NORTHWEST TERRITORIES
SPECIES AT RISK COMMITTEE

DETAILED INSTRUCTIONS FOR PREPARATION OF A SARC STATUS REPORT: INDIGENOUS[1] AND COMMUNITY KNOWLEDGE COMPONENT

This document is intended for preparers of species status report components for the NWT Species at Risk Committee (SARC). It should be used together with the *SARC General Guidelines for Species Status Reports*, a separate document that gives other important guidance on the preparation, review, and use of status reports.

Each status report is prepared in two parts: an 'Indigenous and Community Knowledge Component' and a 'Scientific Knowledge Component'. This document gives detailed instructions for preparing the Indigenous and Community Knowledge (IK/CK) Component. A complete status report typically includes both components presented together, unless SARC determines that there is not enough information available to complete one component.

These guidelines adopt a 'biocultural' approach[2], in accordance with Canada's commitment under Article 8(j)[3] of the Convention on Biological Diversity (1993), which recognizes the role of Indigenous knowledges and ways of life in the conservation of

[1] Please note that this differs slightly from the term 'traditional and community knowledge', which is what is used in the *Species at Risk (NWT) Act*. In line with shifts in organizational terminology, SARC agrees that the term 'traditional' should be replaced with 'Indigenous'. The term 'traditional' is felt to limit the reader to interpretations of these knowledges as historical only. The term 'Indigenous' allows the reader to understand more clearly that these knowledges are relevant in the present tense as well, as they adapt and evolve over time. This is not intended to change the meaning of the term in the legislation, but simply to reflect evolving standards for language.

[2] For example, see Bridgewater, P. and I.A. Rotherham. 2018. A critical perspective on the concept of biocultural diversity and its emerging role in nature and heritage conservation. People and Nature 2019(1): 291-304.

[3] Article 8(j) of the Convention on Biological Diversity reads: "Subject to national legislation, respect, preserve, and maintain knowledge, innovations, and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations, and practices, and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations, and practices.

biodiversity, and reflects the role of Indigenous land management in conserving biodiversity[4]. The focus of species status reports is on the full range of knowledge about ecological and biocultural changes affecting a species. The IK/CK component also encompasses Indigenous relationships with wildlife, knowledges, and related practices. The status of these relationships, knowledges, and practices is considered an integral part of species status.

Every single extinction takes away from the earth's biodiversity, undermining the stability of the systems we rely on. Each loss increases the chances of problems arising. In the face of biodiversity loss, the ability of ecosystems to provide essential services is impaired, especially with ever-increasing pressures from people. Ecosystems work best and are more resilient to change when their biodiversity is intact. Each species has a role to play, no matter how small it is.

"Traditional knowledge takes a holistic view. The first principle is that we are all connected so there cannot be one winner and some losers. We all win or we all lose."[5]

In assessing the availability of IK/CK, it is important to understand, as noted above, that knowledge holders implicitly understand that everything is connected. For various reasons, however, this may not be explicitly described in the sources available for a status report. SARC recognizes that only a small portion of the IK/CK that exists has actually been transcribed. Available transcriptions of IK/CK are also often removed from the cultural, spiritual, linguistic, and ecological context in which they were intended to be heard. Likewise, knowledge holders often avoid speaking negatively about species, or may only speak about a particular species when they see a problem occurring or are no longer able to observe it despite it being previously available. These factors may limit the completeness, and perhaps also accuracy, of status reports.

[4] For example, see Schuster, R., R.R. Germain, J.R. Bennett, N.J. Reo, and P. Arcese. 2019. Vertebrate biodiversity on indigenous-managed lands in Australia, Brazil, and Canada equals that in protected areas. Environmental Science and Policy 101: 1-6.

[5] Ontario Nature, Plenty Canada, and the Indigenous Environment Studies and Sciences Program at Trent University. 2017. Indigenous Perspectives on Conservation Offsetting: Five Case Studies from Ontario, Canada. Available at: https://ontarionature.org/wp-content/uploads/2017/11/Indigenous20Perspectives20on20Conservation20Offsetting20final_796kb.pdf

Likewise, SARC understands the often-local nature of IK/CK, which may affect the presentation of information in a status report. Preparers have the discretion to present information in whatever manner is most appropriate to the knowledge being presented (e.g., regionally, locally).

Protocols

Preparers should refer to the GNWT *Traditional Knowledge Best Practices Summary*[6] for general guidance in assessing Indigenous knowledge materials and applying them in status reports. In certain regions and communities of the NWT, specific protocols and policies on Indigenous knowledge apply. The Secretariat will direct the preparer to these protocols/policies. Where such guidance is not established, the preparer will be asked to follow the *Guidance for Integrating Indigenous and Local Knowledge (ILK) in IUCN Red List Assessments*[7,8]. It is the responsibility of the preparer and SARC (during draft reviews) to ensure that the appropriate protocols/policies are followed as much as possible.

The IK/CK component of status reports draws upon a wide body of materials from diverse peoples, cultures, and landscapes. This knowledge is embodied in stories and narratives[9] that combine understandings of current conditions along with knowledge passed down through many generations, often known as 'baseline'. This knowledge is complex and contained in stories and narratives that lose meaning when taken out of

[6] Government of the Northwest Territories. 2010. Summary of Best Practices for Applying Traditional Knowledge in Government of the Northwest Territories Programming and Services. Available at: https://www.enr.gov.nt.ca/sites/enr/files/reports/tk_best_practices_summary.pdf

[7] The IUCN uses the word 'integrating' but SARC does not support use of this term in this context. Indigenous knowledge and science are considered equal in their integrity as knowledge systems. Indigenous knowledge is not being integrated into assessment criteria; SARC's assessment criteria were developed to account for both knowledge systems.

[8] https://www.iucn.org/sites/dev/files/final_guidance_for_ilk_-_for_commission_sign_off.pdf

[9] Openness to stories about a species is important to enhance understanding of the species. Stories can provide context to the change that's happening. It's hard to say directly how some of the stories will be important to assessment, but they're very important to the biocultural dimension. A story provides a means of holding data, providing meaning, and showing relationships among different players/components of the story. Stories are told based on knowledge holders' understandings of the question at hand, and it can take a long time to understand the purpose of the story being told.

context. For this reason, while preparers are given general guidance on topics to be addressed, they are also asked to take a 'grounded theory' approach to synthesizing knowledge within these topics, identifying key themes from available materials. Where appropriate, Indigenous language concepts, quotations, and narratives should be included to provide context and enhance cross-cultural understanding.

Preparers should draw on their expertise to interpret Indigenous knowledge in relation to status assessment requirements. Knowledge that is given significance within source materials but whose meaning may not be apparent can be included with a caveat. Specific questions are provided to help the preparer understand the sort of information that is required by SARC to assess the species. They are not intended as interview questions. The preparer has the discretion to draw on their expertise to determine the relevant available knowledge for inclusion in the report.

Some IK/CK, such as sacred teachings, may be considered confidential and/or sensitive. Where knowledge holders, or the preparer(s) *in consultation with SARC*, have indicated that information should not be made public, it is considered 'sensitive information'. Sensitive information should not appear in the main body of the report. It must be placed in Appendix B. It should not be explicitly referenced in the status report. However, it should be generally referenced so that a reader of the report can understand its implications for status determination.

Status report components may vary in length depending on the amount of available information. They should contain a summary of all relevant information but not all details of all information. The preparer's job is to pick out the relevant available material and succinctly summarize and synthesize it for SARC's use. Preparers should strive to be brief, but bullets and lists should be avoided. In all cases, cite references. Relevant available material primarily relates to information that can inform an assessment of status for the species. That is to say, insofar as is possible without losing necessary contextual information, information should focus on, for instance, reproductive success rather than mating rituals.

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Title Page

Each report should begin with a title page, as follows:

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DRAFT

SPECIES STATUS REPORT

(Indigenous and Community Knowledge Component)

for

[Common Names list in as many languages as are applicable]

in the Northwest Territories

prepared for

Northwest Territories Species at Risk Committee

by

[Preparer name]
[Preparer address]

Submitted: [Date]

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Table of Contents

Include a table of contents that can be automatically updated.

Preface

This is a standard statement from SARC about the role of the IK/CK component in the status assessment process. Standard text to be included in a status report's preface is as follows (italicized, and including the below quote):

"Our history is written on the land, in the placenames and stories, in the language. …And unless you speak the language, you will not fully understand the stories. I'm always searching for stories. That's where our knowledge comes from. That's how knowledge in my area is passed on." (Walter Bayha [Tulít'a] in Bayha 2012[10]: 26)

The consideration of Indigenous peoples' cultural histories, identities, languages, social organizations, and interactions with their environment is of vital importance for the accurate assessment of species. While all reasonably available Indigenous and community knowledge was solicited for inclusion in this status report, limitations are acknowledged. First, in the completion of these reports, the Species at Risk Committee (SARC) is not able to conduct any primary research or information gathering activities (e.g., interviews). The transcription and verification of Indigenous and community knowledge is often complex and resource-intensive, not to mention sometimes controversial (Bayha 2012[8]). It is often the case that only a small portion of the Indigenous and community knowledge that exists has actually been transcribed. This limits the completeness, and perhaps also accuracy, of a status report. Second, it is important for us to recognize that the Indigenous knowledge that has been transcribed and was available for inclusion in this status report, is, in many respects, removed from the cultural, spiritual, linguistic, and ecological context in which it was intended to be heard (Berkes et al. 2000[11]; Thorpe 2004[12]; SENES Consultants Ltd.

[10] Bayha, W. 2012. Using indigenous stories in caribou co-management. Rangifer, Special Issue No. 20: 25-29.
[11] Berkes, F., J. Colding, and C. Folke. 2000. Rediscovery of traditional ecological knowledge as adaptive management. Ecological Applications 10(5): 1251-1262.
[12] Thorpe, N. 2004. Codifying knowledge about caribou: the history of Inuit Qaujimajatuqangit in the Kitikmeot region of Nunavut, Canada. Pg. 57-78 In D.G. Anderson and M. Nuttall (eds.). Cultivating Arctic

2010[13]; Tłı̨chǫ Research and Training Institute [TRTI] 2016[14]). Translation, in particular, can result in generalizations and the loss of sometimes subtle descriptions of inter- and intra-specific variation, interactions, and patterns (TRTI 2016[12]; Polfus et al. 2017[15]). As noted by Polfus et al. (2017[13]: 17), "words are used in context and convey different meaning depending on who is speaking, what dialect is being used, what questions are being addressed, where on the land the speaker is located, and the dialect or background of the audience." Although Indigenous knowledge and its transmission is ultimately grounded in practice, language is integral to its interpretation (Bayha 2012[8]; Polfus et al. 2016[16]). Ultimately, understanding the environment (animals, plants, land, water, air, etc.); that is, practicing one's culture, is essential to understanding the stories and legends.

In cases where only a scientific knowledge component is being prepared, the following statement should be used in lieu of the above information.

In the preparation of this report, an effort was made to find sources of Indigenous knowledge, community knowledge, and scientific knowledge. Unfortunately, there is little available documented Indigenous or community knowledge for [species]. Therefore, this report is based almost exclusively on scientific knowledge.

Landscapes: Knowing and Managing Animals in the Circumpolar North. Berghahn Books, New York and Oxford.

[13] SENES Consultants Ltd. 2010. Ɂekwę Hé Naıdé: Living with Caribou. Traditional Knowledge Program 2005-2009: Preliminary review of management and policy implications. Sahtú Renewable Resources Board, Tulít'a, NT.

[14] Tłı̨chǫ Research and Training Institute [TRTI]. 2016. Ekwǫ̀ zǫ̀ gha dzô nats'êdè 'We Live Here for Caribou': Cumulative impacts study on the Bathurst Caribou. Tłı̨chǫ Traditional Knowledge and Land Use Study. Tłı̨chǫ Government, Behchokǫ̀, NT. 56 pp.

[15] Polfus, J.L., D. Simmons, M. Neyelle, W. Bayha, F. Andrew, L. Andrew, B.G. Markle, K. Rice, and M. Manseau. 2017. Creative convergence: exploring biocultural diversity through art. Ecology and Society 22(2): 4.

[16] Polfus, J.L., M. Manseau, D. Simmons, M. Neyelle, W. Bayha, F. Andrew, L. Andrew, C.F.C. Klütsch, K. Rice, and P. Wilson. 2016. Łeghágots'enetę (learning together): the importance of indigenous perspectives in the identification of biological variation. Ecology and Society 21(2): 18.

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Production Note

This page provides SARC with the opportunity to describe the internal review process used to produce the species status report (e.g., sections adopted from other reports) and ensure the accuracy and completeness of the species status report.

If this report is for something other than a full species (i.e., subspecies or distinct population), briefly provide the rationale using the *Assessment Process and Objective Biological Criteria*.

Executive Summary

Summarize in simple terms the relevant material contained in the body of the report. Include the main headings used in writing the report. Under each heading, give a brief summary of the key information and conclusions for that topic. Do not include information that is not presented in the body of the report. Do not make reference to figures in the report, and do not include citations.

Use plain language. The executive summary is intended for the average NWT resident who does not have specialized knowledge of the species.

About the Species
xxx
Place
xxx
Population
xxx

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Threats and Limiting Factors
xxx
Positive Influences
xxx

Technical Summary

The technical summary will be presented alongside a technical scientific knowledge summary as an overview of information that must be considered in assessing the status of a species, with a focus on known changes. The IK/CK technical summary should provide short narratives synthesizing key available knowledge on the main topics covered in the status report. Bullet form is acceptable in the technical summary.

About the Species
For example: whether cultural relationships have been impacted by declines/changes in the species; whether the species is sensitive to natural/human-caused disturbances; the reproductive capacity of the species; the dispersal capacity of the species; whether the species has critical/important/sensitive habitat components.
Place
For example: amount and quality of habitat available to the species compared to the past; changes in range use by the species; whether knowledge holders feel there will be changes in habitat quantity/quality; whether the species has shifted its distribution/range and if so, how.

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Population (e.g., local, regional)
For example: how often the species is observed compared to the past (less, more, same) and, if possible, the degree of change in observed abundance; whether the species is now unavailable, or less available, in areas where it was historically abundant; whether these changes are seen as normal or not for the species; if knowledge holders are expressing concern about the species' future, whether they express these concerns in the short-, medium-, or long-term.
Threats and Limiting Factors
For example: how knowledge holders characterize the degree of disturbance the species and/or its habitat are facing, through human-caused or natural sources.
Positive Influences
For example: factors that are or are likely to have a positive influence on the status of the species in the NWT, including habitat protection, community conservation initiatives, etc.

Glossary

Include a glossary of important terms/acronyms used in the report, including Indigenous language terms. The term 'Indigenous knowledge' does not need to be defined in the glossary; however, please include a cross-reference in the glossary to Appendix A: Indigenous Knowledge Definitions.

Place Names Map

Include a map showing place names used in the report to facilitate interpretation by a reader who may not be familiar with the region. The Secretariat can assist with the preparation of such a map if needed.

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Preamble

Briefly describe the nature and scope of available IK/CK for the species.

Identify and describe the major IK/CK sources used, including the following types of information about each source to assist the reader to interpret the information provided: level of peer review with knowledge holders, adherence to social science standards and/or rigorous Indigenous knowledge methodology in gathering the information, whether information gathering was purposeful or incidental, whether the information would be considered current or not, etc.

Describe gaps in IK/CK sources, including gaps in space and time (e.g., if there's a lot of old information about a species, but little current information). In particular, describe regional differences in gaps that relate to a lack of recorded IK/CK rather than a lack of knowledge about, or presence of, the species. Include notes about how this may impact the accuracy and completeness of the status report.

Describe areas of overlap between Indigenous knowledge, community knowledge, and scientific knowledge in sources used, and clarify whether or not overlap information was included in the report. Overlap information may include, for example, observations where it is unclear if the source was IK/CK or possibly a narrative observation from a scientist.

Describe jurisdictional extent of information used in the report. Although assessments are focused on the species within the NWT, use of information from other jurisdictions is acceptable and encouraged when that information is likely also relevant to the species within the NWT.

ABOUT THE SPECIES

Names and Classification

List the common and local names for this species. Refine according to the level of distinct population used, if required. Also, if necessary, describe local names and

concepts of populations, subpopulations, or distinct groups (i.e., describe any relevant local taxonomic classifications for the species).

Names and spellings of species in Indigenous languages, as well as standards for English and French names, can be found in SARC's *Guidelines on Taxonomy and Species Names*[17]. SARC will work with the preparer to clarify any of these terms if needed. Other important terms used to distinguish life cycle stages, behaviour, or appearance (e.g., older bulls, juveniles, scouts/leaders, different colours, behaviour variants, etc.) can be placed in the most appropriate subsection, at the discretion of the preparer.

Relationships with People

Discuss the relationships the species has with people (e.g., spiritual/cultural importance, regional/historical context, etc., as is most appropriate to the species). For example:

- Spiritual/cultural importance and sacred teachings and knowledge.
- Is it harvested? To what degree?
- Is the species' distribution well-known?
- At what frequency is the range visited by knowledge holders?
- What communities have knowledge of this species?
- Where and when do people tend to encounter the species (e.g., close to communities or only a long distance away)? Has that changed over time?
- How do they encounter the species (e.g., is the species a target of specific hunting/fishing/gathering trips to certain locations? Is it only encountered opportunistically? Is it baited or otherwise attracted to specific locations?)?
- Which areas do people use the most, and know the most about?
- Which areas are not so well known?
- Have these practices or areas changed in recent generations? How? And how does this influence knowledge of the species?

[17] https://www.nwtspeciesatrisk.ca/sites/enr-species-at-risk/files/official_taxonomic_references_combined_final_december_2016.docx.pdf.

- When was the last time the species was seen in a particular area (the presence or absence of a species from a region strongly influences human relationships with that species)?

Description

Describe the species, in a way that presents a good understanding of the species from the perspective of the knowledge holders. This may include, for example, what they look like, how males and females and age classes differ, subpopulation differences within a population (e.g., known areas with different-looking individuals), distinctive movements, adaptations, intelligence, sounds, behavioural characteristics, which indicators are used to describe if an animal is healthy or not, and other interesting facts, as appropriate.

A photographic or artistic representation may be included here. The Secretariat can help with obtaining photographs. If deemed to be useful, a more detailed description, including photographs, may be included in *Biology and Behaviour* or placed in Appendix A.

Biology and Behaviour

Briefly outline aspects of the biology of this species in the NWT that could help the reader to assess the level of risk (e.g., age groups/roles, roles of males and females, lifespan, areas where females tend to give birth, species' needs at different life stages, etc.). If appropriate, more detailed information may be placed in Appendix A.

Discuss the species' life cycle, focusing on, for instance, rate of reproduction rather than mating rituals, unless that information is useful for interpretation.

Diet and Feeding Behaviour

Discuss the diet and feeding behaviour of the species, using the following questions as a guide:

- What does the species eat?

- Does it require a specific food? If yes, does it require this specific food at any particular time in its lifecycle? Does this change at different life cycle stages? How is this food important to growth and reproduction?
- What influences its ability to find food or the availability of food?
- Does feeding change by season? What can make it differ from year to year?

Adaptations to Environment

For example:

- Does the species have any traits or behaviours that help it adapt to changes and/or unfavourable/extreme conditions (e.g., hibernation, forming spores, regulating body temperature, etc.)?
- Are there conditions or events that the species cannot tolerate (e.g., weather-related unusual events like heat, cold, flooding, freezing rain, etc.)?
- Is the species particularly vulnerable to changes in its environment/habitat or to disturbance from human activities (e.g., noise, roads, etc.)?

Relationships Within and Among Species

For example:

- Describe how the species relies on other species.
- Describe how the species interacts with other species that may affect its survival or reproductive success (e.g., a predator that eats it, a disease that shortens its lifespan, etc.)?
- What are the main predators?
- Does the species compete with others for resources (e.g., food, space, shelter, mates, etc.)?
- Are negative interactions with other species (e.g., predation, disease, competition, etc.) natural or unnatural (normal or not normal)?
- Does the species live in colonies or groups? If so, how is the group important to survival and/or reproduction?
- How do these interactions influence survival?

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PLACE

Distribution

Describe the distribution of the species in the NWT. If the species' range has been mapped using IK/CK, include the map(s), if possible. Refer only to the species, subspecies, or distinct population being reported upon, unless there is a specific reason for doing otherwise.

For example:

- Where is the species found in the NWT?
- What is its usual range in the NWT?
- Are there places in the NWT where the species is occasionally found but not usually found?
- Are there distinct groups? If so, how many?
- Is the species found in a continuous distribution or are populations isolated from one another? Are any populations particularly isolated from the others?
- Does the species show differences in seasonal distribution/availability?
- Is the species migratory? What seasonal ranges does the species use during its migrations?
- If the species' distribution has changed, what are the current and historical ranges?

Changes in Distribution

For example:

- Has the species' distribution in the NWT changed? If so, how?
- Does the distribution change from year to year? Does it change in multi-year cycles?
- How big are the changes?
- What are the causes of the changes?
- When did the changes happen? Are they happening now?
- Have any populations disappeared?

- Have any new populations appeared?
- What factors could influence changes in the distribution?

Movement and Dispersal

For example:

- How does the species disperse from one place to another (e.g., water currents, carried by birds, walking, intentionally moved by humans, etc.)?
- How far does the species disperse?
- Are there certain stages of the life cycle that disperse?
- Are there any barriers to dispersal or in the migration routes?
- Does the species make annual or seasonal movements?
- Is the species faithful to a certain area over a long period of time?
- Does the species concentrate in certain areas (e.g., rutting areas, molting areas)?
- Are there daily movement patterns (e.g., roosting, bedding, or sleeping areas)?
- Is the species capable of moving over long distances?
- Observations on distances the animal may travel.
- Have movement or dispersal patterns changed over time?

Key Habitats

For example:

- Are there key habitat areas in the NWT that are known to be important for the survival of the species? If so, briefly describe these and include a map if possible.
- Consider Indigenous or community place names as a way of identifying key habitats. These could be historical or current.

Habitat Trends

For example:

- Has the amount of suitable habitat changed? Is there more, less, or is it about the same?

- Has the quality of suitable habitat changed? Is it better, worse, or about the same?
- What are the causes of these changes?
- How big/important are the changes?
- When did the changes happen? Are they happening now?
- Does the habitat change from year to year? Does it change in multi-year cycles?
- Did the species decline or disappear from the NWT because conditions were not favourable?
- Consider both short-term and long-term changes.

Habitat Fragmentation[18]

For example:

- Is the habitat or range of the species fragmented?
- Is the fragmentation natural, or is it caused by people?
- How does the fragmentation affect the species? Do individuals tend to leave once an area is fragmented? Do they ever move back? Do other species move into the area? Do other species that move into the area prevent the species from coming back?
- How well can this species move from one good habitat patch to another, if the habitat in between is not good?

POPULATION

Abundance

Abundance of the species in the NWT can be spoken about using terminology consistent with how knowledge holders characterize abundance. If people tend to speak about abundance of the species in qualitative terms (e.g., accessibility, observability, group sizes, harvest success), please use those terms in the text (i.e., it doesn't need to be

[18] Please note that Habitat Trends and Habitat Fragmentation are often combined, given the degree of overlap possible in these topics.

numbers). Please note the time periods during which observations were recorded (i.e., is knowledge about abundance current?).

For example:

- What is the abundance of the species in the NWT (e.g., measured by knowledge holders using numbers, accessibility, observability, group sizes, harvest success, etc.)? Abundance can be presented regionally or locally, if this is more appropriate to the species.
- If the species is divided into different populations in the NWT, what is the relative abundance of these populations?

Population Dynamics

For example:

- Does the species have more than one young at a time?
- How many young survive the first year?
- Roughly how many deaths occur each year (e.g., just a few, lots, etc.)? Is it the same every year? Is it mostly young, adults, the old and weak, or a combination? Are there certain times of the year when deaths occur?
- Do you see animals move into or out of the area from other areas (immigration, emigration)? What is the magnitude and/or proportion of these movements? Which individuals does this tend to be (e.g., young males)?
- Have there been changes or trends in age or life stages (e.g., fewer calves compared to the past, or animals not living as long as they used to)?
- What is the ratio of males to females? What are the ratios of different age groups in the population?
- Do any of these stages have a particular role in the population (e.g., large bulls or old cows leading herds/groups)?
- What factors can influence reproduction (e.g., availability of food, presence of disturbances, levels of body fat, etc.)?

- What factors influence survival of young in particular? What factors affect survival of other life stages?

Changes in Population Size

For example:

- Have the numbers of this species gone up, gone down, or stayed the same? As noted previously, population trends can be presented at a scale suitable to the species (e.g., regionally, locally).
- Do the numbers change in multi-year cycles?
- Are there 'extreme' fluctuations (ups and downs that are frequent, rapid, and usually more than tenfold)?
- How big are the changes?
- Are the changes part of a natural cycle? What is the approximate timespan of natural cycles?
- What are the causes of the changes?
- When did the changes happen? Are they happening now? Are they expected to happen in the future?
- Is the trend likely to continue if nothing is done?
- What factors could influence changes in the numbers and/or density?
- Have any populations disappeared?
- Have any new populations appeared or been discovered?
- Are there changes in numbers and/or density within a certain population?
- Is the species rare? If so, has it always been this way? Why?
- Consider both short-term and long-term changes.

Health

For example:

- What indicators are used to describe if the species is healthy or not?
- Have there been changes in the health of the species (e.g., body size, antler size, body condition, disease, ages, etc.)?

- Has the appearance or behaviour of the species changed, and if so, how?

Rescue Effects

Discuss the process by which a species may move through its range in a way that would mitigate an NWT extirpation or population decline. For species whose range is shared with another jurisdiction, discuss the likelihood that movement from the outside population will repopulate the NWT population should the latter disappear or experience a decline. Use the following questions as a guide:

- Have any populations of this species previously disappeared from the NWT? If so, were they re-established by other individuals moving in?
- Are there any barriers that prevent movement to and from these other populations?
- Is the species capable of moving over long distances?
- Is the species known to move over long distances?
- Does the NWT population have any special adaptations that are different from populations elsewhere?
- Did the species decline or disappear from the NWT because conditions were not favourable?

THREATS AND LIMITING FACTORS

Identify the threats and limiting factors, and explain what impact they are likely to have. Some information on threats will have already been addressed in previous sections of the report (e.g., Relationships Within and Among Species, Habitat Trends). The earlier sections can provide the background needed to understand how the threat works and how it affects the species. Then in the Threats and Limiting Factors section, focus on how important the threat is, what the current state of affairs is (e.g., how many predators are there), and how the situation may be changing (e.g., proposed industrial development projects).

A threats assessment based on the content in this section, along with the Threats and Limiting Factors section of the Scientific Knowledge Component will be completed

collaboratively by SARC, following submission of a final draft of the status report by the preparer. Threats will be assessed in terms of their relevance to the status of the species in the NWT over approximately the next 10 years. It is important that the preparer lay out and discuss threats in a manner that will be useable by SARC during this assessment. This includes ranking threats by importance, and, insofar as is possible, addressing the following parameters for each threat:

Table 1. Parameters used in threats assessment.

Parameter	Description	Categories
LIKELIHOOD		
Timing (i.e., immediacy)	Indicates if the threat is presently happening, expected in the short term (<10 years), expected in the long term (>10 years), or not expected to happen.	Happening now Short-term future Long-term future Not expected
Probability of event within 10 years	Indicates the likelihood of the threat to occur over the next 10 years.	High Medium Low
CAUSAL CERTAINTY		
Certainty	Indicates the confidence in that the threat will have an impact on the population.	High Medium Low
MAGNITUDE		
Extent (i.e., scope)	Indicates the spatial extent of the threat (based on the percentage of population area affected).	Widespread (>50%) Localized (<50%)
Severity of population-level	Indicates how severe the	High

effect	impact of the threat would be at a population level if it occurred.	Medium Low Unknown
Temporality	Indicates the frequency with which the threat occurs.	Seasonal Continuous
Overall level of concern	**Indicates the overall threat to the population (considering the above).**	**High** **Medium** **Low**

Use the following questions to guide development of this section:

- What are the threats and/or limiting factors to the species/habitat in the NWT? Are these threats past or current?
- What are the potential future threats and/or limiting factors to the species/habitat in the NWT?
- Are there different threats and/or limiting factors in different parts of the species' range and/or life cycle? If the species is migratory, try to distinguish between factors in different seasonal ranges.
- Are any of these threats cumulative (i.e., do they act together to result in more pronounced effects than expected)?

What should be included:

- Be as specific as possible about each of the factors. For example, if mining is important, list the potential mine, location, and its possible impacts. This will facilitate completion of the threats assessment by SARC (see above).
- Where there is uncertainty or disagreement, present the uncertainty and discuss it.
- Focus on actual or imminent factors that can result in harm.
- If the threat is imminent but the potential harm is unclear, discuss it but explain the uncertainties.
- Photos demonstrating the impact of threats can be useful, if available.

- Other threats can be considered under a section called potential threats, for example:
    - If the threat is not likely to occur in the next 10 years (not imminent), but would likely cause harm if it occurred.
    - If the threat is not imminent, and there is uncertainty as to whether or not it would cause harm if it occurred.
    - Competition, predation, disease, and natural mortality may be included if circumstances have caused a recent change.

Limiting factors should include traits that make the species particularly sensitive to disturbance. This means that a species, for instance, reproduces slowly (e.g., is several years old before it starts reproducing, has few or very few offspring (for animals), only sets a small number of seeds (for plants), etc.), moves very slowly or not very widely (e.g., will have a hard time moving somewhere else if its habitat becomes unsuitable), and/or has very specific, critical habitat components, especially if those habitat components are rare or impacted by disturbance (e.g., salt licks, ice patch habitat, karst habitat, hot spring habitats, very specific food requirements, etc.).

POSITIVE INFLUENCES

Outline existing and potential positive influences on the species and its habitat in the NWT, and explain what impact they are likely to have. Address positive influences in a logical order (e.g., from most important in the NWT to least important in the NWT). Positive influences will be considered by SARC during the assessment of threats (i.e., how a threat is being addressed could modify a threats score) and during the overall assessment of the status of the species.

Some information on positive influences will have already been addressed in previous sections of the report (e.g., Relationships Within and Among Species, Habitat Trends). The earlier sections can provide the background needed to understand how the positive influence works and how it affects the species. Then in the *Positive Influences* section, focus on how important the positive influence is (magnitude, immediacy), what

the current state of affairs is (e.g., how much habitat is protected now), and how it may be changing (e.g., proposed new habitat protection).

For example:

- What are the current/potential positive influences on the species/habitat in the NWT?
- Are there different positive influences in different parts of the species' range and life cycle? If the species is migratory, try to distinguish between factors in different seasonal ranges.

What should be included:

- Positive influences that are actual (already happening) or imminent (will happen soon) and that can result in clear benefits.
- Where there is uncertainty or disagreement, present the uncertainty (e.g., as to what the potential benefit will be) and discuss it.
- If the factor is not imminent, but would likely have a benefit if it occurred, do not include it as a primary positive influence.
- If the factor is not imminent, and may or may not result in benefits if it occurred, it should not be included.
- If the positive influence is not clearly related to the species or its habitat, it should not be included.
- If management recommendations/suggestions are not likely to be implemented, they should not be included.
- Consider traits that make the species recover quickly (e.g., early reproduction age, many offspring, good dispersal capacity, wide range of food preferences, etc.).

Examples of positive influences to consider:

- Increase in food
- Creation of habitat
- Increase in quality of habitat

- Protection of habitat
- Removal of a disease or parasite
- Reduced competition
- Community conservation planning/actions

ACKNOWLEDGEMENTS

Acknowledge individuals, authorities, and agencies that provided assistance and/or funding, or otherwise contributed to the report. If the preparer deems that individuals that provided personal communications should be acknowledged, do so here. However, their name(s) should also appear under Cited Sources.

If this is an updated status report, acknowledge all report writers involved in the preparation of the original status report and any previous updated reports.

AUTHORITIES CITED

Under a separate subheading, provide a list of knowledge holders who were cited in the body of the status report, together with the reference from which they were drawn and the individual's home community.

Example format:

From Legat *et al*. 2008:

- A. Wedawin [Behchokǫ̀]
- C. Beaulieu [Behchokǫ̀]
- M. Martin [Behchokǫ̀]

AUTHORITIES CONTACTED

Under a separate subheading, provide a list of authorities contacted together with title, affiliation, city, province/territory/state, and country if outside Canada. The list should include all of the minimally required contacts provided at the beginning of the project. However, if none of the attempts to contact were successful, the contact should not be included.

NORTHWEST TERRITORIES
SPECIES AT RISK COMMITTEE

Example format:

Territorial government representatives:

Marsha Branigan, Manager, Wildlife Management, Environment and Natural Resources – Inuvik Region, Inuvik, NT.

Bonnie Fournier, Data Analyst, Environment and Natural Resources – Wildlife Division, Yellowknife, NT.

Federal government representatives:

Donna Bigelow, Species at Risk Biologist, Environment Canada, Yellowknife, NT.

Ifan Thomas, Western Arctic Field Unit Superintendent, Parks Canada, Inuvik, NT.

Indigenous organizations and wildlife management boards:

Steven Baryluk, Joint Secretariat, Inuvialuit Game Council – Inuvialuit Renewable Resource Committees, Inuvik, NT.

Bruce Hanbidge, Resource Biologist, Wildlife Management Advisory Council (NWT), Inuvik, NT.

Other species experts:

Debbie Jenkins, Qikiqtani Regional Biologist, Wildlife Research Section, Department of Environment, Pond Inlet, NU.

CITED SOURCES

List all literature and personal communications cited in the text, figures, tables, and appendices. Use the formatting and style described in the *SARC General Guidelines for Species Status Reports*.

BIOGRAPHY OF PREPARER(S)

Briefly outline your background, using the third person (e.g., use 'he is' instead of 'I am'). Stress the qualifications that make you a suitable writer for this report.

NORTHWEST TERRITORIES
SPECIES AT RISK COMMITTEE

APPENDIX A. ADDITIONAL DETAILS

This appendix contains any extra details that are useful background support for the main report. Information should be organized under the same headings as the main report. The main report should contain ONLY information that is needed for doing the assessment. The main report should reference any entries included in Appendix A.

Indigenous Knowledge Definitions

Under a separate subheading, include a list of relevant Indigenous knowledge definitions, based on the range of the species. Organize this list by region (e.g., Akaitcho, Gwich'in, etc.) and then by the organization that published the definition (e.g., Yellowknives Dene First Nation). Citations and references should not be used in this section; rather, insofar as is possible, include a web link to the definition. The Secretariat can provide SARC's working list of Indigenous knowledge definitions. These can be replicated exactly, or added to as needed.

APPENDIX B. SENSITIVE INFORMATION

This appendix contains information that is necessary for assigning species status but that should not be released to the public. Information should be organized under the same headings as the main report. Preparers should ensure that any detailed information that might put a species in danger (such as the precise locality of populations or their habitat) or that is considered confidential (such as specific details relating to Indigenous knowledge, where the knowledge holders have indicated that the details are confidential) does not appear in the main body of the report. Sensitive information should be placed in Appendix B. It should not be explicitly referenced in the body of the report; however, it should be generally referenced so that a reader of the report can understand its implications for status determination.

Appendix B will be provided to SARC so that a fully informed assessment can be done. It will not be made public and will not be distributed beyond SARC.

NORTHWEST TERRITORIES
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Appendix B should be prepared and submitted **as a separate document** to help maintain confidentiality.

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