋᠋᠆᠋ᡶᡃᢆᡶᢗ᠋᠋᠘ᠳ᠋ᡩᡞ᠂᠕᠈ᡃᠵ᠆᠆ᢀ᠆ᡥ᠆ᠴ ᠖᠔᠘ᢣᢋ᠙᠆ᡐ᠕ᠺ ∆ౕట౨ౕౕరా. ∆؈ٵ<>>≻۹۳۵۲۲ ∆ౕట⊸∧ిరా C95774 ՙԻՂՙ ⊲⊔ ᠘ᡃᢐ᠋᠋ᠴᡰ᠋᠋ᡅ᠌ᢈ᠌ᢂ᠋ᠺ᠅᠘ᢞᢘ᠋᠋᠈᠋ᡬ᠙᠘ᢣ᠉᠋ r_{0} ⊲L Ja (1975a) ๛ ー イ ペ ム レ ጜ (1975a) . $\Lambda_{a}/\Lambda_{b}^{\prime}$ Λ_{a}^{\prime} ለበ⊲ነቍ∿ՐႦ ⊲∽ጋ፞፞፞፞<

The upstream migration, for the same rivers, began in early August and was completed within 5-6 weeks (Moore 1975b). In the downstream run, smaller fish go first and tend to stay nearer to the mouth of the river. The larger fish travel further away from the river mouth to feed. In the upstream run, very large fish go first. Tracey Loewen, Ross Tallman and other DFO personnel have sampled the Kipisa stock for several years. The distance from the sea to the first lake is longer for the Kipisa system then for other systems in the Cumberland area and the river is very shallow. Ms. Loewen speculated that spawning individuals migrate earlier in the Kipisa system than in other places probably making use of the spring tides, which allow earlier access to the lake. Restina individuals remain in the ocean the longest, migrating back to the lake late in the season. Patterns of movement for Kipisa char in the marine environment are not well understood. Levi Evic thought that female char do not move around as much in the lake as do the males but that once they move down the river, they might move farther than the males. Brian Dempson confirmed that in Labrador populations females do not migrate as far in the ocean if they are spawning the same year. The non-spawning females and the males move further from the river. In general, larger char move into the river first and of these the spawners move first followed by non-spawners and then the smaller fish. There is likely to be behavioural differences in staging prior to spawning as well. Those ready to spawn may move closer to the spawning area as a group.

ለ৮ሒኈጋበ 5-6 (Moore $\Pi \sim \Pi^*$ Γ₽⅃ርϷσ℠ϞΔϤ 1975b). $\Pi \sim \dot{H} = \dot{H} \sim \dot{H}$ ∆∿ل∆ن ⊲⊔ ᡃᢐᠣᡗᡃᠵᡃ᠋ᡶᡠ[᠊]ᠣᡪ᠌᠈᠋ᠴ᠋᠋ᡣ᠂᠋ᡃᢥ᠘ᢗ ᠋᠆᠆᠋᠋ᢆᢞᡗ᠊᠋᠆ᢞ᠋ᢣ᠘ᡃ ᠘ᡃᢅᡃ᠋᠘᠋᠊᠘ᡃ ᠈᠊᠘ᢞ᠆ᠳᡃ᠋᠋᠆᠋᠆ᡣ નુનrC σ_{Λ} σ_{Λ} σ_{Λ} σ_{Λ} σ_{Λ} ئې .*≎د $\Delta^{(1)} \Delta^{(1)} \subset \mathcal{O}^{(1)} \subset \mathcalO^{(1)} \subset \mathcal$ ĊL° ⊲⊔ ፈካ_ጉር ΔLⁱLbCcacid ᠘᠋᠋᠋᠋ᢑ᠘ᢣᢑᢕ᠋᠋ᠧ᠋ %D>\%Z 'የለ \ ▷ < ⊲^ړزالد⁻ۍ۲. ∆‰_ిోర ⊳∿եՐ՟Ժ∿ե ΔĹσʹ (μίμς (μαιμαικό μαιμαικό) ᠊᠋᠋ᡏ᠆ᢧ᠆᠔ᡃᢆᡃᢧᢣ᠋᠋ᡔ᠆᠆ᠺ᠆ᢑᡃᡗᢆ᠆᠕ᢪᡀᠣ᠆ᡐᡃ᠋᠘ ℃ ∆∠L⊀® վ՞∿վՎ‰ ∆ిర్౨ం. ్ ᡣᢣ᠋ᡰᡪ᠘ᡱ᠋᠋᠊ᢛᡃ᠋ᠲᢂᢞᡏ᠋ᡗ $2^{\circ} < 2^{\circ} < 2^{\circ}$ φ_Λς dub ᠕ᡝ᠋ᡥ᠆ᡠᡃᡗᠣ **⊲**ጋኄርኈጋበ ᡣᠣᡃᢗᡃᠣ᠋ᡃᡃᡅᠴ ⊲L ⊳⊂'bິເິງີວໍໄມວ. ᢗᠠ᠋᠋ᡃ᠋᠋᠋᠋ᢆᡃ᠋᠆ᠴ᠒᠋ᡗ᠋᠋᠆ᠴ᠒᠋ᡗ᠋᠋᠆᠆ ᠋᠈ᢅᡗ᠘ᡱᡆᡗ ∆ڬڂٵڬڂ؆ڹ؞ しょうくうし ▷ላና∩ላዖቴ°∽▷~ና∆ၬLና. ᠋ᠴᡃ᠋ᡃᡉᡃᡗ᠈ᡆᡃᡄ ੰዋ∧⊾⊳≦ ᠘ᡃᡃ᠘᠋᠆᠕᠂ᡥ ΔĹᡠ᠂ᡣᡝ ጋየረት አረሀላ ሲኒንም. ርዲ ወል ወላ ላላ ላ ∆҄Ҍ_∧҅ ᠕ᡃᠳ᠘ᡕ ່ ພວ⊲‰ເ∿ບາວ ເປາΓ ᢣᠣ᠊ᡐᠣ ᠙ᠠ᠋᠆᠆᠆ በረትሪካር. JUL¢ ଏ∿L穴୍ ᢂ᠋᠆ᠳ᠋ᡃᢑ᠘ᡀ ᠳ᠋᠆᠆ ⊳≀⊽հ≻ ∩ব⁴৲৽ ᠳ᠋ᠴᡆ᠘ᡃᢛᠠ᠊ᢅᠯᡃ ۵(>ے ᠕ᡃᡆ᠘ᡕ ▷∿しሥ⁻ሑ℁⊾๎ା<<∿Րናጋና ᠕᠋ᢅ᠘᠆ᠰ ᠆᠆᠆᠆᠆᠆ ᢉ᠊᠋ᠿᢛᡃ᠋᠘ᡱᡆ ⊿^γΎJΓ. ᠆ᢞ᠋᠘ᡔ᠉᠆ᠺ᠋᠉ᢕ ᠕ᡃᡆ᠘ᡕ ⊲ĽL **√**JŲc ᠔᠋ᡃ᠆᠆᠆᠆᠆᠆᠆ ᠋᠆᠆᠉᠆᠘᠋ ďΓ. ۸[٬]هـــم ġŗŢġ₽c₽Ⴢċ ₫L ᡥᠯᠳᡅ ᠆ᡥ᠘ᡔ᠈᠆ᡗ᠉᠆ jog grad and the constraint of ᠆᠆᠆᠘᠂᠆᠆᠆᠆᠆᠘ Δ¹هے، ذ_ *ا*σ^ω, Δ^ι ⊲L ላ^ኑጋገ"ገ՜ የ ᢀ᠆᠋᠆᠙ᠺ᠉᠑ √≪∆۶-۵۳۵ و۲. ᠆᠆ᡏ᠘᠆᠈᠘ᡔᡃ᠘ᡔᡃ ᡃᢐᠣ᠆᠆᠋ᡗ᠊᠋᠊᠋᠆᠆ᡆ᠋᠋ᡃ

The local fishers were questioned about Tarrionituk lake (Freshwater lake) located south of Kipisa and which is actually an arm of the sea, receiving saltwater input for at least part of the Although the surface layer is year. fresh, it is likely that the deeper layers In the late 1980s, the are saline. waterbody was closed to commercial fishing because the local people believed that the fish caught in Tarrionituk Lake originate from Kipisa The fishers attending the Lake. meeting did not agree with this and suggest that the two areas are not linked in any way. The local fishers described the fish from Tarrionituk Lake as looking different from the Kipisa char. The fish have a longer nose and are darker in colour.

Resident char

The local fishers confirmed that there are "resident char" in Kipisa Lake. Residents are fish which remain in freshwater throughout their lives and do not move into saltwater to feed, as is the case for the anadromous form. Local people refer to these fish as "landlocked char" as they are more similar to the char found in landlocked populations where there is no access to the sea, although in Kipisa there is physical access to the ocean. They are distinctive in colour being yellowish brown. The resident fish have white flesh whereas the anadromous fish have red coloured flesh. The difference in diet between the two forms may result in the difference in tissue colour. When asked to describe the size of the residents, they estimated fish approximately 30-35 cm (shown by hand). Levi Evic described

Δ^b b b c c ^h 4 A b b c b ^b ൶ഺഽ (~▷°~°)< (~~U</p> -°U 'PASÞ< ⊲Ľ ᢉᡄ᠋᠆ᠴᠣ᠌᠌ ∆LÞ≺. (∟◊ ፞ ヮ – '<′ ጋ ፟ ዾ _ ፞ レ ኇ ↓ ኇ ↓ ኇ ↓ ? ` ፟ ໍ ບ ኇ ` ጋ ፟ Հ~⊳,ฦ,ഺթ⊃վ"Ա,– ልበታሚኒ (~⊳ህኖ՟∟∆⊀^ቈ. __ህዮዮ균 1980, ∆Lህ Lフᢣ₽ᡄ᠋ᢐ᠌᠌ᠫᡑ ᠘᠋ᡃ᠘᠕ᡐᠺ᠆ᡷ᠊ᢑᠲᢕ᠋ ᠔᠕ᡨᠴᠺᠣ ۵_۵ ∆~L_D^SLC ∆锔ጔ℃ዾኆ℃ (ሒዾኇኈ)୮ ፟፼ለኣ广ኂ<፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟ ∆∿ل∠ا⊂⊾∆ ₽∪₽₽С₽⊀₀ ĊŀZĿ ላ℃ኈበኈር⊳℃℃ ላL ⊳ኈሊላኈጋበ Lነሥ ᠘ᡃᡃ᠘᠕᠆᠕᠘᠆᠘ ԵՈ^ъՆԴւՐԵՍ՝ ؎ᡆ᠆᠘ ∆؈ات⊲ ৽ৗ৽ঀৢ৸ৣ৻৻৸৾৾৾ Ç٩٩ ᠘ᡃᡃ᠋ᡅ᠋ᠴ᠘ᡃ᠋᠋᠘᠋ᠺ᠘ᡬ᠆᠘᠋ᢂ᠋᠆᠘ᡃᠴᠴ᠘ ⊲^ነ≻ቦ℃[⊥]Lቦ^c ΔΛ∖Ϸ[<] Δኄ∟Λ℃ ∖σ⊲σ. ∆∿ل∆ ჃႱႨჅჾჂႮ ᢗᠻᠣ᠋᠋᠋᠋᠋ᠳ᠋ ⊲⊔ ᠋ᡩᠣ᠋ᠲᢗᢀ᠋ᠣ᠉ᢣᡐ᠆᠋᠋᠆᠒.

∆∿د⊾∧

൭ഄഺഺ ∆؈ات مےم⊿∿۲د⊳نک "ር ኦ ፊቴ ሌኒ" የለላል ርር ነው. ᠘᠋᠋ᡗ᠋ᡗ᠋ᢆ᠆ᡆᠲ᠋ ᠘ᡃᡃᡅ᠋᠋ᠴ᠅ᡗ᠋ᠬ ሀጓዳፖሪሪ $\Delta \dot{\sigma} \gamma^{*} \gamma \dot{\sigma}$ ⊲ĽL ᡣ᠘ᡃᡪᠯ ᠅᠆ᡣ᠈᠈ ϹΔLΔ^LΓL^c ᠳᡅᡆᢣᡃᡏᡑ᠑ᡣ በረዮቄጋና Δ^{c} Δ^{c} Δ^{c} Δ^{c} Δ^{c} Δ^{c} ֍⊳≻Ր∿ւ ሀጓዳፖሪን ግግር እና የ ᠘ᡃᡌ᠋ᠴ᠕᠋᠄ᢗ᠖ᡃ᠋᠋᠋᠋ᡃ᠘ᡃ᠘᠂᠘᠂᠘ ᠕᠋ᢅ᠘ᡔ᠋ᢥ᠆ᠳ Հ~Ի։ๅ๙ԻՀՔԽՍ-Չๅ የለላር 4L4_vu (ᠭ᠔᠋ᡃ᠕ᡃᢣᢗᡃ᠋᠋ᡃᠺ᠆᠕᠉᠘ ᡃ᠋ᡃᠻᢛᢣᡗ᠊ᠧ᠋᠆᠆᠘᠂᠆᠆᠘ ۵_م (5)< ᠖᠔᠋᠆᠆᠆᠆᠘ "∆‰_ം ^∿ს" ⊲⁺≻Ր<느¹LՐና Δ锔ዾÅና ∖፝σᢣ▷⊀ና Δል∖ን∆ና</p> ᠕᠋ᢅ᠘᠆ᡩᡗᢪᠣ Հա⊳վՎԳՀՔՀՔԳՈ՟գվ. ᢉᠭ᠋᠋ᢄ᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆ የለ ᠕ᡃ᠘᠆ᡩᢂ ঀ৾৾ঀ৾৾৽৾৾৾৾৾৾৾ የባንትናዮቄ የ ליבח. ∆^ישי (ר⊳< ∧^יע ישל״C>לי ᠘᠕᠋᠋ᡪ᠘ᢩ᠂᠋᠕ᢂᠵ᠉᠘᠘ ᠣ᠋᠆ᠾ᠖ᢕᢧᢧᠴ ᠕᠋᠆ᡗ᠃᠋᠆᠆ᠰ ᢀ᠋ᡗᢀ᠋ᡥᠣ √≻በኅበኅኅና∿ ላለ^አት እተር ᠕᠋᠂᠆᠆ᡗ ᠋᠋᠋᠋᠋ᡧᢣ᠋᠋᠋᠋ᡬ᠋᠋᠋᠋᠋ᢥ᠆ᡩ᠋᠃ᡗ᠅ᢕ᠋᠋ᢆᢞᢕ᠋᠋ $\nabla A + A \nabla C$ √Гላ℉ຼ ᡧᢄᡩᡳ᠊ᠯᡣᡗᢣᡥᢉ. ᡧ᠕ᠸᢣᢂ᠘ 35 cm (ላ∿ሁቴና ርቆጜ⊳∩ር⊳⊰ና). –ኖ∆ ፊልዮ ᠳ᠋ᠣ᠊᠋᠘ᢛᡃᡪᢅ᠊ᢋᢛ 'የለኣ ∆∟ిగిర ∆^ເb_ໂ≟ັປ⁻_∩ ∆^ເb_)⁵b) ປ^L

Kipisa Lake as having some small fish that look very old and some very large fish that look very young. In general, people do not fish the landlocked or resident char as much as the anadromous form. There are not many resident char in Kipisa Lake and they tend to be found at the shallower end of the lake. The resident form of char found in conjunction with the anadromous form may interbreed and in the future, there may be a need to consider both forms in the assessment of a stock.

The Fishery

The Kipisa area has been fished for over 30 years, however, Kipisa Lake is the only freshwater waterbody on the river system which has been fished. In general, fishing at the lake occurs in winter. In recent years, fish from the Kipisa Lake winter fishery were used for subsistence purposes. It was also pointed out that the area is quite far from the community and as a result is of the not one most popular Fewer subsistence fishing areas. people fishing during the winter because of the weather conditions. Community elders like the fish from Kipisa and some individuals go and catch fish there to give to the elders. The local RAP committee members estimated that there are about six individuals who would currently fish the Kipisa stock for subsistence purposes. The local HTO does not control where people fish for subsistence harvests.

The river downstream of Kipisa Lake is about 2 km long and tends to be shallow although this varies from year-

∟ኯጏ፞፞፟፝ኇ፨ጚዾ፞፟፝፞፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟ ᠕ᡙᢣ ᠘ᡄ᠋᠂ᡥ $C\Delta L\Delta^{c} \cap J, \Delta \Delta^{c} \Delta^{b} \cup J^{*} < ^{\circ} C^{c}$ ∆ልሥናኈቍና ላዛL ∆ኈጋ∆ና ርイ▷< ∧ኈዮጐ ᢉᠭ᠋ᢄ᠃ᡧᡗ ᡣᢣᡃᢣ᠋᠋᠈᠊᠆᠋ᡗ ᢣᠳ᠌ᡐᠳ ᢀ᠋᠘ᡩ᠘ᡐᠰᢈᠫᢩᡳ᠆᠘᠋ᡃᢐᠴ᠘ᡕ (ґ⊳< ∧∿Րъ ʹየΛϚΓ ϤʹL ͼσϧϷͿϥϞͼ ΔϧͼϽϹ ϲϲͼϹ. ᠘ᡃᡃ᠋ᡰ᠋ᠴ᠘ᡃ᠋᠋᠋᠋᠘ᡃ᠂ᠺ᠋ᢥ᠘ᡃ᠋ᡀᠴᡬᡃ᠂᠋ᡆᠳᢣᢂ᠊ᢞ ᢉ᠊ᡭᡄ᠋᠊ ᢉᠭ᠋ᢄ ᡣ᠘᠆ᠰ᠑ᠳ᠋ ᠙᠋᠆᠆᠆᠆᠆᠆᠆᠆ ᠆᠋ᡗᡷ᠋᠋ᡒᡃᡃ᠋᠆᠆ ᠘᠘᠘᠘ᢣ᠔ᡩ᠘ % በ____0% ᠕ᢗᡃ᠋ᡃ᠋ᡖ᠋᠃ᢕ᠋

᠘ᡃᡃ᠋ᡰ᠋ᠴᡄ᠋᠇ᡄ᠋᠊

᠘ᡃ᠋ᠳ᠕᠋ᢂ᠆᠆᠖᠘᠆᠉᠋ ^φΛ5 م۲۶J∆c ⊳∿lĊσ **٢**٩ ٩ - - - , ίΡΛ5 C^{n} 30. Հ∼⊳՞վ՞Ր⊔ ∆L∿L ۹_רכש ∆‰للالدائك ⊳₽⊳₽д⊃₫₽. ᢉᢇ᠋ᡃᠣ᠆ √^۲۲۷۵ م^۲, ੰዋ∧⊾⊳≦ (კა ∆⁰لےاتا⊿ ᢦ^ᢛᢪᡃᡃ᠋᠆᠆ᢣ᠔᠋᠘᠂ᢆᡆᢢ᠋᠐᠒ Pb4p924 ৽ৗ৽ঀৢ৽৻৶৽৸৻৸৽ የለ ⊳∿רי⊃ֿירי ഫപ്പ ⊲ĽL $C\Delta L\Delta^{\circ} \sigma^{\circ} U \Delta$ σዀ፟፝፞፞፞፞፝ጏዾኇ፝፞፞፟፟፟፟፝፞፞፟፟፟፝ፚዾኇ፝፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟ Δ^{1} Δ^{1 Δ° Δ° ᠋᠆᠆᠆᠆᠆᠆᠆᠆ ∆ີ ໑. ໂຄ່ ໑. ____L RAP ه ۲۲۷۹ حሪትንግ ڡ∟⊳‹ڔۥ۲۲؞ 6-∿J⊀′ ∆^یات 'የለ५⊳< ∆∿∟ిోం Ű௳ $\sigma^{\mu} \mathcal{A} \mathcal{A}^{\mu}$ ם הישילת שלים ח. בעריך של ביר ס'ראיס שלים הישי ᢀ᠆ᡣᡐ᠉᠆ᡐ ۵_۵ ۹٦ $\Delta^{\circ}_{\Delta} = L^{\circ}_{\Delta} = L^{\circ$

to-year. In low water years, you cannot fish in the rivers although you may be able to in years when the water is deeper. There is no evidence that it has ever been fished using a weir. Summer fishing occurs away from the mouth of the river, out from the tidal influence, so that nets are not left out of the water during low tides.

When asked about other fishing locations in the surrounding area, several fishers indicated that, although there are lots of fish around the head of Kangilo Fjord, most people don't go fishing in this area other than near Kipisa. Distance from the community is also cited as the reason the area is not generally used for sport fishing. Billy Evic had taken some anglers to the Kipisa area back in the 1980's. The scenery is nice and there were lots of fish so the anglers liked it. There is a sport fishery in the adjacent fjord, Isuituq (Clearwater Fjord). Isuituq has also been fished for scientific purposes for the last three years.

It was suggested that a second map should be included in the SSR with the whole Pangnirtung area indicating the locations of other fisheries. This would serve to emphasize that Kipisa is one of many fisheries in the Pangnirtung area.

The subsistence fishery is unregulated and unreported except for the years when data were collected for the Nunavut Wildlife Harvest Study (Priest and Usher 2004). Under the Nunavut Land Claim Agreement (NLCA 1993), an Inuk shall have the right to harvest

⊲[،]ذٰاھ. Δ b_l/4?°__°()) dub ᠕ᠠ᠋᠋ᡥ᠆ᠳ ᠘ᡃ᠋ᡰ᠋ᠴᡰ᠘ᡃᡏ᠘ᢆᠼᠧ᠋᠋ ᠋ᡏᡃᡗᢖ᠆ ∆L∿Ն ∆∩ெ∿۲⊳-۱۲`_ا. ᢗ᠋᠕᠆ᢂ᠆ᠺᢛᢕᡀ $r \Gamma^{c} \Delta^{c} \square \Omega$. ₽۹4⊲⊘ ∆⁰لےا∿∆ ⊳∿⊦∕°∽∿∽ તુંનુC. ᡣᠳ᠋ᡃᢗ᠋᠋᠋ᠺ᠔᠋᠋᠂ᡣᡗ ⊲L ∿دم ⊳∽ናርነላ⊳∿ርነጋር. ᡣᠣᡃᢣᠵ᠖ᡃᢗᠣ᠊ᢀᡩᡃ᠘ᢗ.

ላለፊት prtC ᠕ᢅ᠆ᡥ᠆᠆ $\Delta^{i}b_{J}b_{J}d^{i}\Lambda^{i}\Lambda^{b}\Lambda^{b}d\sigma$ ᡃ᠋ᡃᢆᢐᠣᡗᡃᠵ᠋ᡃᡫᠣ. 424664c ᠘᠋ᡃ᠕᠆᠕᠘ ᠂᠋ᡃᢐᠣ᠋ᢉᡃᠵᡃ᠋ᡶᠣ᠆᠖᠋᠋ᡃᡗ᠋᠋᠋᠋᠋᠋᠋ᡃ᠋᠔᠊᠋ᢉ ᠕ᡝ᠕ᡐ ᠘ᡃᡃᡆ᠋᠆᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕ 'የለ \ ▷ < ⊳∿৮Ր⁻∽∿ ൧൨ഺഺ ᡃ᠋ᡃᡖ᠋ᡗᢞ᠋ᡃᡫᠣ. ∆^ເb_ງປ^ພະ⊳_ງ⊲^ເb⊂Cናσ. ᠕᠈᠊ᢣᢗ᠌᠌ᠺᢣ᠋᠂ᠰ ፈር ᡃ᠙᠕ᡃ᠋᠋᠋᠋᠆ᢪ᠆᠋᠖᠂ᢗᢛ᠘᠆ᡘᢛ ∆∿٩ ᢀ᠌ᡄ᠋᠋᠋᠋ᡪᢛ᠒ᠳ᠋ᡗ 1980-°°°σ. ᢉᡆ᠋ᡗᡆ᠋᠋᠋᠋᠋ᠲᠫᡝ᠋ᠴᠳ ⊲L ᠘ᡃᡃ᠋᠋ᠴᡃᢗᡃ᠋᠖᠋ᠬ᠈᠆᠘ ۹⊳⊂۲₀Ų ∩دځغ۹۷ ∆؈ٵ٩٩٢ ∧⊳Ր∟^ቈԸ∿Ⴑ. ${}^{(2)}{}^$ ᠘ᡃ᠋ᡃᢑ᠋᠆᠋᠘᠆ᡁ᠕ᢂ᠖᠖ᠺ᠖᠘᠘᠘ ₽₽₽₽₽

▷৳▷৴▷ՐՎౖ▷ˁℾՎ^ቈ ᢦ᠘≦<∿ ౨ౖౖ৶ঀ৾ ∧ᢑ৴▷᠒᠘ᢣᠵᢩᢦ᠆ SSR-୮ <՟☞ን৴ᡄĹ^ቈ ∧ᢑ৴▷᠒᠘ᠴᠦ ௨౨௨᠘^ቈᠠ᠘ᡶᢋ ᡓᡄᢌᡗ ᡆᡘᡩ ᠘ᡩᠫᢑ᠘ᢣᡆᡃᡘᡧᢣ᠘᠄. ᡬ᠊ᡄ ௨௮᠘^ቈᠠᡶᢣ^ᢘᠫ^ᢘ ᡬ[᠇]ᡄ ᡩ᠕ᢣ ᠘ᡄᡗ᠘J ᢦ᠋ᡗᢣᠦ ᠘᠖᠘ᡫᢣᡆᡃᡘᢐᠦ <՟ᠳᡗ ᠖ᠳᡗᢣ᠋᠅ᡶᠣ.

᠘᠋ᡃᠣ᠆ᡐᡃ ୶⊳⊂(⊳_℃L(۹Ľ ᠔ᠳᡃᡠᡄᢂ᠋ᢉᢩ᠔ᢞ᠋ᠳᠣ م₋لېٰک ዮረፈው ∩_-∿0)⊳ם ጋዮረLዺෑዮJඋሪ ൶ഀ഻ഽ PL4*CD40 ՙԵ⊳≻հԺՙ୮ (Priest ⅆLUsher 2004). 1993), ∿م∆ ᠕᠊ᢞ᠆᠋ᡄᢂ᠖ᢆᡃᢛ᠔᠋᠉ ᡬ᠘᠊ᡃᡗᢪᡆᡃᠴᠣ᠊᠕ᢗᡃᡃᢐᠣ᠋ᡩ ⊲ĽL ᠕᠘ᠫ᠆᠕ ؎ڡڰۯ (NSA) م- المانات ⊸∿⊂ Λ \mathcal{A}° $\mathcal{A}^$

that stock or population in the Nunavut Settlement Area (NSA) up to the full level of his or her economic, social, and cultural needs, where a TAH for a stock or population has not been established by the NWMB subject to the terms of the agreement (Nunavut Final Agreement 1999). The terms domestic or subsistence fisheries are used interchangeably in Nunavut. There was a general agreement that subsistence harvest and exploratory fisheries are carried out at the same time.

A table containing the historical harvest data and quotas will be added to the SSR. In this table, there will be several different types of fisheries noted commercial, test including and experimental/exploratory fisheries. Α Commercial fishery is one where the catch is intended for sale or barter. This type of fishery currently requires a licence, issued under the Northwest Territories (NWT) Fishery Regulations authorizing a person to engage in commercial fishing. A waterbody must be listed on Schedule V of the NWT Fishery Regulations to be commercially fished. The waterbody is opened to commercial fishing upon annual request through a Variation Order for a specified time and quota. Survey, test, experimental and exploratory are terms, which have all been used to describe a temporary fishery, fished for commercial purposes. To reduce confusion, these fisheries are currently referred to as exploratory fisheries and are fished under an Exploratory Fishery Licence. The purpose of these fisheries is to identify waterbodies not listed on

⊲L VeqL7 ᠕ᡃᠵ᠋᠋᠕ᢣᡅ᠋᠋᠆᠆᠋ᡥᡗ᠂ᠳ. $P(\mathcal{A}, \mathcal{A}, \mathcal{A}) = P(\mathcal{A}, \mathcal{A})$ ᠕ᢗᡃ᠋ᡃᡠᡃᠣ᠋᠂ᡥ᠋᠊ᠴ ⊳⁴ペጏ፞፞፞፞፞፞፞፞፞፞፞፞ ᠕᠋ᢅᡗ᠆ᠰ᠋ᠴ <u>հ</u>՞եր_քՍՀ⊳Շչեր ൶ഀഽ ႱႶႱჁჼႶჼႻ *PL*۲*CL*^r*L*^r $L \sim \Omega$ ⊳⅌ՎՐՉ ଏଂ୮?∩⊳< (ےمے>۲ ᡥ᠋ᡃ᠆᠆᠋᠋᠋ᡃ᠅ ⊲∿Րዖና 1999). D⁶bD^{→c} ⊳⁴ீ≟⁺் ᠋ᡐ᠋᠋᠋ᡩ᠆᠘᠆᠋ ح٩٦ ᠘ᡃ᠋ᡃ᠋᠋᠘᠂ᡃ᠘ ⊲)₀(⊳rrc ൧ഄഀഀഺഺ ڔ؈ ⅃℉⅃⅃⅃ℂ⅌⊂ℙℯ℈ℯ _ምየረግ ር∟⁰₽ ⊲ር⊳ና∩ነፊና ₽୮₽₽⊃∩.

በበናኈረ୮ፈ‹ ኦ୮ፈ"ርኦምሪውንድ ጋዜላሀላሪ‹ ⊲Ľ ᠔ᢗ᠋᠂ᡗ᠄᠈ᠣᡏᢦ᠆᠕᠂᠘ SSR-J. ᠂ᠳᠣ᠘ᡃᢗᠫ᠘ᡱᡆ᠕ᡃ ⊳℃∽ $\Pi \Pi \mathfrak{S}^{*} \mathcal{L} \mathcal{L} \mathcal{J}_{\mathcal{F}}.$ ᠈᠊᠋ᡗ᠈ᡙ᠋᠋ᡝ᠆ᡧᢂ ᠘ᡃᡃᠣᠴᡄᡅᠥᡃ᠋᠘ ᠳ᠋ᠴᡆ᠋᠒ᢛᢗ᠌ᢂ᠋᠆᠘᠊ᠺ ᢆ᠋ᢆ᠙᠋ᢩ᠆᠔ᢣ᠆᠋᠋ᠺ᠈᠆ᠳ᠋ ᠋᠂ᢅᡃᡝ᠋᠋᠋ᠫᠻᡃᠣ᠊᠋᠊᠋᠋᠋᠋᠋᠆᠋᠘᠋ᡃ᠘᠋ᢄ᠘᠂ᢑ᠘᠋᠂᠘᠋᠘ᠴᡄ᠋ᡅᠥᢂ᠆ᡘ ᠙ᢩᠴ᠌᠌᠈ᢣ᠆᠔ᠺᢞ᠊ᠳᡃ᠋ ᠘ᡃᡃ᠋ᡅ᠋᠆᠆ᡘᡆ ᠘ᡃᡃ᠋᠋ᠴ᠋ᢉᢂ᠆ᡩ᠂ᡄᢂ᠕ᡧ᠋ᢣᢂ᠆᠕᠋᠉᠆ᡩ᠅ᡩ᠋ $(D^{*}T^{*}D^{*}\sigma')$. $(\Delta L\Delta^{C})^{C} \Delta^{*}D^{*}\sigma'$ Ľ°₂Þ⊀Γ Δh^{r} ᡗᠳᢣᢂᢞ մԸԾ ᠣᠳᡗᠯᡐᠮ ∆່⊎⊃⊂∿ວ່⊥ ᠕᠊ᠲᢛ᠋᠊᠋᠆ᠾ᠋ᡣ᠋᠊ᡧ ᠘ᡄᡃᢗ᠌᠌᠔ᡔ᠋᠕᠆ᠳ᠖ Δ_μΓ <u>م</u>ے۔ہوں الم ∆⁵لےہ کہا۔ے6 ∆L∿l ᡣ᠋ᡣ᠋᠋᠋ᡥᠠ᠘ᡃᠵ᠋᠕᠆ ᠘ᡄ᠋᠋᠊ᡶ ᠮ ᠴᡆᡩᠠᡐᠮ ᠘ᡃ᠋ᡃ᠘᠆᠘᠆᠘ ᠘᠆ᡃᢗ᠌᠌᠔ᡔ᠕᠆᠆ᠳ ᢆᡥᡆ᠌᠌᠔ᡃᠵᡄ᠔᠋᠋ᡪᡘ᠆ᠳᡐᡃᠴᠳ ∆৳এ℃০িিিব∿)িি. ∆L∿L Lጋ∆∿L≺℠ ᡥᡆ᠐ᡃᠵ᠆᠔᠋ᡪᡘ᠆ᠴᠣ ۹٬¢٦CĻċ حد⁻∽مادە∿∆ √۲۲۲۵ ᠕᠈ᢣᡤ᠋᠋᠋᠋᠋ᠰᡗᡗᠣ᠂ᡬᠯᡃ᠋᠋᠋᠋ᢥ᠙᠘ᢣᠣ᠂ᡆ᠋ᠴᡆ᠘ᡃᡃᠠ᠘ᢣᠥ 'b∿b'dَσ્⊲'ેન્∿ ્યL dેC∿L. ᠖᠔᠋ᢄᢣ᠘᠂ᠣ᠋᠉. ف^c⊃۲∆σ[®]. ᠖᠔᠋ᠵ᠆᠆᠆᠘᠖ ▷ኈተ∟균▷፞፞ጚ. ۵)^ی(۲۲۲۹۰ പെപുംപ്റ്_ി ∆‰ے۲۰ ᢆᡥᡄ᠌᠌᠔ᢣ᠆᠋᠔ᠺᢞ᠊ᠳ᠋᠋ ᠕᠈᠊ᢣ᠋ᡣᡄ᠆ᢆ᠋ᠴ. Ľ°adr PPPAG℆Ϸ≻հℨՍϷ՟⅃Ս ∿L ∆⁶ک ∩ √C ᠖᠔᠘ᡔ᠘᠊ᡆᡁ Δኄጏሮኊኇኄ፞ጏ ዸፚጜ፟፞፝፝፝፝፝፞፞፝፝ ዸዾጜ፟፝፟፝፝፝ ᠘ᡃᡃ᠋᠋᠋᠋᠘᠆᠘᠆ᠺ $\Delta L \Delta^{c}$ ᠘᠆ᢣ᠋᠋᠋ᢞ᠘᠆᠆ᡧ᠋᠉᠘ ႶႶናჼ℃⊳ჄႾѷՐჼჂჼ ∆د∿ل V d٦ Ֆ⊳≻Հւ⊃Ն ᠂ᢆᡥᡆ᠔᠋ᢣ᠆ᡐᡗ᠋᠋᠋᠆ᡧᡆᢩ᠖ $\Delta^{i}b \supset \subset \wedge \sigma^{i} J^{i}$.

Schedule V and evaluate their potential as commercial fisheries. Over the last nine years, the local fishers estimated that they harvested less than 900 kg (2000 lbs) of char annually from the Kipisa stock for personal use. The Nunavut wildlife harvest study. however. reports an average of approximately 1700 kg (3700 lbs) of char harvested annually from this stock between 1996 and 2001. A caveat identified in the harvest study is that harvest estimates for char do include some of the commercial harvest and should be considered too high if only considering subsistence harvest of the community. Records that were known to be commercial were removed from the database and it was thought that for the remaining, a small portion of the commercial harvest and most of the subsistence harvest was included. The Pangnirtung HTO however, does not agree with the numbers provided in the harvest study and believe their estimate to be more accurate for this stock. No other estimates for harvest are subsistence available. There are natural fluctuations in the subsistence catch as sometimes bad winters are followed by poorer fishing the next year.

Over the past 30 years, there were 27 years with commercial and or exploratory licences issued for the Kipisa area. Harvest data are available for 24 of these years.

The quota changed during this period from 3600kg in 1982, 1400kg from 1983-1988/1989 and 2400kg from 1989/1990 to the present although we do not have the rationale for these changes. Over this period, the fishery √^יأ√ 9-[°]JC[®])ơ[°]. ൧൨ഺഽ ڡ∟⊳؞ڔۥ۲۲؞ ᠘ᡃᡃ᠘᠆᠕᠆᠕᠆᠘ ∆‰_ખ∠՟_∩ %ຕໍ້໑⊳൳[ൢ]∖൳ 900 kg (2000 lbs) ∆ኈጏ∧ኈኇ ᠄የ∧ᢣ⊳< ∆ኈጏኄՐኈኇ ⊲ک₀(⊳,¬⊃∪ ∽٩⁰५⊳⁻∟∩. ൶ൣ 'b▷≻ᢣ᠋ᡃᠣ᠋*. የґ ላۍ –, **PLイ**[®](Pイー ∆؈ۂۮ ∆‰ບເ⊳∟۲ (3700 lbs) (ኖ∿ና ∆ኈጋኄፍና ላቆኇዅኄኇ 1996 ላL ₽٦₄₀CҼ ᡃ᠋ᢐ᠌᠔᠆᠆ᠺᢦ᠋᠍᠊ᡏ $P_{4}CP_{4}$ م∟کرز⊳۲۲۵ ∆ٛد⊾∆ ᠕ᡃᡃᠣᢇᡃᡄ᠘ᢗ ᢆᡥᡄ᠔᠋ᢣ᠆᠀ᡧ᠆ᠳ᠋ ᠘ᡃᢅᡃᡃ᠘᠂ᡩ᠘ ⊲LI ᡃᡆ᠋ᠿ᠆᠋᠆ᡐ᠖ ᠘᠘᠘᠘᠘᠘᠘᠘ ᠘ᠵᡃ᠘ᢉᢣᢣ᠋᠘᠆ᢅᡆ᠋ᡃᠺ ᠳ᠋ᢪᡃᡃᠫ᠊ᠴ ႶႶናჼႠ⊳ჄႾჃ ₽Г⊰₽С₽&こ℃ _____. 304749% ᡠ᠋ᢩ᠆᠐᠘ᡩ᠆ᡔᢣᢙᠴ᠙ ᠕᠋᠋᠋᠋ᠳᢕ᠑᠋ᢙ ጋዮረሀላያዎሪ ⊿L $\Delta / L \cap \mathcal{D} \subset \mathcal{D} \mathcal{L}^{\mathsf{c}}$ ⊲⊏∿∿∿___, ር ሪት ላጋ ∆د∿ل ᠘ᡃᡃ᠘᠋᠂ᢗ᠋ᡗ᠋᠊ᡠᡃ᠘ ᠈ᠳ᠕ᡙᡐ᠆ᢣᡆᢩᢀ ᢀ᠋ᡥ᠆᠆᠉ ᠘ᡃᢅᡃ᠋᠘᠋᠂᠘᠋ 4L ⊲∿Րኼ∩ኼ∿Րՙጋՙ ᠕᠋᠋ᢅ᠘ᡔ᠋ᢥ᠆ᠳ $Pr < \sigma_{c}$, ᠔᠘ᢣ᠋ᡃᡑᢗ᠋᠋ᡗᠳᡃᠣ᠋ ᠋᠄ᡃᠣ᠐ᡪ᠘᠆ᡏᢦ᠍᠍᠕ ₫Ľ ᡆᡄᢩᢂᡩ᠖ᢕ᠋ᠳᢥᢪᠥ ⅃⊂ー゚∖₽՟⅃Ո ∆'ຢ_ບິໄຕ໌ ເບັ່ງ ຝີ່າຍີ່ ພະບໍ່ ᠕ᡝ᠋ᠾ ᠳ᠆᠆ᠵ᠋ᠵᠧ᠕᠕᠘᠆᠕᠕᠕᠕᠕᠕᠕᠕ ᠆ᢡᡃ᠘᠊ᢩᠣ ᠕ᡃ᠆᠋᠋᠋᠆ᠮ᠆ᡗ᠆ᠯ **۵)∆°₀⊳√**√. ⊲[⊥]Γσ^ቈ ᡃ᠋ᠳᢕ᠋ᠴᢓᡃ᠖ᠺ᠉ᢖ ᠆ᡥᡃ᠋ᠫ᠊ᠴ ለታዾኈርኈጋምና ዾየዾኇ ለዾኈርን厂ቍዾበ՟ጋJ ∆ኄጏኄጚዾናበላናኇ ላኁነበር−ኈር∿ሁኇ.

> ْບໍ່ເອ ຝໍາ່ເງອເ 30-ອ, 27 ຝໍາ່ເງລ ຍິດ ଜନ୍ମ ଜନ୍ମ ພຣາ ເລິຍ ເລີຍ ເລີອ ເລີຍ ເລີອ ເລີຍ

JCL ᡏ᠘᠆᠆᠆᠘ ৻৻৵ ∧Ր⊲∿ጋெ 1400kg ∧Ր⊲∿ጋெ 3600kg 1982-L. 1983-1988/1989 ⊲L 2400kg 1989/1990-J L°aJ NrCJ ArL°rCJr ∿^∿ך%). ጋግዚልግር ርዞግግ (৫ল $dd\sigma P \sigma^{u} d\sigma$, $\Delta^{u} \sigma r \sigma P d^{u}$ $\Lambda c P^{u} C^{u}$ ⊳∿ل(`ف∿)ح

caught more than the quota 9 times. Harvest data are reported by fiscal year (1 April to 31 March) which is the licencing period currently used. although it does introduce some confusion in interpreting these data. Harvest data from 2002/2003 and 2003/2004 exploratory fisheries are If the NWMB harvest unavailable. study data were used as a long-term average subsistence harvest, then the total harvest from the Kipisa stock may be close to double the existing quota of 2400 kg. HTO members asked if exploratory fishery sampling could be divided amongst the fishers on a Since this would still waterbody. provide the samples needed to monitor the fisher and would lessen the work involved for individuals it seemed like a reasonable approach to take.

Discussion included the economics of Although the economic the fishery. discussion is not directly related to the assessment of the Kipisa char stock, it does serve to illustrate and explain some of the patterns of harvest in the exploratory and commercial fisheries in the area. Some of this information will be used in the development of the char management plan. which DFO Fisheries Management and the HTO are working on.

In Pangnirtung, the fish plant is the principal purchaser of Arctic char. Fish are caught under commercial/exploratory licences and are sold to the plant. The plant provides the trade records (purchase slips) which are sent to the DFO Area office in Iqaluit and detail the harvest for the particular waterbody. Ű₂Þ⊀Γ, ᡆᠴᡆ᠋᠋ᠲᡗ᠒᠋ᡗ᠒ᡄᡗ᠋ᢆ᠘ᠴᢩ᠕᠋᠋ ᠌᠋ᡔᠻᢇ᠋ᢩ᠆᠆᠘ᡐ᠋᠁ ጋዮረር ላየል ድ. ጋዮረሀፈላሪ ᠔᠘ᢣ᠋ᡃ᠋ᢄ᠘᠆᠂ᠳ 2002/2003 ⊲L ᡠ᠌ᢄᢣ᠆᠋ᠴ᠘ᡃᠣᠵ᠆ᡘ᠆ᡏ 2003/2004 $d\Delta^{\circ} a \Delta^{\circ} C$. $a a \Delta^{\circ} L \prec c a \Delta^{\circ} L \land c a \Delta^{\circ$ የሆኑ የሀገባባ ᠋᠈ᡙ᠒ᢓ᠕᠕ᡁ **⊲**⊃°•C⊳<<C ᡏᢣᡏ᠊ᠣᡌ ᠆ᢡᡃ᠘᠊᠌ ለ৮୮ቍ[٬]ቍ[٬], ዞበ[٬]ጋቦ ዾ፟L፞፞፞፞ጚ*ር୮ቍ[٬] 'የለ፟፞፞፞ዾ› ᠘ᡃᡃᠣ᠋᠆᠘ᡃᡗᢦ᠋ᡃᠲ᠋᠋᠆᠕᠋ᢪᡆᢩᢂ᠆᠘ ቨር⊳⊰ኈ 2400 kg. ▷L∹ናው ላበነሪና ሀበL≻℃ ᡏ᠕ᢅᡣᡄᢩᢂ᠋᠉ᢕ ᠋ᡃᠣ᠘ᢣᡆ᠀᠋ ᠘ᡃᡃᠾ᠋᠆ᡄᠣᡃᡃ ᠕ᡃ᠋᠆᠆᠆᠆᠆᠆᠆ ∆∿ل∠ا⊂ل Ċ° م ᠕ᢗᡃ᠋ᡃ᠋ᡅ᠋᠋᠋᠕ᢗᡃ᠋ᢐ᠋᠊᠋᠕ᢗᡃᢐ᠋ᡅᡐ᠋ᡃ᠖᠋ᡃ᠋ ∆L∿bσ. ᡃ᠋ᡰ᠔᠋ᢄᢣᠺᡃᡌᠴ ک⁶لےں∿ک ∕L₋∕⊳ ᠘᠋᠋᠋ᢑᠣ᠘ᢣᡃᢆ᠋ᡥᡗᢪᠳ ∆∟∆` ∿لد'لک ∿لدک¢ ک۰∆د.

⊳ն⊳ഺ൛๛ ᠕᠖᠘᠘᠈ᢣ᠘᠀᠘ ᠙᠆᠔ᢣ᠆᠀ᠶ᠆ᢦ᠔ᡃ ᡥᡆ᠌᠌ᢂᢣᡄᢂᠺᢞ᠊ᠳ᠋᠋ ₽₽₽₼ کژ∿لے⊲∠⊳∿۲۰کٰلے⊲ ኼ⊳≻ጚኈር⊳∿Ր 'የለኣ▷< Δኈጏለግ፝፞፝፞፞፞፞፝፝፝፝፝፝ኯ፟ዀዀ, ርቍ፝፝፝፝፝፞፞፞፞፞ዾስነበጚዀ ላ፟፟፟፟፟፟ ∆ഺ∿ഀ൳ പാപ∆∿∠്⊃െ ᠋ᠳ᠘ᡔ᠘᠊ᡆᡁ ᠘ᡃᢐ᠋᠋᠆ᡣ᠘ᢧ᠆ᡣ ⊲⊔ ᡥ᠋ᡄ᠌᠌ᢂᢣᡄ᠌ᢂᡪᠯᡏ᠖᠘᠖ᠴᡄ᠋᠋᠆ᠸ᠖ᡀ J64J24C ᡏ᠋ᢕᡄ᠊᠋᠋᠆᠆᠆ ∆د∿ $\wedge^{\circ} - \wedge^{\circ} - \circ^{\circ} - \circ^{\circ$ ᠔᠘᠋᠋᠋ᡗ᠋ᢄᢕᠧ᠋᠋᠆ᡔ᠈ᡏ ᠘ᡃᢆᡃᠣᠴᡄᡅ᠋᠊᠋᠋ √ഗ്പാ⊴⊘ ₫L $\dot{\mathsf{D}}\mathsf{L}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{L}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{L}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{L}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{A}^{\mathsf{h}}\mathsf{C}\mathsf{C}^{\mathsf{h}}\mathsf{C}\mathsf{C}^{\mathsf{h}}\mathsf{\mathsf{h}}\mathsf{C}^{\mathsf{h}}\mathsf{C}^{\mathsf{h}}\mathsf{C}^{\mathsf{h}}\mathsf{C}^{\mathsf{h}}\mathsf{$

<ిర్'ర్. ᠘ᡃᡃ᠋᠋᠋᠘ᡃᡃ᠘᠆᠘᠕ᡃ ᠳᢣ᠋ᠺᡃ᠋ᡃᢑᢗᡃ᠘ᡃ ∆'రి⊸∆ిర్. Δኄ_Δ[、] Λ৮▷ኄ⁽ርኈ)[、] ላር ~ ᠋ᡃᡖᠵ᠆᠆᠆᠘ ᠙ᡆ᠔ᢣ᠆᠔᠋ᠺᡃ᠕ᠳ᠋᠋ ⊲⊔ ᡄ᠘ᡃ᠋ᠲᡗ᠊᠆᠘᠆ ⊲⊔ ᠆ᢣ᠕᠕ᡃᡃ᠆ᡗ᠈ ᠘ᡃᡃ᠋᠋ᠴᡄ᠇ᠺᡃ᠋ᡃ. ᠘ᡃ᠋ᡃ᠋᠘᠖ᠴᡄ᠋᠘᠗ᡔᠧ᠕᠌ᢂ VCP_{PO}^{PO} ᢉ᠌᠌ᢂᡩ᠘ᡁ᠘ᡁ $(\sigma \triangleright \land ? \cap \Gamma \dot{\sigma}^{c} < \Delta^{c} \dot{c})$ ᢀᡩᡄ᠉ᡣᢗ᠈ᢞᢗ᠈ᡬ ᠘᠘᠋᠋ᡗ᠋ᢩᢂᢕ م⁺دائ∆ ⊲L $a a \Delta^{+} F^{+} L \mathcal{A}^{-} \Delta^{+} b a^{-} C \Gamma \sigma^{-} \sigma^{-}$ ∆LÞ< ັດ_ີ່ດັ[∿]ປດ. b∩^ເጋՐ 60,000-Γ to 70,000

A total of 60,000 to 70,000 lbs of fish are available in the area. In the winter, the plant will only purchase about 10,000 to 12,000 lbs of frozen char. The winter fishery is limited because the fish plant has a more restricted market for frozen whole (not cleaned) fish. These fish are used for local sale and can't be shipped out of Canada. Fishing begins and continues until the fish plant stops buying at which point the fishers stop fishing. The fish plant has limited capacity to process and store char. Therefore, the fishery may stop abruptly because there is no place to sell the catch. The fish plant is interested in purchasing fresh fish during the summer season but they prefer that the fishing is spread out over the longest possible season. The U.S. market would buy 3000 lbs of fresh fish two or three times a week if it were available although shipping can be a problem. The fish plant is also interested in purchasing larger fish and usually pays less for smaller fish. Usually they only buy fish over 5 lbs and all fish are graded by size. They either won't buy small fish or only pay \$.75 or \$.50 per pound. As a result, smaller fish are kept for subsistence or given to elders or sold for less money. The market influences the pattern of harvest. In the last couple of years, the plant has bought more fish than they had previously (52000 lbs). The market had improved last year and there were hopes that it would be better this year. The fish plant is trying to develop new southern markets for the products, which has resulted in the shift to fresh char. Boston demand may increase the amount of fish that the plant is able to sell.

∆ኈጋርኪል፦ ወ⊳ልኈርዖኈ፞፞፞ 10.000-Γ 12.000 lbs-⊥ ᡃᠳᡐᡃᢧ᠋ᡖᡕ $\Delta^{i}b _ \Lambda^{-}\sigma^{c}$. ⊳6⊳_Pq_c ᠘᠋ᡃᡉ᠋᠆ᠳ᠉ ዮ′<u>~</u>ዄኈበር⊳፞፞፞ጚኈ ᠔ᡥᡄ᠋᠋ᡗᠣ᠘ᡃ᠋ᡌ᠋ᠴᡄ᠋᠋᠋᠋᠕᠋ᢂᢣ᠋ᢞ᠂᠋ᡗ᠆ᡄᡃᢐᠲ᠒ᢕᡃ᠘ᡃ ᠆᠋ᢣ᠕ᡧᡃ᠋ᢣᢂ᠆ᡱ᠋᠆ᢘᡃᢧᠥ^ᡕ ᠂ᠳᡐᡃᢑ᠊᠋ (ፚኁጜዾዀጘዾዀርንና) ∆⁵ه_∆۲. Ç٩٩ Δ؈Δ۵ ⊲℃℃℃ ൭ഄഺഺ ᠆᠆᠆᠆᠆᠆᠆ ⊲L ، صن م^ر. ᢀ᠆᠆ᡎ᠐ᢕ᠆᠆ᠳ᠙ po_C⊳< $\Lambda \Gamma \Delta ^{e} < C \Sigma ^{e}$ ᠘᠋ᡃᡖ᠆ᢧ᠘᠘᠕ᢆᠴ ⊲L ᡖᢋᡗ᠆ᡆ᠋᠋᠉ᠫᠳ የረፈ ፊኄጋርሲል ᡔ᠌᠋ᠵ᠋ᠺᡃ᠋᠖ᡃᡗᢪᡠᡃ᠋ᠫᠥ D6924990 ∆ئە_ل≺ەئە≻ا-خ%). ᠘᠋ᡃᡌ᠘ᡀ᠘ᡀ ᠘ᡃ᠋ᡃ᠋᠋ᠴᡄᡅᠺᢂᢣᡃ Բ՟–՞⅌ℯՍՀԻՐՐ ᡖ᠋᠋᠆᠆᠆᠆᠆᠆᠆᠆᠆ ∕Ľ ∆፫ґLᢞᡆ᠋᠋ᢞᢗ᠋℃ᢪᠥ. (ALA ٔ ص^ول. ᠴ᠋᠋ᠲᡋᡃᡄ᠋᠋᠆ᡆ᠋ᠲ᠋᠋᠋᠉ ᠘ᡃᡃᢧ᠋ᠴᡄᡅᠥᢂᢞ ᠔᠕ᡱ᠋ᢩᠳ ᠣ᠔ᡧᡃᢞ᠋᠋ᠴ᠋ᡥ᠘ ᠘ᡃᡃ᠋᠋᠋᠘ᡃᡃ᠘᠆᠘᠕᠋ᢂ᠆᠆ ∆؈℃٦٦℃. ᠳ᠔᠀᠙᠙ᠺᢓ᠘᠊ᢋ᠉ ےرف ⊽ کیم۔ م⊳م_ام ᠘᠋ᡃᠳ᠘᠕᠆ᡣ የረፈዋር てくつでくしてく ⊲۹۹۵۶۲۰ مهک۲. ᡔ᠋᠋ᠵ᠕᠋ᡃ᠖ᡃᡗ᠆᠋᠋ᡗ 3000 lbs _റ്ര Ľγُ ∿⁺℃` ∆'لے ک ᠕ᡨ᠘᠘ $\Lambda_{a} \rightarrow \Lambda_{c} \rightarrow \Lambda_{c$ ᢀ᠆ᡄ᠒ᡃᡣᠣ᠊ᡃ ᠕᠔᠋᠋᠆᠆᠐᠈ᠺ᠐୬ ᠘ᡃᡃ᠋᠋᠋᠘ᡃᡃ᠘ ᠳ᠔᠋᠕ᡁᡕᢗᠫ᠋᠋᠋᠘᠇᠘ᢞᢕ᠉ ᠋ᠿᡗ᠊ᠣ᠋᠋᠋ᠳ᠘ ∆'b_ిర్ ∕ĽL Δ^{μ} ርንም Γ^{μ} Δ^{μ} Δ^{μ} שאנינולי ⊳∿ללייסד 5 lbs שר ∆‰____ໂ∿ປ⊀ິ ላዣቍዣበJና. ቍኦልኈርንኄ፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፟ናንና Ľዮጘቍና ∆‰ے ح∿ ⊳°ペン゚፦℃ ۹۲⇒۵۲⇒۹۷ ك∿≎ك \$.75 \$.50 ላጋ lbs. $(\Delta L \Delta^{\circ} \sigma^{\circ} L \Delta)$ Γ°σ[%]հΔ^c ∆∿ل∆د ר-,סל-20 ∿_م_بور ⊳<℃⊃⁺⁺℃ **⊲**₽₽°ᠳᢣ⊳՟_∩. ∿∿∿∿∿∟ ۹۲۶۶٬۵۵ ؇^ۥڔ۬ڹ L?cゔ゚゠. ∆ౕట⊐ఁ౦><ిరాఁ. ᠘ᡃ᠋ᡃ᠋ᡅ᠋᠆᠆᠕ᢂ᠆᠆ ᠕᠋ᢅ᠆ᡷᠣ᠋ᡃ᠆ᢐ᠘᠊ᠣ ᠘ᡃᡃ᠘᠆᠕ᢆᡃ᠘᠆᠕ ᠕ᡃᡃ᠖ᡃᢗ᠌᠌᠔᠆᠔᠋ᡃ᠘ᠳ ۹^₀۲ُσ ᠕᠌᠋᠔᠘ᡩ᠆᠆ᡒ᠋᠘᠊ᠺ ⊲L ᠕᠌᠔᠋᠆ᢞ᠋᠘ᢂ᠘ ۲Ĺσ ⊿^₁ŚJΓ. ᠘ᡃᡃ᠋ᡅ᠋ᠴᡄ᠋᠇᠕ᢂᢣᡃ ഹി موړله പ്പുറ ~⊳∧⊲∿ነ√~_ኈጋቍና $\$ ᠕᠆᠋ᡝ᠊ᠣ᠈᠆ᡧ᠘ [،] ص) ک Δኄ፝፝ጏΔ^ເ. ፟<

The Kipisa fish are available to the fishers after they migrate to the sea. Exploratory fishery generally The occurs when they begin congregating near the mouth of the river beginning in late July until they move up into the freshwater system. By mid-August, the exploratory fishery is usually complete. This provides a short window of opportunity to fish and the window in most waterbodies is synchronous. Licensing is an issue for exploratory fisheries since there is a delay between applying for the licence and when it is issued. Once the fishery is opened under an exploratory license, the fish may not be accessible. This is another reason that the community would like to see this fishery listed as commercial since the process to open the fishery is much faster.

ASSESSMENT

Key Indicators

In most of the char stocks in Nunavut, there are no estimates of the stock size or direct measures from tagging studies or weir counts. As a result, the stocks are assessed by managing the catch (setting the quota and tracking harvest levels), collecting effort data (catch-per-unit-effort Index). determining the catch structure from biological samples taken from the fishery and having research samples comparison purposes. The for information collected is interpreted in light of Inuit Qaujimajatugangit (IQ) or Traditional knowledge (TK).

From the scientific literature, removal rates of between 5 and 10% are usually considered sustainable for char populations (Cosens et al. 1998).

᠕᠋ᡩᡄ᠋ᡗ᠊᠋᠕ᢕ᠘᠋ᠴ᠋᠋᠆ᡣ᠙ ᠘ᡃᡃ᠋ᡰ᠋ᠴᡄ᠇᠕ᢂ᠋ ᠣ᠔᠋᠕ᡧᡃ᠋᠋ᡣᡗ᠋᠆᠆᠋ᠴ᠖ 'የለ \ ▷ < ۵°مائلام ∆∿പംപ് ᡏ᠋᠘ᢧᠧ᠆ᡐᠧᢈ በረትሪካር C∼Þ¹₋ſ. ᡃ᠋ᢐ᠋᠌᠔ᠵ᠘᠂ᢆᠣ᠉ _____ చ__ \bigcap° \square° \square° የበላታ 4° በላታ 4° ነት ነው እንዲነት የሆኑ እስከ ᠕ᢣ᠋ᡬᡶ᠋ᢣ᠋ᢅᠰ. ڔؖ؈ VCP_UCA_{P} $\mathfrak{P}_{\mathsf{C}} = \mathsf{P}_{\mathsf{C}} + \mathsf{P}_{\mathsf{C}} +$.∩د⁺د>וׂ≺∿ ᡄ᠘ᡃ᠋᠋᠆ᡗᡃᢐᠲ᠒ᡃᡣᠳ᠋᠋ᡃ ᡥ᠋ᡃᠡ᠋ᢞᡃ᠋ᠲᢉ᠋᠌ᢂ᠆᠘ᢣ᠋᠆᠘᠋᠋᠆᠘ᢣ᠋᠆᠘ ᠖᠔᠋ᢄᢣᠲ᠋ᡃᠴ᠋᠊᠘ᢣ᠋᠆ᡗᡃ᠖ᡃᡃ᠋᠌ᠵ, LJAGALC ᠘ᡃ᠋ᡃ᠋ᠴ᠘ᡃ᠋ᢄ᠆᠘ᡃᡃ᠋ᢣ᠋᠋ᠵ᠘ᡩᠴ᠘ᡩ᠘᠋᠋᠆᠘ᡃ᠘᠋᠋᠆᠘᠂᠘᠋ᡃ᠘ Δር[\] Λ[\] - A[\] - A[\] CdJL - A[\] ∩∩∿ር⊳∠∟⊸∽ ᠘᠋ᡃᠣ᠆ᠲ ᢆ᠋ᢆᡥᡄ᠔᠋ᢣ᠆᠀ᡧ᠆ᠳ᠋ ᠕ᢟ᠆᠆ᡐᠣᡃᡃ

ᡃᢐ᠋᠔᠋ᢣ᠆᠆᠆᠕

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᠕᠋᠋᠋᠘ᡃᡄᢩ᠋ᢥ᠋ᠺᢂᢋ	᠘ᡃᡃᡅ᠋᠕ᡨᠣ	[.] دګ۲,
ڡٮؚ٥°ۮؗ؇٩٢٢	᠆ᢞ᠋ᡃ᠋ᢐᢞᡗᡃ᠘ᡕ	᠘ᡃᢆᡃᠥ᠋᠋ᠴ᠘ᡃ
ᢀ᠋ᡗᢣᡃᠣ᠋᠋ᡥ᠆ᠳ		ݢݮݼݤ
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∢⊳⊂(⊳-⊐∪	ԾՔ⊃Հ⊳հ	^c (ძCზსთ
₫℠₽ィ՟ጔ∩	ଏଂL ^୳ ⊳ନ	۲۹−۲٬۵۶٫۳
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<u></u> մ ^ቈ ℙℯ୵Lℴ _՟ Ն	ᡃ᠖ᢂ᠋ᢣᠺᡃᢂ	-
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Based on the assumption that the current level of harvest is sustainable and the population is stable, using the harvest rate from the exploratory fishery and this 5-10% removal rate, Ross Tallman estimated that the population would catchable be somewhere in the range of 17,000 and 34,000 fish. Using cohort analysis to determine mortality rate and from this, estimating the stock size would give an estimate of over 35,000 fish in the catchable population.

When this information on stock size was presented, the local fishers were asked if they thought these numbers were real. Although they did not know, they agreed that they liked seeing these sorts of estimates for planning especially when they wanted to develop a fishery.

Stock trends

Catch-per-unit-effort (CPUE) was used to measure stock trends. These data are only available from the scientific and sampling program not the exploratory or subsistence fisheries. Nets were standardized to 150 ft for the analysis. Many factors contribute to the variability in CPUE including weather conditions, fishing location, etc. Some discussion centered on the idea of an index fishermen specifically recruited to record the necessary data (CPUE, local weather conditions, etc.). This might solve some of the problems we have had in collecting and interpreting CPUE data. This would provide more precision in the comparison between CPUE in the fishery and in the scientific research series.

∆"⊾__(⊳ແ) ຉຆຉ⊲ຆຒຬຩຒຎຏຎ ᠕᠋᠘᠆ᢢ᠆ᠺ $(\Delta L^{b} \Delta a \wedge T^{c} a < J^{c})$ ଏ)_"୦୦ ∆"⊎_⊃℃>< ᡃᢅᠡᢤ᠋᠆᠆ᠳ ᡃᡖᠵ᠆᠆᠆᠘ Ċ௳ ᠘ᡃᡃ᠋ᢆᡅᠴᡄ᠋᠊ᡊ᠊ᠮ ⊲L ĊL° 5-10>5 Ġ٢ ^^ቈር▷^ቈርነቍዮ. ᠘ᡃᡃᡅ᠋᠋᠆ᡣ᠘ᡍ᠋ م_∠◊‹(⊂◊٩)٩ ᠕᠋ᢅ᠘ᡔ᠋᠂ᢕ ᡃᢐᡄᢉᡃᢞ᠋ᡶ᠋᠋ᡠᡃᠲᢣᡗ᠉ 17.000 ⊲ĽL 34.000 ∆∿ل∆۲. ঀ৴৽৴৽ ᠕᠋ᢅ᠘᠆ᢥ᠆ᠳ ᡃ᠋ᢐ᠔ᡔᢣ᠋᠆᠋ᡗ᠊ ᡆ᠋ᠴᡆ᠘ᡃᡃᢄᡔᡆ᠋ᡗᡃ᠘ ᠋ᠫᡃᡝ᠍᠊ᠲᡃᢕ ∕L₋∕⊳ ڡ_∠Þ[‹]Ċ'۳ ርኖራግቦር. ᠕ᢗᡃ᠋ᡃᠣ᠋᠂᠋ᡗᢪᠴ ه¢ل∫ه ላኄጉዲ م_ک²(۴(۵)۶ ᠕ᢣ᠔᠊ᢞ᠊ᡆᡃ᠋᠋ 35.000 ᠘ᡃᢅᡃ᠋᠘᠋᠘ᡃ ⊴Γ,່ີ ວີ້ີ ເ

ር ግንዮ/ርሳያሉ ለትኦሀር ግን ለርያነው የግንግ ൭ഄഺഺ ላ℃~℃~. ∆ٛلےل∿ک ᡏ᠕ᡣᢣ᠔᠆᠐᠉᠕ ∆طلد⊳۱۲٬۲۵ ف∠⊳∩∘ ᢐ⊳ᢣ᠘ᡄᢀᡩᡗ᠋ᢆᠫᡰ᠋ᠴᡏ᠋, ^ν-^μL^{⁴υC.} ۲۲-۲۲) دارو ୰୳ୖୖ୵ୢ୰୷ $(\Delta L \Delta^{c})\sigma$ ٦ᢗᡥᢈ᠘ م∟⊳د۲۹۵ ᠆᠆᠆᠆ L^{P}

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4C⊳cUr9c ᠕ᢣ᠌ᢂ᠆᠕᠆ᡐ᠘᠕᠆᠕ (CPUE) ᡏᢕᡄᢂ᠋᠉᠂᠖ᢂ᠆᠘᠆᠕᠆᠕᠘᠉᠂᠘ ᡏ᠋᠐᠀ᡀ᠆ᡐᠺᠺ ᠖᠔᠋᠆᠆᠆᠘ ᠕᠆ᡅ᠊᠕ ᠆ᡧ᠘᠋᠋᠖᠔ᡔᢣ᠋᠋᠋ᡃᠣ᠋ᡗ᠋᠋᠉᠘᠂ᠺᢁ᠋ᠴ᠋᠅᠆ᡘ᠖ ft ᠖᠔᠋᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆ ٩٢ڬ٦٩ 150 CPUE ¢¢∠⊳%) ᠕᠕᠕᠕ ᠕᠋ᡃᡖ᠘ᢓ ר⊂⊳< ն_∆⁻Շ∿. ۰Γ $\Delta^{i}b \cup b \wedge d^{i}\sigma^{*}\Gamma^{i}$. ⊲۲°۲۰_. ∆∟ີՐ >P.P.P.U.P.9.4 ∕້⊀∩‰_⊲∠⊳ິົິ Δ~LΓ≻>ʿ_∩ ∩∩ናኄʿCʿ_∩ Δኄ_Jレረ⊲ᅆՈ` ᠕᠋᠆᠋᠕᠅᠘᠆᠂᠆᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕᠆᠕ ᠕ᢗᡃᡃᠳ᠘᠋ᢂ᠆᠆᠆᠌ ጋዮረሀፈነዋስት (CPUE, ؎ݠ᠆᠘ ר⊂⊳< ზ_∆_~∿_∿. ⊲۲∿۲՟__.). ᡃ᠋ᡬᡃᢛ᠋᠙ᡃᢞ᠊ᡆ᠋᠋᠋᠘ᠳᡅ᠕᠆ᠳ ۯؖ؎ ᢀ᠋᠆᠆᠆᠆᠆᠆᠆ ᠴᡏ᠋ᡣᠳᠮ ⊲L ᠌᠋᠋᠋᠋᠋᠋᠋᠋᠋ᡔ᠋᠋᠋ᡗ᠆᠆᠃᠆᠃᠃᠃᠃᠃᠃᠃᠃᠃᠃᠃ ለር**ኈ**₽ቦርሀር≻ቌጋኈ ᠘᠆ᠳ᠋ᡃ᠋ᢑ᠋ ϤϞϷϳϧϤϤϧϢϘϥ ⊳da∿ba CPUE ᠘ᡃᡃᠣ᠋ᠵᡄ᠋ᢛ᠋᠋ᡏ᠋᠄᠋᠖ᢂ᠋ᢣᠲ᠋ᠮᠮ

Since the opening of the exploratory fishery there has been no apparent change in catch rates nor in the size and age structure in the population of fish (Tallman 2004).

Age frequency data were presented for 1998 to 2004. No sampling of this stock was carried out in 2001. Sampling in 2004 suggests a change in the population age structure towards more of the younger fish. The results 2004 from the sampling were discussed by the committee. А reduction in age classes and an increase in the smaller fish might signal that the fishery is having an impact on the stock. Scientific sampling of the Kipisa stock is done over a very short period of time and as a result, the 2004 sample may also be an anomaly. Notes taken during the sampling suggest that it was colder and more difficult than usual to catch the fish. Tracey Loewen found it took her longer to catch char in 2004 but Billy Evic caught lots of char fast when he fished later in the season. He indicated that he did better fishing last vear than the previous five years. It was suggested that rather than it showing a shift in the population structure, the 2004 sampling may have resulted in a different part of the run being fished. This might suggest that because of environmental conditions the fish came in together in a pulse. Tracey Loewen sampled ahead of the pulse and Billy Evic fished when the pulse occurred. The year was colder than normal which may have delayed the normal staging of the run. There was general agreement that the 2004 fishing season was colder. There was lots of multi-year ice coming into

᠋ᡔ᠆᠆᠆᠆᠆ 1998-**F** 2004-_. ᠖᠔᠋᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆ ᢗᡃᠳ᠋ᠣᡨ᠋ ᠕ᢗᡃᡃ᠋᠋ᡋᡃᠣ᠋᠂ᡗ᠆ᠳ 2001-L ᠋᠋ᡃᡖᢄ᠘᠙᠋ᠴ ᡆ᠋ᠴᡆ᠘ᡃᡃᡟᡄᢩᢂ᠋᠅ᡗ᠅᠋᠕ᡩ᠘ᠴᡆ᠘ᡃᡃ᠆᠘ 2004-Г ᠕᠋ᢅ᠘᠆ᠾ ᠐ᢉᡝ⊃ᡏᢞ᠆᠘ᡃᠯᠣ᠋᠋᠆ᡩᡗᡭᡆᡐ ∆؈∠۲. ᡃ᠋ᢐᠴ᠘᠂ᢆᠣ᠋᠆᠘᠆᠘ 2004-F ⊳⊌⊳∠⊳⊳℃ 6∩∟≻۲ذے۵. ᡃᡰ᠔᠔ᢣ᠘᠋᠂ᠳᡗ DDD JL C ᡏᡣᡄᢛᢣ᠋ᢄ᠆᠉᠑ᢕ ⊲L ᠕᠃ᡗ᠆᠆᠋ᢕ᠙᠉᠑ ∆؈ۦٛۮ؈؇ے۵ ᡆ᠋᠋ᠴᡆ᠘^ᠲᠠ᠋ᡝ᠋᠘ᡱᡆᡅ᠊ᢩᢂᠭ ᠘ᡃᡃ᠋ᡅ᠋᠆᠆ᡘᡆ ᠕ᢗᡃ᠋ᡃᠣ᠋᠂ᡗ᠆ᢆᠴ ᡏ᠋ᠫᡃᠦᡃᡠᡃᠥᡃᡃᡅᠴ 'የለ \ ▷ < ᠋᠄ᡃ᠋ᢣᢂ᠆ᠳ᠘᠊ᠯ ᠕ᢗᡃᡃ᠋᠋ᠣ᠋᠂᠋ᡗᢪᠣ ⅌ℴℾ⋗⋞⅃℆ℾℂ ∕ĽL (۵L۵ ٔ ص^۱ ۲ م 2004-F ᠋᠖᠔᠆᠘᠘ᠺ᠕ ᠂᠋᠆᠈᠆᠕᠆᠕᠆᠆᠕᠆᠆ᠰ متوححها والم ᠕ᢣ᠌᠌ᢂ᠆᠈ᢕ᠉᠑᠆᠕ᢣᢂ ᠳ᠋ᠴᡆ᠘ᡃᢛᠠ᠊ᢅᢣᡃ ᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆ ⊲L ᠫᡪ᠘ᠠ᠋᠋᠅ᢞ᠊᠋᠖Ϸᠵᡄᢂ᠉ᠫ ঀঀ৾৾৾৾৸৸৾৾৾ঀ৾৾৾৾৾৾৾৾৾ ∆ິ⊎_ງີ໑∠⊳ົՐິ) ∆ິ⊎_∧ີ ເ 2004-Γ የረላውር ልሮ ∆የ ላГ√ው ∆የጋሮ⊳°ጋ* ᠘ᡃᡃᠣ᠋᠕᠂ᠣ الد ۲۲ے۴ ᠔ᡏ᠋ᡣᡏᢄ᠆ᠳ᠆ᡥᡀ $\Delta^{\mathfrak{h}}$ ᠘ᡃᡃ᠋ᡰ᠋᠋᠋ᠴ᠆ᠳ᠋᠋᠋᠋᠋ᠲ᠋᠉᠆ᢑ᠋᠋ ݡ⊐ݥݤ"ҶҀݤ"Ⴢ" ▷ኄ▷८▷∿ๅ₽ ᢉ᠕᠘᠖ᡙ᠘᠘ ᢤ^ᢐ᠙ᡃ᠋ᡗ᠘ᠳ᠋᠂ᡗ ᠕᠘ᠫ᠆᠕ 2004-F ᡃ᠖᠔᠆᠘᠂ᠳ᠘ᡀ հ֎ԽՍՐԵՆ ᢦᡃᢣᡗᡃ᠋᠋ᡥᢉ᠋᠋᠋᠋ᡃᡫᠳ᠋᠒ᢣᠯ᠋᠆᠘᠋ᡃ᠋᠘᠘ᡃ᠋ᢉᢙᡄᢂ᠋ᡃ᠋᠋᠘᠄᠘ ᡬᠳ᠋ᢕ᠘᠘᠕ᡱᡆ᠉᠋ᢕᢘ᠂᠕᠈᠊᠊ᠯᢕᡗ᠆᠋ᠴ᠋᠋ᠨ᠋᠂᠋᠕ᡧᢕᢂ᠈ فا∿ح∿مط ᠘᠋ᡃᠣ᠋᠘ᡃ ₽₽₽₽ ℃` ℅₽₽℆∟₽℆⅃ℴ ۹C⊳Uր۹. JUZ ۲۶-۵J^ເ ۹^L ۵⊂ ۵۵^k ۵^k⊔۲∠^k)^k ∕۲ĽŶ٬D ხ∩∿ს~ზ∩՟_∩. ℙ℩⅃℆ℙℿℴ⅁ℯℷ℈ ᠆ᡄᢞ᠋᠆ᠳᡃᡃ᠋᠆ᠺ᠆᠘᠋ ᡣ᠘ᡃᠣᡅ᠘᠋ᢆ᠆᠆᠆ ᠕ᡥᡗ᠖᠕ᡩ᠘᠘ 2004-F ᠘ᡃᡃᡖ᠋᠘᠘᠆ᠳᠮ rdbLacd'L' < σ 5 ΔΡ τσ 2004-Γ ᡏᢕᡃᡄ᠋ᡃᢐᠲ᠋ᡔ ᠠᡄ^ᢐᠾᠣ ᡐ᠋ᡃ᠘ ᠘᠘▷< ⊳_⁶5⁶6. (°_ ᠕᠈᠊ᢣ᠋ᡣ᠔᠂ᢞ᠋᠆ᠳᡄ᠐᠉᠑᠋ᡃᢛ.

Cumberland Sound in 2004 affecting both the air and water temperatures, which may have been a factor.

Length-frequency data are presented as well but the size of the fish caught is not as good an indicator of stock health as age structure.

A curve drawn on the descending portion of the age-frequency plot is used to determine average mortality. A long tail, which has many year implies a relatively low classes. mortality rate. The mortality rate results from a combination of the fishing and natural mortality. The number of age classes are used to judge the state of the population. Fishing often results in a truncated curve with fewer older age classes. There are still lots of age classes present in the Kipisa stock although some of the older fish were not sampled last year.

Sources of Uncertainty

One source of uncertainty brought up early in the discussions was the idea of stock delineation in the Cumberland Sound area. There is no information on this. Genetic sampling and tagging studies carried out simultaneously on the main systems in the Cumberland Sound area would be useful in interpreting some of the stock assessment results.

There was discussion about the idea of climate change and how it might impact the fisheries in the Pangnirtung area. People have noticed that the weather patterns in the area have been highly variable in the past few ᠳ᠋ᠴ᠋ᡃᡆᠲᡗ᠘᠊ᢞ 4J4<~~4/L4* ∿۹⊳∿∿ ᡃ᠋ᢣᢛ᠋᠋᠋ᠻᡀᢄ dD#CD⊀⊮ م_م∆۲Cک`_σ Ͻίδιδις(ته∿۲°_۵. <Λλοίς, ᡆ᠋ᠴᡆ᠘ᡃᢛᠠ᠊ᢣᡃ ⊳₽⊳₽₽₽₽℃℃___. ጋᡃᡃ᠍᠍ᡰᢑᡃᢗᠺ᠋᠋᠋ᡧ᠋ᡗ᠆ᠳ᠂ᢉᢪ᠊ᠴ. ᡆ᠋ᠴᡆ᠘ᡃᢛᠠ᠊ᢣᡃ ͺኈϼኈϽϲ ᠋ᠫᡃᡆᡃᡖᢈᢕᡃ᠋᠆᠆ (ነዮ ታ م∂کرک ⊲⊔ Ͻ[;]ͷϽΔ[·]ͺϫͺϧͺͺͺͺͺϧͺ ᠕᠋ᢅ᠆ᢞ᠆ᠴ ∿۹⊳∿∿ 4)*CP4c متمح√ر⊳,⊃∪ ზ⊿∆⊂∿ნ∿სთ $\nabla \Gamma \to \Gamma$ ᠘ᡃᡃᡅ᠘᠆᠊ᠣ᠊᠆᠋ᢣᡑ᠋ᢆᡝᢞᡃ᠋ᠵ᠋ ᡆ᠘᠆ᡄ᠋ᡗᢀ᠋ᡃ᠘᠊ᢣᠥ ᠕ᢗᡃ᠋ᡃ᠋᠋ᡥ᠆᠆᠆᠘ ∆ᠲ᠋ᠫᡠ⊳⊸ᢐᡪ∆. ᡩᠷ᠘ᢣᢄ ᠙᠕᠘ᢂᢩ᠂ ᠘ᡃᡃ᠋ᡰ᠘᠖᠆᠉᠆᠘ᠺ ᠋᠖᠔᠆ᢣ᠋᠋᠋᠋᠆᠖᠆ᡁᡬ᠘ᠴ᠕᠅ᠺ

∽∽ح5∪⊳⊀ر

a⊐a5UÞ⊀⊮ ∆د∿ل 5⁶P(D_c D⁶)⁶ ▷ኄኄ∩Ր⊲ーናᢗᢐ∩՟_ๅ $\Delta / L \cap \mathcal{D}^{-} \mathcal{D}$ ለርቴነቍዥ በበኈተĽኄበ <ጐታነጋ፞ ለዖሢታ. ጋየተՐላኄላ\^ቈርኈኄዮናጋኈ ር፞፞፟፟፟፟፟፟፟፟፟፝፝፞፞፞ጏ፞፝፝፝፝፝፝፝፝፝፟፝፝ AD ² U 1 പൗപ⊽₁പുംപുംപും ᡃ᠋ᢐ᠋᠔ᡔ᠘᠂ᢩᠣ᠉ ⊲ĽL ᠖᠔᠋ᢄ᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆ 4C⊳_cU_Pq_c ᢉ᠂ᠧᡗ᠊᠆ ៱᠙ᡃႱႻ ᡏ᠋᠕ᠸᢇᡐᢕᡀᡄ ᠘ᡃ᠋ᢣ᠋᠋ᠮ᠆᠈᠘᠋ᢆ᠆᠆᠘᠆᠉᠘ ∆∟ిౕరా

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There are changes in the pattern of freeze-up and ice break-up. It is taking longer for freeze-up to occur and spring sea ice breaks up earlier making it more difficult to travel to fishing sites. Hunters have also cited birds not normally spotted in the area. Α researcher from the University of Gita Laidler, has been Toronto. interviewing elders in several Baffin communities to document the contribution of Inuit Qaujimajatugangit to sea-ice and climate change science.

ADDITIONAL STAKEHOLDER PERSPECTIVES

The local fishers indicated that there has been a fishery at the Kipisa long before the 1940s and the area has had lots of fish. The texture and smell of fish is different and thev are considered nice and healthy. Based on some elder's description of the area, the fish were abundant before the 1940s, there was a period of decline in the stock although the fish caught tended to be larger and now the char are returning to the higher Over the past nine years numbers. most of the fishing has been done in the ocean and most of that in the nearshore marine area. The fish are also getting bigger and some of the elders have noticed that they are more abundant. The fish are now large enough to harpoon and can be caught using fishing rods.

Much of the pattern of resource use is driven by economics issues rather than biological changes.

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᠘᠆᠆᠆ᡧ	֍⊳≻հ⊮Ը	⊳ರ್∿.

ᠳ_ᠮᡄ᠙᠋᠕᠋᠋᠋᠋ᢆᠲ᠙᠘ᡁ

൭ഄഺഺ Δۥβ¬חרק ᠳ᠋ᠣᡆ᠘ᡃᢛᡪ᠘᠊ᠺ Δ ¹b_b/¹b^cC⁶rL^LL^c 1940 ՈԲ⊂⊳ղՐՆՅ ⊲⊔ ⅆℾⅆℾℴ℩՟ℴ ∆‰_%%C%~L⊀%. ᠳᡃᡗᢪ᠋ᡶ ଏ-L ∩∧∿l ∆‰ച്റി∢≮⊳്ച∩. ⊲Ľ ⊲ጋኈጋՐ ᠔᠋ᡃ᠔᠔᠘᠘ᡩ᠕ᡁ ᠕ᠳᡅ᠋᠘ᢄ 'የለ ነ ▷ < 1940كد∆د ⊴୮୵ୢୖ୵ୢ୰ୢ୵ ∆∿∟∆ NPCD⊂D[®]N[°] J. ᠕ᢗᡃ᠋ᡃ᠋ᡖ᠋᠂ᡗ ᡏᡣᡄᢤᡃᡄᡄᢂ᠋ᡃᡟ᠘᠊ᡧ የረፈድር ⊲L $\dot{\mathsf{L}}^{*}$ Δ^{*} Δ^{*} Δ^{*} Δ^{*} ᠀᠆᠋ᡃ᠆᠆᠋᠋᠉᠆ ۹۹۶م ᠘ᡃ᠋ᡃ᠋ᠳ᠘ᡀ᠆᠙ Հ∼⊳Ր ⊲L ᠊ᢀ᠋᠋᠋᠋᠆᠘᠆ᢞ᠋ᡗ᠋ ᠠ᠈ᡃᠵ^ᢐᠵ᠘᠂ᢥᡗᡨ $\Delta^{c}b \Delta^{c}$ ⊲ĽL ᠕᠋᠃᠆᠀᠆᠆ᢞ᠆᠆ᢞᡅ ∆∟ີՐ ᠕ᠳᡄ᠋᠋ᠴ᠋ᡃᡉ᠘ᡃ ᠈ᢗᡝ᠆᠘ᢣᡏ᠘ ᡏᠧ᠘᠆ᢛᢣᢂ᠆᠆᠉᠑ᢕ ∆∿ل∆ ᠆᠕ᡩ ف۲۲۵۳ ᡆ᠌ᢂ᠋ᡩ᠘ᡀ᠘᠕᠕ᠺ ⊲L ଏ⊳∟୳⊳₁ ∨≻⊳ዳ₌»ጋՍ.

᠕ᡃᢣ᠌᠌᠔᠋᠆᠆᠆᠆᠆	ᡏᢕᢧᡗ
<u></u> ᢆᡥᡄᢂᢣᡄᢂᠺᢝᠣᡃᡆ	᠋᠄ᡃᠣᢂᡔ᠋ᢣ᠋᠂ᠳ᠘
᠊᠋᠋᠋᠋᠆᠆᠈᠆᠆᠈ᡩ᠆ᡗ᠆᠈	

CONCLUSIONS AND ADVICE

The data shows the Kipisa stock is a healthy stock and has remained healthy with the combined subsistence exploratory harvest. and It is recommended that this fishery could be moved to a commercial fishery. be included in the This should management plan drafted by DFO and reviewed by the HTO. being Development of the management plan should take into account the marketing of the products and should include consultations with the fish plant.

The level of harvest and the state of the stock suggests that the total of both and the subsistence exploratory harvests could be used as the "total allowable harvest" (TAH) level for this The amount that the system. subsistence harvest contributes to the overall mortality is unknown. The local members committee were all in that the subsistence agreement harvest was not at the level described in the Nunavut Wildlife Study (Table 1). The harvest study was undertaken to provide the information on the "Basic Needs Level" (BNL) from the fisheries. BNL is calculated as the aggregate of the greatest amount harvested in any one year during the study, and the average annual amount harvested over the five years of the Study, which aggregate is then divided by two. For the Kipisa char stock, a BNL of 2340 kg was calculated using the harvest determined by the Harvest Study and considering the data from 1996 as being only a half year (average for 4.5 years rather than 5 years).

ᠴ^ᢛᡃᡖ᠋᠂ᠳ᠘ᡐᡌᢂ᠋ᠴ

ጋዮረቦላ'ልካላሪ ՀԳՐ⊳ՍՀԻ 'የለ \ > < Δ b \mathcal{M}^{c} \mathcal{A}^{+} \mathcal{A}^{+} \mathcal{A}^{+} \mathcal{A}^{+} ᢗ᠋᠋᠘ᡃᢨᠣ᠊᠊ᡦᡃᢪᡃ᠋ᢣᠴ᠂᠋᠋᠋᠋᠘ᡃ᠘᠘ᢆ᠂᠘᠘᠘᠘᠘ ∆‰ച℃⊳<ോ൳്. ᠕ᡃᡃᡆᢣ᠋ᢂ᠆ᡐᢐ᠋᠌᠉ Ċ° م բ(⊳Վ,Չ»)։ ᠘ᡃ᠋ᡃᠾ᠋᠆ᠸ᠊᠋᠆ᡐ᠋᠊᠆ ᢆ᠋ᢆᡥᡄᢂ᠋᠆᠆᠙᠘᠘᠆ᠳ᠋ Δឞ៓៓៓៹៹៹៹ ⊲⊳⊂∿−₁٦ ለኄተዾኯዾተレኯ፟፟፟፟፟፟ <u>በበና^ቈር⊳ቦላ∿Ⴑ^ቈሖ୮ዳ</u>ჾ ᠘᠘᠋᠋ᠮ᠋ᢂᢕ᠆᠕᠘ ₫L ᠋᠂ᡩ᠋ᡗᢓᢣᡐ᠋᠂ᠴᠣ ᠕ᢟ᠆᠆ᡏ᠒ᢗ᠈᠆ᢆᡃ᠕ ዾ୮ጚۥዾሇኯኇ፞፟፞፞፟ ᡔ᠌᠌ᢄ᠈᠆᠐᠂᠘᠂ ᠘ᡃᡃᡅ᠋᠕ᡨᠣ ⊲L ᠕ᡃᡃᠣ᠘᠆ᡪ᠊ ᠵ᠖᠔ᡩ᠘᠕ᡩ Δ^{b}

ᡃ᠔᠋ᢞᢞ᠋᠆᠆ᢣ᠘᠅᠘᠆ᢞᢗᢂᢞ᠆ ᡆ᠋广ᡨᡀ ᠕ᢗᡃ᠋᠋᠋ᡰᡠ᠂ᡆ᠋ᠴᡆ᠘ᡃᡟᡝ᠊ᡟ᠖᠒ᡃᡗᡗ᠂ᠳ᠋ᢪᡃᢣᠴ d٦ ∿⊳հՀչՍ¬ ᠘ᡃᡌ᠋᠋ᠴᢩ᠘ᡃᢂ᠆ᡕ ላጋኈር⊳ኆ_┲"ጋና "የሀሪጋしር ϧΓኆ"ር⊳ኆ_ምጋር" Ć[\]ᄼ൧`Ს ◁ጋჼ< ∠⊌⊃‹C⊳⊀ ∠⊂Lβ·CiLJ)ધ⊌‹Ci−°L ൧൨ഺഽ ኈዾዾኯርጋኈ. ٥٦٢٩٩٩ ᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆ പ~∆∿(⊳_⊳∿)Г ᡃᠡᠯ᠋ᢞᢇ᠆ᠳ᠋᠊ᡊ᠃ᡗᡃ᠘᠋ ₽ĽҶ҄СҼ ᡃ᠋ᡃᡉᠵᡃ᠆ᡏᢦ ൶ഀ഻ഽ (೧೧ና%イレマ 1). ダレマ%(の %)やちょしゃしく ᠕ᢗᡃ᠋ᡃ᠋᠖᠆᠕᠋ᢙ᠉᠋ᢙ ጋዮረሀፈለው (BNL) ႱႱႱႱႦჅჿჂჿ BNL ᠘ᡃᡃ᠋ᡅ᠋ᠴᡄ᠋ᡅᠦᡃ᠋᠋ᡗᡃ. ⊿۲۲ <u>ላ</u>ዮሩ ፈትዮም ĎL⊀®(D⊀∽ 1°20 Ֆ⊳≻Հ՞Ո՟_Ր, PUcol ⊲۲۲⊳-⊃م Lየ2√∩ኈጋ፞. 'የለ \ ▷ < Δ b Δ h Λ h BNL 2340 ⊲⊃₀⊃∪ kg-o-₽₽₽₽₽₽ $\dot{P} \Gamma 4_{P} C P 4^{P} \sigma \sigma \sigma \sigma \nabla \theta A_{P} C P 4^{P}$ ₽₩₽₩₽₽₽ ₽₩₽₽₽₽ ₽ ᠋ᡃᢐ᠋᠔ᡔᡃ᠆ᡏ᠊᠋᠊᠘ ⊲L ጋዮረር ላ የ እ የ ት 1996-L ^^ړלץ ∆۲¢J م<<)ک₅م∽۲P (4.5 Ը՟୷LϷ℉℆⅌ϽՈ).

Estimates of harvest levels for a population are usually described in terms of levels of risk to the population or stock. There is always some 'risk' to the population when it is harvested. Harvest is considered a low risk when all information is available and the stock appears healthy. There is a low probability that problems will result from the level of harvest being discussed. Harvest is considered a moderate risk, when some information is missing which would allow for the assessment of the health of the stock. We think fishing at the level requested may not adversely affect the stock, however, it is very important to collect data from any harvest that occurs. It is also important to reassess the stock once biological data has been collected and analyzed. Harvest that is considered high risk is based on information that is available and we would not recommend fishing. When considering risk, it is important to know the total amount of harvest or to be reasonably confident that the whole harvest is below the level of TAH.

If the current exploratory harvest is stable at the quota of 2400 kg and the level of harvest from the subsistence fishery is 2340 kg this suggests that the population has had a sustained fishing mortality of around 4800kg. Therefore, a total harvest of 4800 kg would provide a moderate level of risk and 2400 kg would provide a low risk the harvest study numbers and considered that the subsistence harvest from the harvest study was an

م_**د**کرز_%(کجر ₽₽₽₽₽ ᡃᠡ᠆᠆᠆ᠺ مےم∆⊮۲۲۷۵ ᠕᠋ᢅ᠆᠕᠂ᢅ᠆ᡐ᠘ ⊳%եւՐԸՉ ᡃᠡ᠔᠋ᢞᢇ᠆ᠳ᠋ᡫᠣ ᡏᢉᡄ᠋᠋᠋᠋᠋ᠲᠧ᠆ᡙ᠆ᡆ᠋᠘᠆ᢣ᠆᠘ کرچ⊳∧ Λ ($b^{-1}C$) Λ (᠕᠘ᡃ᠆᠕ ĎL√[®]CÞU∆^LLC. ᠔᠊ᢆ᠊ᠯᡃ᠋ᠳ᠋ᡃ $\Delta \mathcal{A} \mathcal{L} \mathcal{L} \mathcal{L} \mathcal{L}^{c}$ ᡏᡃᢉᡆ᠋᠋᠋᠋᠋᠋ᢐ᠘ᠧ ጋየረLዺ፧ፇኯኯ ⊲⊃∆₅∽⊳∪₋⊃∟ ⊲⊔ ᠕ᢗᡃᡃᠣ᠋᠂ᢡ ∿^`∟^` ᢀᢗ᠈ᢇᡶ᠋ᢆᢣᡅ᠒ᡩ᠕᠘ᢂ **Ა**[®]ዮႻჽჂႻ ᡃᠡᠯ᠋ᢞ᠆᠆ᡩ᠆᠆ᡔ ĎL ₹%CD ₹° 0%02020 ᠔᠘᠊᠊ᡲᠣ᠋ᡃᢛ ∆~Lr≁P^L^c ᠋ᡃ᠙ᡣ᠋᠋ᡃᡶᡠᡃᡗᠣ **⊲**د⊂⊪⊃۲, ∆∟ిՐ ᠕ᢗᡃ᠋ᡃ᠋᠋᠋ᡃᢨᡆᢕ ᠖ᢀ᠘ᢣ᠘᠐᠙ᢣ᠆ᡆ᠋᠉᠋ ᠕ᢗᡃ᠋ᡃᡠᡃᠣ᠋᠋᠂ᡗ᠆ᢆ᠋ᠴ. ᠕᠋᠘ᠲ᠕᠋ᡗ **VH7** ᠘᠋ᡃᠣ᠆ᠳ ᡃᠡᠿ᠋᠆ᠳ᠋ ヘჃL≻⊳∖LՎ® ᡏ᠋ᡗ᠈ᠳ᠋ᡃ᠋ᠴᡧᡃᡃ᠅᠋ᡗᢉ᠉ ∧ር'ხ'σ∿ს_ი. ᠕ᡃ᠘ᡣᢂᡃ᠘ ᠕ᢣ᠘ᡱᡆ᠋᠊ᡅ᠋᠋᠆ᡗ የረፈድር ጋየተበላ^ነልካትሮĽ^c ᠂ᡃᠣ᠋᠊᠘ᡃᢕ᠘ᡱᡆ᠂ᡃᠣ᠋ ᠕ᡃ᠘᠊᠋᠕ᢣ᠘᠘᠖ᡃ ₽ ך≮₀C>ל≏` ᠕ᢗᡃᡃ᠋᠋ᠣᡃᠧ ᠋᠄ᡃᠣ᠐ᢣ᠆ᡝ᠆ᡗ᠕ ᠋ᡃᡉ᠈᠘ᡃᡆᡐᠯ ∧⊬⊳∠∟⊂₀∪ ጋዮረርፈ፣የትሪስ ₫L ⊳۲4_°C>۲_c ∿∠۲۹۵ ልግግሥል ᠕ᠸᢦ᠊ᢛᠫ᠋᠋᠋ᡏᡕᠫᡅ dC λ ჂჀႻჼႦჼჂჼ ጋዮረርፈየያት ᡏ᠋᠘ᠧ᠆ᡐᠧᢙ ₫L ᠕ᡃᡃᠣ᠋᠆ᡩᡁ᠆ᡩ᠔᠆᠘ᡃᢁ᠘᠘ لد ۵٬۲۲۶ ᠆ᡏ᠋ᢉᡆ᠋᠋᠋᠋᠋᠋᠆᠆᠃᠕᠘᠘᠘ᢂ %D>L>D_F کورچی PT4حد⊲ځ۲∟⊿

└°む▷ᲙГ ᠋ᡃ᠘ᡃ᠆᠆᠘᠊ᢙ DF4%CD4c ᢉ᠘᠘᠘᠋ᡩᢪ᠋᠊ᡆ᠌?ᠳ ქCჀ 2400 kg ⊲^L ₽Г⊀₽СР⊀с ᡃᡆᡃ᠋ᢞ᠆᠆ᠳᡃᡶ kg ∆⁵لیاتی 2340 പ്ര ᠕᠋ᡏ᠋᠋᠋ᢣᢆ᠋᠆ᡩ᠋ᡗ᠋᠄᠕ᢣ᠌ᢂ᠋ᠴᢀ᠋ᢞᠠ᠘ᡁ᠒ ᠳ᠋ᠣᡆ᠒ᢛ᠋᠘᠊ᢞ ∆"⊎__`(▷ペິ)` ᡃ᠋ᡃᢐᠣᡗᡃᢣ᠋ᡃᡉ 4800kg. (Ճഺ∆ഀ൳ഀ഻൶, ๒∩ՙጋՐ ൎ>๎LՎ՞(>⊀ 4800 ⊲L 2400 kg ⊲ና∩ናጋΓ ⊲ናር⊾ኈጋ广Խ৮∿ዮናጋና **⊲**۲∠ٰۍ۴۴_۵. $Pr < \sigma_{c}$ فالكعنو $\Delta \subset \mathcal{V} \land \mathcal{V$ ᠔᠘᠊᠋᠊ᢞᢗ᠋᠋᠋᠆ᠳᡃᠣ ᠈ᡄ᠈᠊ᠣ᠋ᡣᡗᡪᢣ᠊ᡏᡆ᠍ᢧ ف∠⊳∩∿Ր° ⊲L ∆∠L∠⊳∿⊃ີ ᠳᡃᡗᡃ᠋ᡰᡃᢆᠴ᠋ᢩ᠘ ₽∟⊰⊮сг÷ҁ

בישרחשי	- 1990-1 20	UU		
Year ଏଂና୍ଧ	Fisher Ճ ^ւ հال	ل⊀د`⊲ Date	Number ∝୳⊳∩∿	Estimated Wt (kg) assume fish average 2.5 kg ౖౖంఁరీ్రె≺్ రిశిLదింి (kg) ద౫Lగి>ర్ఎం దింుీ ⊳శిLదింిట 2.5 kg
1006	75285	huly 🚽 \Lambda	10	25
1000	75200		17	12.5
	75205	$\frac{1}{22} \operatorname{Son} \mathcal{A} \operatorname{OA}_{2}$	80	200
Tota	19292		107	200
TUla			107	207.5
1997	75244	20 Feb ∿>⊲∿	20	50
	75248	23 Mar ُL℃	210	525
	75287	22 Aug	100	250
	75286	26 Aug ⊄'r'r∕	13	32.5
Tota	I ԲՍշՆՆ		343	857.5
1998	74010	14 Feb ∿>⊲∿	500	1250
	75232	21 Mar ட்구	110	275
	75242	16 May L∆	50	125
	75262	29 Jun 🕁	25	62.5
	75261	30 Jun रन	25	62.5
	75290	24 Jul 🕹 \Lambda	20	50
	75300	14 Aug ⊲ירׂר	210	525
Tota			940	2350
4000	75044		50	405
1999	75241	14 Apr $\Delta > 2$	50	125
	75281	06 Jul ≺د∆	38	95
	75282	14 Jul ≺∟∆	/5	187.5
	75259	13 Aug 447	350	875
	75260	19 Aug ላጥ	30	75
Tota	հՍ _Հ շեշ		543	1357.5
2000	75246	20 May L∆	20	50
	75498	13 July ᢣᡄ∆	350	875
	75499	13 July ⊀∟∆	300	750
	75500	14 July ≺∟∆	86	215
	75509	14 July ⊀∟∆	280	700
	75501	11 Aug	80	200
	75502	18 Aug	34	85
	75247	\$∧ف 17 Nov	30	75
Tota	I ԲՍշՆՆ		1180	2950

Table 1: Results of the NWMB harvest study from 1996 to 2000. ∩∩ና[®]イレイ[®] 1: [\][®]P[®])^c ュュ[≫]^LΓ Ϸ^L イーヘ^ト^L ヘ[®]^d ー Ϸ⁻ Δ[®] - Ϸ⁻ L ペ[®]^d ー Ϸ⁻ Δ[®] - Ϸ⁻ - Ϸ⁻ - Ϸ⁻ - Φ⁻ - overestimate of the fishing, which had to the population. However, the local committee members did not agree with occurred. If the subsistence harvest had been lower than reported by the harvest study, then the total harvest sustained by the population would also have been lower. Without an estimate for the subsistence harvest, 1200 kg total harvest would put the population at a low level of risk of over fishing, 2400 kg a moderate level of risk and 4800 kg a high level of risk.

Discussion centered on what the local committee members considered a more reasonable estimation of the subsistence harvest. They felt that if for example 5000 lbs (2268 kg) were fished under the exploratory fishery, then one quarter of this amount would be a reasonable estimate of the subsistence harvest. Using this proportion, 2400 kg exploratory plus 600 kg subsistence would contribute to a total fishing mortality of 3000 kg. It is expected that this system can handle in the range of 3000-3650 kg total harvest. Consensus by all participants was that the total allowable harvest should be set at 3000 kg and that the distribution should be 2400 kg from exploratory/commercial harvest and 600 kg subsistence harvest. Local committee members want to have more involvement in the management of the fisheries by monitoring the lakes and taking more initiative in the process. They liked the RAP process, which considered their opinions in the advice provided. They also were concerned with the conservation of

᠋᠋᠖᠘ᢣ᠆᠆᠆᠆᠙ ĎL ∀%C_o ⊳∿LĊ÷ՈւՍրՐ ᠆᠋ᡃᡥᡃ᠋ᠴ᠋ᢩᢩ Δ^{i} שייר דייה. <u></u>հ[®]ρ[®]∠Γ⊀^c. ₽₽₽₽₽₽ ᡏᡣᡄ᠋ᢛᢣ᠋᠋ᢄ᠆ᠳᡗᠣ ᠔ᠳᡃᢅ᠋᠖᠆ᢂ᠋᠖᠖᠙ᢕ᠘ᢅᢣᠥ ᠔᠘᠊᠋᠊ᢞᢗ᠋᠋᠆ᠳᡃᠣ ᠖᠔᠈᠘᠘ᡩ᠙᠘ᡩ᠘᠘᠘᠘᠘ᡩ᠘᠘ᡩ **մՙՈℴ՞՞Հ**ՒՆԻՆԴ՞. ᠕᠋ᢅ᠆᠕ᢅ᠆ᠴ م_ک¢رې(ک₀(ک₀ل ᠆ᢡᡃ᠘᠊ᢩᠣ ⊳Γ≺_°C∇_c ÞΓ4_eC∇_c 1200 kg PUcol ᠘᠆᠋ᡃ᠖᠋ᡃ᠋᠆᠘᠆᠋ᡃ᠘᠆ ᡏ᠘᠆᠕᠆ᡐ $\triangleleft^{\circ} \square^{\circ} \square^{\circ$ 2400 kg ᡃ᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋᠋ kg ᡃᠠ᠆ᡣᡗ᠆᠂᠕ᡩ᠘ᠴ

᠘ᡄᢉᢣ᠌ᢂ᠊᠋᠘᠘᠘᠘ᢣ᠋᠘᠘᠘᠘᠘᠘᠘᠘ م--۵٫ږه(۵۲، ᠳᡃᡗᡃᡃ᠋ᢆ᠆᠘᠆ ₽רל⊮כ⊳לנ־ ∆‰ے℃کےاک ᠋ᡃᡉᠵ᠆᠆ᡗ᠊ kg) ᠘᠋ᡃ᠋᠘᠆᠋ᠮ᠆, ᠔ᡏᢕ᠆᠋᠘᠘ ᠆᠆᠋᠆᠆ Ⴣ₽₽₽₽ م∟ک_دږیا ᠆ᢡᡃ᠘᠊᠌ ĎĹ┥ჼCÞ┥。 ᠘ᡄᡗᡃᢣ᠋᠂ᡃᡶ പ്ര لدי⊂⊘. 2400 kg ኄ⊳≻רבירסי⊃ז 600 kg ∆'ຢ_ບເ⊳ແວຼ (°~~4)%(>~4% ᡖ᠋᠋᠆ᠼᢄ ᡃᢐᠣᢉᡃᠵᡃ᠋ᡉᠣ 3000-3650 kg ᠆᠕ᡙ᠉᠘᠂ᠳ᠘ $\Delta = P_{P} = P_{C} =$ ፟^ዿኈኰርዾ፞፝ዾዾኯ፝፟ኯ፟ 3000 kg ٩Ľ ᠋ᡔᠣᢀ᠋ᡃᢀ᠆ᢕ 2400 ka-Ներվեր ᠋ᡃᢐ᠋ᢄᢣ᠋᠆᠆᠆᠆᠆᠆᠆᠆᠆ kg ሮምናጋ ᠘ᡃᡃ᠋᠘᠂᠘᠘ ۹۲ 600 ∆؈_دلאל. ۵۵۲۶۶۰۲۹۹ ᠕᠆ᡁᢣ᠀ᢋ ᠘ᡄ᠌᠌᠌ᢂᢗ᠔᠊ᢛᡃᠺ᠔᠊᠍᠆᠘᠊ᡃ ᢀᡄ᠋ᢉᠬᠳᡃ᠋ ն⊳≻հւ⊃Ս ᢉᢇᡃᠳ ᠘ᡃᡃ᠋ᡅᠴᡄᡅᠦᡃᡗ ⊲⊔ ᠕ᢟ᠆᠆᠊ᡏ᠆᠋ᡃ. ᠕ᡗ᠊᠍᠋᠋᠋᠋᠋᠆᠋᠘ᢧ᠘ᡁ᠘ᡁ ለኦቦ৮∿Ⴑ RAP ∧ኖ՟~ব৮∿, ᠔᠋ᡃ᠔᠋᠆ᡩ᠐᠆ᡏ᠘ ለርኈኈበር⊳⊰ታ. AdL_c>°F ₹° ᠕ᢂ᠋᠖᠕᠘᠕ ∆∿ل∆د Λ**ᢗ**᠄ᡃb^ᡃσ℃ ᢏ. ۹۸∿۶Ъ⊓ТС ᠘ᡄᡗᡃᠵᡃ᠋ᡶ ᠳ᠋᠋᠙ᡃ᠋ᢣᠴ᠘᠆ᡶ᠆ᢅ᠋ᠴᡏᢗᢂ᠘᠆ᢆᡁ᠉, ∆"b_ງເປ⊳⊀ເ ᠕᠆ᡁᢣ᠔᠆ᡣ ᠔᠋ᡃᢧᠵ᠕᠆ᡣ᠕ ᠿᡆ ⅆ᠈ᢣᡗᢟᡄ᠘᠋᠋ᡥᡗᡃ᠘ ∆⁶buchocLo. ∧ు⊲ి౫. దఓిౕ ిలంసే ఎ౧ <ిలుసే

their fish stocks. When asked if the proportion of the catch for subsistence was a general rule for the area, the local members suggested that this was probably not the same for all the fisheries. In particular, waterbodies which were close to Pangnirtung were likely harvested for subsistence purposes at a much higher level.

It is recommended that research continue on this stock and that some effort be made to continue collecting CPUE data.

Recommendations for further research

The discussions during the meeting emphasized the importance of Inuit Qaujimajatuqangit (IQ). This traditional knowledge from the older fishers is being lost at a rapid rate. The older fishers in the community would have been the ones who would have gone and fished the lakes in the winter and would have most of the information about them. It was suggested that an Inuit Qaujimajatuqangit (IQ) study be undertaken now to try to save some of this information.

There is no information on stock delineation in the Cumberland Sound area. Genetic sampling and tagging studies carried out on simultaneously the main systems in on the Cumberland Sound area would be useful in interpreting some of the stock assessment results. In addition to providing stock delineation information. a tagging program provides important information on migration patterns which is important for understanding and managing fisheries. A tagging

᠘ᡃᢐᠴᢩ᠂ᢗ᠌᠌ᢦ᠊᠋᠆᠋ᢗ᠌᠌ᢦ᠅ᢕ᠋ᢝ᠋ᠶ᠋᠘ᡃᢐ ᠈ᡃᡆᡗ᠋ᠬᠣ᠋᠋᠋᠋᠋ᢛ᠋ ᠳᢡᡃᢣ᠌⊳՟₋∩

᠋᠋ᠺᡃݸᡃᢣ᠌ᢂ᠆ᡧᡃᢆ᠅᠋ᡄ᠄᠖᠔᠋ᡔᢣ᠋᠋ᡪᡝ᠋ᡔ᠋᠉ ᠅᠘᠆᠋ᢣ᠋᠊᠘᠆ᡩᡄ᠆ᡩ᠋᠘᠆᠆ᢋ ᠴ᠋ᡏ᠋ᢉ᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆

᠕ᡃᡃᡆᢣᢂ᠆᠂᠖ᢂ᠆ᠺ᠖ᠴ᠖᠋ ᢂ᠋᠔᠙᠘ ₽₽₽₽₽ م⊐م∆₀५⊂⊳₀ک Λ^{L} L harpoondot P $\Delta a \Delta^{c}$ %₽₽₽₽ን₽∿℃. ڔؖڡ ᠕᠋᠂ᠳᡗ᠊ᠳ $b > L = A^{*}$ 26JL ᢣ᠋ᡰᢗᢂᢞ᠆᠆ᡧ᠘ᡃ᠋ᠺ᠘᠋ᡃᢐᠴᡁᢣᡃᡣ᠋᠋ᠫᡃᢐ᠘ᡃ᠂ᠴᡆ᠆ᡃᠮ ۲۵ ک₀ ۵۹۵ کړ)PrrLiub*)O.▷℆₽८₽∿₽₽₽ ڔؖ؈ $\Delta_{o}\Delta^{c}$ ᡃ᠖᠋ᢂ᠋᠆ᡩ᠘᠋ ն⊳≻ՐԴጋթո Ű $bL\Gamma + D \rightarrow UCD = 4^{\Gamma}LC DP + D L = 4^{\Gamma}C$

ጋ <mark>ዮ</mark> ፖርሳኄሊ _፝ ዮርኈኯርጋኈ	ĊŀᲫႻჀ. ୣ⊲⊳∿Ր∩J
ᡃ᠋ᢐ᠌᠔᠆ᢣ᠋᠋᠂ᠳ᠉	ᡆ᠋ᠴᡆ᠘ᡃᡆᡅᡬᡃ᠋᠋᠉ᢕᠣ᠋᠂᠋ᡏ
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ᢀ᠋᠘᠆᠋ᠴᢀᢗᢥᠣ	<°ঢʻ̇̀′ ∆₽∿Ⴑெ
᠘ᡃᢦ᠆᠈ᢕᡧᠣ᠘ᢋ	ᡆ᠘ᡃᡃᡗ᠊᠋ᠴ᠘᠆᠋᠂ᡗ᠆ᠳ
᠕ᢗᡃ᠋᠖ᡃᠣ᠋᠋᠂ᡗ᠆᠆᠆᠖ᢂ	∿℃⊳⊀రా. ∆౬Ր⊲ౕ౨ి
᠕ᢗᡃᡃᠣ᠋᠂᠋᠋ᠿ᠋᠆ᠣ᠈ᠯ	ᡆ᠋ᠴᡆ᠘ᡃ᠋ᢞᡃ᠘᠊᠋᠆ᡩ
ጋዮተՐላ'ልካኣΔና,	ᡆ᠋ᠴᡆᡃᡆᡅᡬᡃᢛᡅᡗᠣ᠋
᠕᠆᠋ᡅ᠋᠊᠕ᡃ᠆᠘᠕ᡃ	᠋᠋ᡔ᠋᠋ᡗ᠆ᢞ᠒᠉ᢕ᠉᠋ᢓ
᠔᠋ᡣ᠉ᢗᡃᡃᠣᢗᡃᠣ᠋᠋ᠧ	᠕ᡃ᠘ᡣ᠌ᢂᢞ
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∆່⊍ວ⊂∿ວ່∃. ໑ຉ໑	ᠵ᠘ᡃ᠋᠊᠍᠕᠅ᡣ᠒ᡩᢐ

program which targets a number of river systems in the Cumberland Sound area, however, would be costly to undertake. The costs to purchase tags is not high but a reward has to be given to ensure that all tagged fish caught are turned in. The reward for char tags is usually around \$10 per tag. In the Cumberland Sound area, rewards for turbot tags had ranged from \$20 to \$40 but have now increased to \$100 per tag. This is to ensure that people turn in the tags but it is also based on the expectation of getting very few tags in total. In the case of a char tagging study, many fish would need to be tagged and many returned to provide tags useful information on movement patterns and stock delineation. In a Labrador tagging study, more than 15 thousand char have been tagged and released with some recovered up to seven years after the initial tagging. Fish in such studies are usually caught in small mesh gillnets, set for short periods of time to increase the chance of survival for the fish. Handling has to be kept to a minimum for the results to be meaningful, as the fish should not be harmed while being caught and tagged. There are significant costs to operating a tagging program. Satellite tagging (usually used for marine mammals) and radio tracking (used for fish) were also suggested as a means for determining movement patterns. The cost of the these type of programs however can be prohibitive. Local members recommended committee that there be a long-term research plan.

۹۲،۷۵٬ ۵۲ ملاده م ᠕᠆ᡅ᠊᠋᠊᠕᠆ < - Δ^{+} Δ^{+} b - Δ ۹۲-۵۲-۵۲ ال ⊲ℙՐ৮∿Ն م⊐م⊽₀۹C⊳< ᠂᠔᠊᠋᠙ᢅ᠆ᢞ᠋ᡗ᠅᠋ᡗ᠅᠋ᡗᢟ᠋ ᠙ᡝ᠔᠋ᠳ ለኦፈረላኄ $PU^{h}U^{h}U^{h}$. $V^{h} + V^{h}U^{h}U^{h}U^{h}$ ⊲٩ۥ٩٢٢٩٦ \$10 ◁<▷┌ᅆ പ⊐പ7ംപ്റം. ᠆ᡗᡃ᠆ <u></u>ΔΡ^ъსσ. ᠕᠈᠊ᢣᠡ᠕ ᠳ᠆ᡗ᠆᠕ ଏମିଜ୍/୍⊂⊳[®]୦ \$20-୮ \$40-୮ ନ୍ମଏକ୍ଟ ᡃᡁᠲᢏ᠊᠋᠆ᡧᢛ \$100 ۹C⊳८₽ مےمک،۲۵، (ثم ۲۵۲۵–۳۶، ۵۵۵ ᠔ᡣᡃ᠋ᡥ᠋᠒᠋᠂ᡣᡆ᠘ᡃ᠋ᡃᠣᢕ᠆᠒᠆᠕᠉᠕᠉᠕᠉᠕᠉᠕᠉᠕᠉᠕ ᠋ᡗᡃ᠋᠊ᡀ᠋᠆ᡁ ᠳ᠋᠋᠊᠕᠆᠆᠆᠆᠘ %د∩ م⊳_⊃∩ مےمح^ہ dCΔ^c. ⊃`ڡ*∆∟ظ ᡆ᠋ᠴᡆ᠘ᡃᡃᠯ᠆᠋ᡃ᠆᠆ **⊲**Γ∠^ι ᠋ᡃ᠖᠔᠋᠆ᢣ᠖ᠴ᠉ Δն_Δ ᡆ᠋ᠴᡆ᠘ᡃᡆ᠋᠋ᡣ᠋᠉᠊ᢗᢂᢣ᠋ᠵ᠋ᠺ᠅᠂ $\nabla \gamma \gamma$ ⊲⊔ ᡆ᠋ᠴᡆ᠘ᡃᡃᡆᢗ᠘ᡃ $PU_{e}UCPA_{c}$ ᠕ᢗᡃ᠋ᡃ᠋᠋᠖ᡃᢆᡊ᠘ᡁ ᡏᡗᠾᢧ᠆ᢆᠿᡁᢓ ᡏ᠋ᡄᠣ᠋᠋᠋ᡄ᠖᠋ᡬ᠖ᢗᠲᢕᠲᠥ ጋየተበላየል ⊲L ذ<>⊲Г ᠕ᢗᡃ᠋ᡃᠣ᠂ᢅᡃᡫ᠋᠋ᠴ പാപ∆ം്പ്⊃∩. $\Box \Box \Box \Delta^{b} d \Gamma^{b} \Gamma \sigma^{c} \Box^{c} \delta D P h^{c} \sigma^{b}, D^{b} U C \sigma^{c} C$ ڬؗؗٞۮٮ؇ؘؗ 15-Հ⊳հբ ᡆ᠋ᠴᡆ᠘ᡃᡆ᠋ᡣᢛᢗ᠌ᠵ᠘ᢞ ⊳∩₀∩с⊳₋⊃∩ ⊲ĽL ∆∟℃ 4L ለታÞペኅጋበ ፈነናጋ<u>ለ</u> 7 ᢆᡃᢥ᠋᠋ᠳ᠋᠉᠘᠆᠉ᡣ᠋᠁᠘ ᠘ᡃᢅᡃᡉ᠋ᢩ᠕ᡃ **CΔLΔ**ΩΓ ᠋᠄ᡃ᠋ᡰ᠔᠆᠘᠈ᠳᢕᢋ᠋ ለ₽▷ኈርኈጋና مــەم?كەت ⁶P_c Γ⊳) ^{[c} ۵۵۵۵٬۵۵۳۵ մ℠ℙℂ⊳ィĽ՟⅃ℴ ᢤ᠆ᠳ^ᠲᢗᢂ᠋ᠳ᠕ᡩ᠘ᠺ ₽₽٦₽ ⊲L م_H∆۲°C>Jσ. ᠕᠆ᢉᡃ᠆ᡆᢂ᠆᠋᠆ᡗ᠉ ⊲⊳⊂∿⊸۲ ᠳ᠋ᠣᡆ᠕ᡃᡆᡗᡃᢛᡗ᠊ᠳ᠋ᡗ $\Lambda \subset \Lambda \triangleleft \Gamma$. ֈ֏֏֎ՍርϷհՐ֏֎ ᡆ᠋ᠴᡆ᠘ᡃᠳᡗ᠋᠋᠉ᡝᠳ (<)*</>(<)*</>(<)*</>(<)*</>(<)*</>(<)*</>(<)*</>(<)*</>(<)*</>(<)*<//>(<)*<//>(<)*<//>(<)* م⊂⊳∪₀مړ ᡃ᠖ᢂ᠋ᢣ᠋ᡝᠣ᠋᠉ `م_ ْت⊲¦∆) ⊲L >%>>%</ (∿لُم ۲)∿(ک ᠕᠈᠊᠊᠆ᡣᢕᢣ᠂᠕ ∢⊳_ح∿^__. $C\Delta L\Delta C$ **ԵՍՇՔՍՇ**₽ ₽₽₽₽₽₽ ∿__ ᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆᠆ م℃∧∟ط ᠋᠄ᡃ᠘ᠵ᠘᠊᠘ Ĺ゚ᡆᢂᠵᢉ $7^{\circ} - 0 + 0 + 0 + 0 + 0 + 0$

Consultation meetings are carried out annually with DFO and the HTO meeting to discuss areas which are higher priorities for char research. Currently the list of priority waterbodies identified by the community are Qasigiat, Isuituq, Naulineavik and Kingnait Fjord.

OTHER CONSIDERATIONS

Legislation ratifying the Nunavut Final Agreement (NLCA 1993) was passed by Parliament in 1993. It provides for the establishment of a co-management regime for Nunavut, which regulates access to fish and wildlife, reviews the potential impacts of development, and government advises on the environmental management, etc. The Nunavut Wildlife Management Board (NWMB) is the main instrument of wildlife management within the Nunavut Settlement Area. The Final Agreement does recognize that Government retains ultimate responsibility for wildlife management and has the right to override the decisions of the NWMB in situations where there are conservation concerns or when public health or safety is an issue. The federal government is also required to consult in a meaningful way with the Inuit of Nunavut when making decisions that affect them. In addition to the functions given to the NWMB, harvesting is overseen by HTOs and Regional Wildlife Organizations RWOs.

ႱჃჄႶርዾ፞፞፝፝ኇ፝፞፞፞፞፞፞ $L \subset U \subset \Lambda \subset \Lambda$ ൶ഀ഻ ᡥᡃ᠆᠆᠋ᡃᡩ ⊲∿Րዖၬ୮ (NLCA 1993) ٩٩٩٦٥٩٩٩٩ bo_C Lーレー▷፟፟δ[™]⊀ላኄራ 1993-Γ. ለርኈኈበኅብ≁ ᢀᡄ᠋᠋᠂ᡣ᠋ᡃᡅ᠒ᡥ᠊᠊᠋ᠳ᠋ᠮ ႱペĽŀჃჀႠ ےمے، ᠘᠆᠋᠘᠆᠋᠘ᢞ᠆᠋᠘᠋᠋᠃᠘᠅᠆᠃᠘ ᠘ᡃ᠋ᡃᡉ᠋᠋ᢩ᠆᠘ᡃ ⊲L *-*ናጚሰሩ ᠙᠘ᡃᢌ ᡏᡗ᠉ᢉ᠌᠌ᢂ᠆ᢆ᠆᠘᠂ᠳ ᠕ᢟ᠆᠆᠊ᢦ᠋᠋∩᠋ᡗᡣᠳᡃ᠋ᡃ, ᠈ᡃᢉ᠈ᠵ᠈ᠵ᠒᠆ᡏ᠆ᡏ᠆ ⊲L l≪LΓ^c ᢀᡏᡅ᠆᠕ᠫᡐ ∢⊳⊂∿∩∽'⊑۲. ⊲۲[∿]۲۴_. ൶ഀ഻ഽ $\dot{P}\Gamma \neq C \nabla P = V = V = V$ (NWMB) ⊲℃⊃⊲℃⊳% ᠆᠋ᡃᢣ᠋ᢕᠳᡃ ᢀ᠆᠆ᡣ ᡥᡃ᠋ᡃ᠆᠆᠋ᡃ᠅ᡗ ےمے ላ°ጉ? ∆_⊲⊄. ᠘᠆᠋᠋᠋᠆ᢣᢛ レペ∟⊳≺ኈ ᠆᠋᠂ᢣ᠋ᢕᠳᡃ ᡃ᠋ᡖ᠋᠘᠘ᢣᢩ᠗᠆ᡩ᠕᠕᠕᠕᠕ ᢀᡄ᠋ᢉ᠆᠆᠋ᡃ ٩Ľ ୵Վ゚ᡆ▷∩℅᠉ϽႻ بالمجوم ൶ഀ഻ഀ ᠔᠘᠊ᠯᡄ᠋ᡊᢣᡃ᠘᠊᠋᠕᠂ᠳ ᠕ᢂ᠋᠖᠕᠘ ∿⁺℃`ځ ∆_ہ_ ᠗᠆ᠳᢀᡣ᠐᠈ᢕᢄ᠆᠘᠆᠋᠂᠘ ⊲L ႱペĽჂჼႱႱ ᡏᠧᡆ᠊ᢛᢗᡐᡄ᠋᠘ᡁᠧᡅ᠖ᠽ ف۲CJL ዾኈዾኯጚ፟፟፟፟፟፟፟፟፟ کم°مک ഄഄഀഺ ⊲دک₀(⊳۲⊃۰. $\Delta / L - P - S \Delta J \cap$ ۷−۱⊃۷ ጋቍኯኯኯጚ ᢀᢄᡄᠣ᠋᠋ᠬᡔᡃ᠋ ᠴᡆᡷᡃ᠋᠋ᡏ᠊᠔ᡃᠯᡄ᠋᠋ᡊᢣᡃ᠘᠋᠋᠋᠘ᢞ᠋᠖ᡃᢗ᠋᠂ᠣ᠋ <u>ԲՐԴ⊳րՐ</u> ᠔᠘᠊᠊ᠯᡃᠣ᠊᠋᠋᠆ᡏᡃ ⊲LI **ላ**ል•ጋኈረ୮ጘഘ ዾ፟Lጚኈ፞፟፞፞፞ፚ∿Ď ᠂ᡆ᠆ᡣ᠈᠋ᡣ᠕ᢞ᠊ᢗᡆ

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- 」⊲, J.W. 1975a. Ճ໒ݮ▷℅ℂՙݮ∿՟ຉ՟ ℅⊳≻ഺՙር ՀLժ⊲ Ո୷৮٬ാ٬ Ճ℅ℶ⅄๎Դ, *Salvelinus alpinus* (L.), Հեգ Հ∿ݮՙാ՜ ৬∿Րՙጋ⊲_⊲գ ՙՔԲՙՀեՐ. J. Fish. Biol. 7: 143-151.
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PUBLICATIONS

The tentative schedule for the various reports resulting from this meeting are as follows. Ross Tallman will prepare a draft of the Research Document (Assessment of Kipis (Cumberland Sound) Arctic char) for end of May 2005. Kathleen Martin will prepare the draft SSR and Proceedings documents for the end of April 2005. Drafts will be circulated for review prior to being finalized and will be translated into Inuktitut for review by the local committee members.

ACKNOWLEDGEMENTS

Thanks were extended to everyone who had participated in the meeting. The discussions provided important insight into the assessment of the stock. We appreciated the work done by Martine Giangioppi for arranging the translation services, providing the necessary equipment and for Tracey Loewen taking copious notes. The simultaneous translation and services interpretation were ably provided by Leetia Janes from Innirvik Support Services Ltd. who stepped in at the last minute to save the meeting. Michael Nowinski, the Pangnirtung Fisheries fish plant manager was able to meet with the RAP committee members and added the economic perspective to the discussions. We

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would also like to thank Donna Copeland and the Auyuittuq Lodge staff for their hospitality.

The meeting was adjourned at 1:15 p.m.

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APPENDIX 1. PROPOSED AGENDA

PROPOSED AGENDA Wednesday, 23 March, 2005 9:00 Welcome and opening remarks Introductions, review of agenda, RAP process explanation, responsibilities of 9:05 participants and comments from participants. 9:20 Begin review of draft stock status report Context Description of the Issue • 9:40 Continue Review of draft stock status report Species Biology Map and photo information 10:00 BREAK 10:15 Continue Review of draft stock status report The Fishery • 10:25 Continue review of draft stock status report Resource User Perspective (Fishers view) 12:00 BREAK FOR LUNCH 1:00 Continue Review of draft stock status report Assessment Key indicators (data) • Stock trends (assessment) 2:15 Continue review of draft stock status report • Current Status (end point of assessment, and biological information on growth, condition, etc., if available) BREAK 3:30 3:15 Continue review of draft stock status report Sources of Uncertainty 5:30 Adjourn until Thursday March 24

PROPOSED AGENDA continued

8:30 Update of process and review of agenda; updates and comments by participants and review and comments of previous day's work

- 8:45 Continue review of draft stock status report
 - Conclusions and Advice (Outlook)

10:30 BREAK

10:45 Continue review of draft stock status report

- Management Considerations
- Other Considerations

12:30 BREAK FOR LUNCH

- 1:30 Continue review of draft stock status report
 - Summary

2:10 Closing of meeting

- Summary of the editorial and approval process for Stock Status Report, Proceedings and Working Papers.
- Assigning of revisions

2:30 Meeting adjourns

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APPENDIX 2. PARTICIPANTS LIST Δ_๒゚σჀ 2. פארועריי געריי געריי געריי געריי געריי געריי געריי געריי געריי

Brian Dempson >ና∆ታ በላና∖

Science – Arctic char / Atlantic Salmon ^ໂຍ>ຯໂອ^{*} - ຝໂລດ້/ເປົ້ລ Northwest Atlantic Fisheries Centre Fisheries and Oceans Canada ຝໂΓ▷ເຕລະໂປິ ເດິດ 80 East White Hills Road80 P.O. Box 5667P.O. Box 5667 St. John's NL, A1C 5X1 Email ^ເຍເຽຍ⁺ປິ ເດິດ Email ^ເຍເຽຍ⁺ປິ ເດິດ Compsonb@dfo-mpo.gc.ca Telephone ໑ໂຣລຍິດ^{*}ປ: (709) 772-4475 Fax ૮৬[°]C^{*}U: (709) 772-3578

Billy Evic ㅅㄷ ᠘ᡧ Pangnirtung Hunters and Trappers Association <ົວ່ ▷L∹໌ঢ</p>

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P.O. Box 2 Pangnirtung, NU, X0A 0R0 Telephone ▷⑮ᡄ▷೧℃ს: (867) 473-8633

Martine Giangioppi Lీ౧ఄ ՐՎՐՒ∧ Fisheries Management, Fisheries and Oceans Canada దీటండారి ఉండంగి, దఓౕ౯Ւఁడా౫ిరి ఉంఁ౯ Building 1074 P.O. Box 358 Iqaluit, NU XOA 0H0 E-mail క్షర్లిలింట: giangioppim@dfo-mpo.gc.ca Telephone సిండంగింట: (867) 979-8003 Fax డిల్ఎిట: (867) 979-8039

Leetia Janes ሩበላ ኑ∆[~] Innirvik Support Services Ltd. Δ[°] ታናል[•] በ୮ነብቦኒ P.O. Box 2020 Iqaluit, NU X0A 0H0 email ኈና⊾▷ኑሪ ጋናዖበኄ: <u>innirvik@nunanet.com</u> Telephone ▷ኈຼ▷በኄ: (867) 979-1012 Fax ሖሪጋኄt: (867) 979-5886 ف ف[¢] د_م⊳ Andrew Keim

Pangnirtung Wildlife Officer くっつう レレギーマシロ Government of Nunavut, Department of Environment エーキン レペレル - マペハーへか Pangnirtung, NU, XOA 0R0 Email もらくトナッゴ つらわし: <u>AKeim@gov.nu.ca</u> Telephone トもこトハン: (867) 473-8937 Fax イトンンし: (867) 473-8326

Tracey Loewen کہ نے ۲

Manasee Maniapik L໑イ Lི▱◁ヘ⁵ Pangnirtung Hunters and Trappers Association <∿໋づ< ▷L∹ថっ⊲∩ʰժ ๖ン≻ኄ∩Րጐ P.O. Box 2 Pangnirtung, NU, X0A 0R0 Telephone ▷ኄ∟▷∩∿L: (867) 473-8751 Fax ሖຽጋ∿L: (867) 473-8741

Leona Nakashuk ເລຍເພັ້ Secretary Manager, Pangnirtung Hunters and Trappers Association <ໍດາວ່ ໄປເລັດປາທີ່ເວລາຍິດທີ່ເດັດເລີ້ອີ P.O. Box 2 Pangnirtung, NU, XOA 0R0 Email ຈິເລຍ່າຍ ວິເລດານີ້: panghto@nunanet.com Telephone ຍຣິເລຍິດາປີ: (867) 473-8751 Fax ເປັດວ່າປີ: (867) 473-8741

Limee Nakashuk டAГ உb ு

Pangnirtung Hunters and Trappers Association <ົດ້າວ່າ ▷L -ເຈົດໃດ້ ບິດານ P.O. Box 2 Pangnirtung, NU, X0A 0R0 Telephone ▷ພຼວດີປ: (867) 473-8751 Fax ຝຽງປ: (867) 473-8741

Stefan Romberg アCマートデー

Sakiasie Sowdlooapik ኣዮላፖ ኣ⊳້ລላላ Senior advisor in fur & sealing ຝົາ ເຈົ້າປີເວົ້ອດ ໂຮຍຣັກໄດ້ ເປັດ ລັດ Government of Nunavut - Department of Environment ລາວ F.O. Box 1000, Station 1390 Iqaluit, NU, X0A 0H0 Telephone ຣົຣຼຣົດີປ: (867) 473-2669 Fax ୵ຩຽງປ: (867) 473-2663

Ross Tallman Ϸና՝ ĊL^{*} Science - Arctic Stock Assessment and Conservation Research Section ቴኦኦኒჾኒግ - ኦዮኦ(ᢏ)ና ለርቴና አንድ ም ቴኦኦ ሬላና ምኒግ ላጊ ቴርጣላ ላቴና ምኒግ ቴኦኦኒምኒግ ለ አስኦላሮ Fisheries and Oceans Canada ΔL ፕኦር አስሮ ቴ 501 University Crescent Winnipeg, MB, R3T 2N6 Email ቴናኒኦኦቴና ጋናዖበኂ: <u>tallmanr@dfo-mpo.gc.ca</u> Telephone ኦቴ ራ ኦበኂኒ: (204) 983-3362 Fax አቴርንኂ: (204) 984-2403 Marc Young L^ኑ '> Economic Development Officer ∧ ኖ՟ ⊂ ଏ ≺ ⊂ ൨ ` Hamlet Office P.O. Box 253 Pangnirtung, NU, X0A 0R0 Email: ኈና⊾ ▷ ነና? በ `t: Telephone ▷ ኈ ຼ ▷ በ `t:: (867) 473-8953 Fax ሥሪ ን `t: (867) 473-8832