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Course Details

Course Title & Number: GEOG 7010: Human Environment Relations in the Arctic

Number of Credit Hours: 3hrs

Class Times & Days of Week: Wednesday's 1:30 PM - 4:30 PM

Location for classes/labs/tutorials: St. John's College Rm 128

Pre-Requisites: N/A

Instructor Contact Information

Instructor(s) Name: Dr. Lisa Loseto and Kim Ovitz

Preferred Form of Address: Dr. Lisa Loseto and Kim Ovitz

Office Location: Office: 594 Wallace Building

Office Hours or Availability: Make an appointment via email for a face to face meeting.
Preferred method of contact is email.

Office Phone No. 204 983-5135 (Lisa)
312 497-1602 (Kim)

Email: Lisa.Loseto@dfo-mpo.gc.ca
Lisa.Loseto@umanitoba.ca
klovitz@gmail.com (Kim)

Do you have requirements for the professional appearance of emails? Emoticons? NO

Contact: Will return a phone call or email-within 24 hrs
Students may contact me via email anytime. This course is geared to a small group of new grad students and contact is necessary.

Course Description

The course is a graduate seminar course open to undergraduates. This course is geared toward introducing human environment relations in the Arctic and to identifying how your research may intersect with or engage Arctic Indigenous peoples. Topics covered will span Indigenous (primarily Inuit) and scientific knowledge systems, co-management, Inuit land settlement agreements, subsistence hunting, arctic ecosystem processes, and climate change. The course is seminal for students planning to conduct Arctic research focusing on the linked human-environment system. The instructors and students will read the assigned articles and/or other media prior to class and use the class time to engage with these materials in a structured format. Questions to consider when reading will be provided at the beginning of each seminar week. Each class will begin with a 20 minute lecture by the instructor and/or student to provide context for the days' readings.

General Course Information

The Arctic is experiencing some of the most rapid changes in climate on Earth. These changes are having implications for the ecosystem and Canada's Inuit population, the majority of who live in small, remote, coastal communities, and continue to depend on subsistence hunting, fishing and/or trapping for livelihoods and food. This dependence on the environment has made Inuit particularly susceptible to climate change. Benefits have also been noted but the balance of impacts is believed to be negative, to the extent that Inuit organizations have argued that human rights are being violated. Climate models project that Canada's Arctic regions will continue to experience dramatic climatic changes in

the future, and Inuit communities, government decision makers, and researchers have expressed concern over the sustainability of Inuit livelihoods in a rapidly changing arctic.

Changes to the ecosystem have been documented ranging from sea ice to mammals, and all trophic levels in between. Understanding how individual species respond to changes in climate is essential to understanding how the cumulative impacts of climate change will alter an ecosystem. For example, warmer temperatures have led to declines in sea ice, which have impacted primary production and altered pathways of the food web favoring temperate (invasive) species over established Arctic species. These, and other, changes are important in the context of changing ecosystems, but they also alter the traditional food system for Inuit communities.

It is not only climate change, however, that is affecting Inuit communities in Canada. In the last 50 years Inuit livelihoods have been transformed within a generation with the settlement of Inuit in permanent communities in the 1950s and 60s, introduction of the wage economy, and euro-centric education. More recently, shifting patterns of food consumption away from traditional foods to a predominance of store-foods has been documented across the Canadian Arctic, with associated health, cultural, and economic impacts. Chronic problems affecting many Inuit settlements have been attributed to these rapid shifts in livelihood. These stresses also have relevance in a climate change context, shaping how communities experience climate change and determining their ability to adapt.

Course Goals

This course will examine human environment relations in the Arctic. This involves students developing a strong understanding of human and environmental processes operating in the Arctic. The course will use geographic approaches, as well as concepts drawn from resource management, wildlife ecology, political ecology, and anthropology. The main course objectives are: (1) build an understanding of the historical processes that underpin contemporary Inuit communities; (2) examine key ecosystem changes occurring due to changing climate (3) examine how ecosystem changes are affecting Inuit lives and livelihoods and adaptation responses; and (4) build an understanding of Inuit knowledge systems and their contribution to wildlife and environmental management.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by me, are made available

for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the Copyright Act applies or written permission has been confirmed. For more information, see the [University's Copyright Office website](#) or contact um_copyright@umanitoba.ca.

Recording Class Lectures

Lisa Loseto and the University of Manitoba hold copyright over the course materials, presentations and lectures, which form part of this course. No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission Lisa Loseto. Course materials (both paper and digital) are for the participant's private study and research.

Textbook, Readings, Materials

Reading materials will include peer reviewed publications, selected book chapters, and synthesis documents.

University of Manitoba Libraries (UML)

As the primary contact for all research needs, your liaison librarian can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you in-person.

A complete list of liaison librarians can be found [by subject](#) or [name](#). In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult [the following](#). When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the [Libraries' homepage](#).

Course Technology

It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. The student can use all technology in the classroom setting only for educational purposes approved by the instructor and/or the University of

Manitoba Disability Services. Students should not participate in personal direct electronic messaging / posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) online and offline “gaming” during scheduled class time. If a student is on call (emergency) the student should switch his/her cell phone on vibrate mode and leave the classroom before using it. (©S Kondrashov. Used with permission)

Class Communication

The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit [this page](#). Please note that all communication between myself and you as a student must comply with the [electronic communication with student policy](#). You are required to obtain and use your U of M email account for all communication between yourself and the university.

Writing and Learning Support

The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor’s feedback.

These Academic Learning Centre services are free for U of M students. For more information, please visit [the Academic Learning Centre website](#) for more information or contact the Academic Learning Centre by calling 204-480-1481 or by visiting 201 Tier Building.

Expectations: I Expect You To

There is an expectation for students to be fully-engaged and participatory during each seminar. Each class will begin with a 20 minute lecture or overview by the instructor and/or student to provide context for the days' readings. The instructor and students will read the assigned articles prior to class and use the class time to engage with the readings in a structured format. Questions to consider when reading will be provided at the beginning of each seminar week.

I will treat you with respect and would appreciate the same courtesy in return. See [Respectful Work and Learning Environment Policy](#).

- Students are required to attend all lectures and take notes. Students are expected to be punctual for classes. Not all material presented in the lectures is covered in the text. If you miss a class, make arrangements to get notes from a fellow student, not from instructor! Lecture slides will not be provided on UMLearn (the learning management tool). Failure to attend lectures will result in a poor class participation grade.
- The individual student is required to read the assigned readings prior to class. Not all the textbook will be covered in the lectures.
- Students are required to complete the necessary assignments individually and on time, unless otherwise stated. Students may consult with other students, however, it is expected that all assignments will be submitted in the student's own words. Failure to do so will result in a penalty (see section of course outline on Academic Integrity)

Your Rights and Responsibilities

As a student of the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school. See the [Academic Calendar](#) for important dates and deadlines and the [University Policies and Procedures and General Academic Regulations](#) for more information on regulations. While all of the information contained in this section is important, the following information is highlighted.

- If you have questions about your grades, talk to your instructor. There is a process for term work and final grade appeals. Note that you have the right to access your final examination scripts. See the [Registrar's Office](#) website for more information including appeal deadline dates and the appeal form
- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the Academic Integrity regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic

integrity in your academic work. Visit the [Academic Integrity Site](#) for tools and support. View the [Student Academic Misconduct Procedure](#) for more information.

Respectful Work and Learning Environment

The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected to conduct yourself in an appropriate respectful manner. Policies governing behavior include the:

- [Respectful Work and Learning Environment](#)
- [Student Discipline](#)
- [Violent or Threatening Behaviour](#)
- [Sexual Assault](#)

If you experience Sexual Assault or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The Sexual Assault policy may be found at: More information and resources can be found by reviewing the [Sexual Assault site](#).

- [Intellectual Property](#)
- For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective [faculty/college/school website](#)
- Contact an [Academic Advisor](#) within our faculty/college or school for questions about your academic program and regulations

Student Advocacy

Contact [Student Advocacy](#) if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns.

520 University Centre
204 474 7423
student_advocacy@umanitoba.ca

Academic Integrity

Academic dishonesty (plagiarism, cheating) is a very serious matter in any academic institution and is dealt with severely at the University of Manitoba. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university). Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam personation (see below). A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty, including a grade of zero on the assignment/exam, a final grade of F in the course or expulsion from the University (based on severity of offense).

To plagiarize is to take ideas or words of another person and pass them off as one's own. In short, it is stealing something intangible rather than an object. Plagiarism applies to any written work, in traditional or electronic format, as well as orally or verbally presented work. Obviously it is not necessary to state the source of well-known or easily verifiable facts, but students are expected to appropriately acknowledge the sources of ideas and expressions they use in their written work, whether quoted directly or paraphrased. This applies to diagrams, statistical tables and the like, as well as to written material, and materials or information from Internet sources. Students are requested to use APA styles to properly reference work. Students will be penalized 20% if sources are not adequately cited. Information on the acceptable styles is available through the [UM Libraries](#).

To provide adequate and correct documentation is not only an indication of academic honesty but is also a courtesy which enables the reader to consult these sources with ease. Failure to provide appropriate citations constitutes plagiarism. It will also be considered plagiarism and/or cheating if a student submits a term paper written in whole or in part by someone other than him/herself, or copies the answer or answers of another student in any test, examination, or take-home assignment. Working with other students on assignments, laboratory work, take-home

tests, or on-line tests, when this is not permitted by the instructor, can constitute Inappropriate Collaboration and may be subject to penalty under the Student Discipline By-Law. An assignment which is prepared and submitted for one course should not be used for a different course. This is called “duplicate submission” and represents a form of cheating because course requirements are expected to be fulfilled through original work for each course. Please familiarize yourself with the University [policy on academic dishonesty](#). When in doubt about any practice, ask your professor or instructor.

Examinations Personations is when a student who arranges for another individual to undertake or write any nature of examination for and on his/her behalf, as well as the individual who undertakes or writes the examination, will be subject to discipline under the university’s Student Discipline Bylaw, which could lead to suspension or expulsion from the university. In addition, the Canadian Criminal Code treats the personation of a candidate at a competitive or qualifying examination held at a university as an offense punishable by summary conviction. Section 362 of the code provides: *Personation at Examination 362: Everyone who falsely, with intent to gain advantage for him/herself or some other person, personates a candidate at a competitive or qualifying examination held under the authority of law or in connection with a university, college or school or who knowingly avails him/herself of the results of such personation is guilty of an offense punishable on summary conviction. 1953-54, c.51, s.347.* Both the personator and the individual who avails him/herself of the personation could be found guilty. Summary conviction could result in a fine being levied or up to two years of imprisonment.

Students are encouraged to review the [Final Examination Procedures](#) for more information and the [University policy on Responsibilities of Academic Staff with Regards to Students \(ROASS\)](#).

Student Accessibility Services

If you are a student with a disability, please contact [Student Accessibility Services \(SAS\)](#) for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.

520 University Centre

204 474 7423

Student_accessibility@umanitoba.ca

Expectations: You Can Expect Me To

This class will take a group learning approach among one another. A large part of our teaching practice includes the use of questions in class. We expect students to ask and respond to questions but we do not expect perfection. We want to provoke novel ideas based on the readings and knowledge acquired in the class. We want all to take the opportunity to learn from one another in addition to readings and lectures.

Class Schedule

This schedule is subject to change at the discretion of the instructor and/or based on the learning needs of the students but such changes are subject to Section 2.8 of the – [ROASS](#)- Procedure).

Course Evaluation

This will be a seminar class where we review papers together for discussion. Additionally students are responsible for completing and submitting the assignments outlined below.

Grading

A sample is given below that you can adjust to your course expectations.

Letter Grade	Percentage out of 100	Grade Point Range	Final Grade Point
A+	95-100	4.25-4.5	4.5
A	86-94	3.75-4.24	4.0
B+	80-85	3.25-3.74	3.5
B	72-29	2.75-3.24	3.0
C+	65-71	2.25-2.74	2.5
C	60-64	2.0-2.24	2.0
D	50-59	Less than 2.0	1.0
F	Less than 50		0

Referencing Style

Please use APA formatting for references, example: *American Psychological Association. (2009). Publication manual of the American Psychological Association (6th ed.). Washington, DC: Author.* Please see the UM Library resources on citation for additional support.

Assignment Descriptions

Assignment and grading objectives and breakdown below.

Assignments			
Due Date	Description	Value of Final Grade	Notes

See course schedule for reflection due dates	Participation (participation in class, coming prepared with discussion questions, two reflections)	20%	Weekly (discussion questions and participation); see reflection due dates in schedule
Feb 14 (week 5)	Context Paper / Lit Review Outline	5%	
April 10 (week 13)	In-class oral presentation summarizing your term paper (20 minutes with 10 minutes for Q&A)	30%	
April 12 (week 13)	Context Paper / Literature Review on pre-approved topic (20 pages max)	45%	
Assignment Submission: Please submit all assignments to the instructors via email by 8:00 PM on the day that they are due unless otherwise noted.			

Weekly participation (20%): Please read the assigned materials outlined below and come prepared to each class with at least two discussion questions and two reflective thoughts to share on the readings and/or other media assigned. You are expected to participate during class by actively listening, reflecting, asking questions, and responding to other students' questions during class discussions. You will also be assigned two short writing assignments (1-3 pages max) that align with course topics (outlined in the class schedule).

Final paper outline (5%): For this assignment, you will be required to write a one-page outline describing the proposed topic of your final paper and oral presentation. This paper should be on a topic of interest to you that directly relates to your research context and ultimately contributes to your thesis in some way. Possible examples include 1) an overview of your study area highlighting key ecological and social elements across scales (e.g., identifying key stakeholders, communities, organizations, local histories, and concerns), 2) a community engagement plan highlighting how you could/would engage community members about your research (e.g., engagement methods, key considerations as a scientist working in a cross-cultural space), 3) a literature review on your research method(s) and how this method has been used or could be used in a collaborative research or knowledge bridging context (e.g., how drones have been used in collaborative Arctic research and how aerial videos complement Inuvialuit knowledge on the environment). These are just some examples, please feel free to develop your own topic as long as it relates to our course themes and positively contributes to your program/thesis in some way. Your outline should include a schematic of your paper (your main topic and how you plan to break this down into subtopics or subsections) as well as a brief description of the types of the search platforms, resources, and materials you aim to draw from (i.e., what search platforms you will use to search for materials, particular bodies of literature you would like to draw from, and a list of at least 5 papers that you aim to cite). The instructors will review, provide feedback, and assist with refining the scope of your outline as necessary.

Oral presentation (30%): Each student will be required to give a 20-minute oral presentation (with accompanying slides and/or other appropriate visual aids) summarizing their final paper with a 10-minute Q&A session to follow.

Final paper (40%): Each student will be required to write a final term paper (20 pages max) based on their approved paper outline (see above). Please follow standard formatting procedures (12 point font, double spaced, left-justified, times new roman or calibri font, with an APA-formatted works cited).

Class Schedule

GEOG 7010: Human and Environment Relations in the Arctic (Wed 1:30 - 4:30 PM)

Date	Class Topic	Required Readings or Pre-class Preparation	Class Agenda
Week 1 - JAN 10	Course Overview & Introduction	<ul style="list-style-type: none">• Arctic Biodiversity Assessment: Synthesis (2013) (skim chapters 1-3)• Liu, J., Dietz, T., Carpenter, S. R., Alberti, M., Folke, C., Moran, E., ... & Taylor, W. W. (2007). Complexity of coupled human and natural systems. <i>science</i>, 317(5844), 1513-1516.	Core Discussion Questions / Topics: Introductions and discussion on student projects and course goals; overview of the Arctic and coupled systems Visuals: Maps of the Arctic; key groupings (linguistic, social, cultural, ecological, climatic); key institutions

<p>Week 2 - JAN 17</p>	<p>Knowledge Systems & Research Paradigms</p>	<ul style="list-style-type: none"> ● Sismondo, S. (2010). An introduction to science and technology studies. Chichester: Wiley-Blackwell. Select chapters: 1,2,6) ● Aikenhead, G. S., & Ogawa, M. (2007). Indigenous knowledge and science revisited. <i>Cultural Studies of Science Education</i>, 2. (Pgs. 540-566) ● Berkes, F. (2017). Sacred Ecology. Routledge. (Chapter 1) ● Wenzel, G. (2004). From TEK to IQ: Inuit Qaujimagatuqangit and Inuit Ecology. <i>Arctic Anthropology</i>, 41(2): 238-250. ● Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. <i>Handbook of qualitative research</i>, 2(163-194), 105. 	<p>Core Discussion Questions / Topics:</p> <ul style="list-style-type: none"> ● What is the <i>social construction of knowledge</i> and how does this relate to science? ● What are some of the key attributes of western science and Inuit Knowledge? ● How are these bodies of knowledge similar or different? ● What <i>research paradigm(s)</i> do you gravitate towards and which paradigm aligns with your research? ● How can the different paradigms discussed contribute to Arctic research?
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<p>Week 3 - JAN 24</p>	<p>History of Place & Social Change</p>	<ul style="list-style-type: none"> ● Usher P.J. 1971a. The Canadian Western Arctic: A century of change. <i>Anthropologica</i>, 13: 169–183. ● Demuth, B. (2019). <i>Floating coast: An environmental history of the Bering Strait</i>. WW Norton & Company. (Preface – Chapter 1) ● I Nuligak. 1966. (6-page excerpt) ● Lyons N. 2010. The wisdom of elders: Inuvialuit social memories of continuity and change in the twentieth century. <i>Arctic Anthropology</i>, 47: 22–38. ● Friesen T.M. 2004. Kitigaaryuit: A portrait of the Mackenzie Inuit in the 1890s, based on the journals of Isaac O. Stringer. <i>Arctic Anthropology</i>, 41: 222–237 	<p>Core Discussion Questions / Topics:</p> <ul style="list-style-type: none"> ● What are some of the core emergent themes from these texts? ● What are some of the major drivers of change that transpired in the Arctic (based on these readings) and how have these changes impacted Indigenous peoples? ● How might the events described in these resources impact your study area, research, and stakeholder relationships? ● What are your thoughts on the structure and framing of each text/video, how are these resources similar or different? ● Which of these resources do you find the most effective or compelling and why? <p>Video: Tallurutiup Imanga</p>
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<p>Week - 4 JAN 31</p>	<p>Inuit Subsistence & Food Security</p>	<ul style="list-style-type: none"> ● Usher P.J. 2002. Inuvialuit use of the Beaufort Sea and its resources, 1960–2000. <i>Arctic</i>, 55: 18–28. ● Day B. 2002. Renewable resources of the Beaufort Sea for our children: perspectives from an Inuvialuit Elder. <i>Arctic</i>, 55: 1–3. ● Hoover C., Ostertag S., Hornby C., Parker C., Hansen-Craik K., Loseto L., Pearce T. 2016. The continued importance of hunting for future Inuit food security. <i>Solutions</i>, 7: 40–51. ● Tod-Tims C., Stern P. 2021. “We are starving for our food”: country food (in) security in Inuvik, Northwest Territories. In <i>The Inuit world</i>. Routledge. pp. 270–287. 	<p>Core Discussion Questions / Topics:</p> <ul style="list-style-type: none"> ● What is Inuit subsistence? ● What is the relationship between Inuit subsistence and food security and what trends were described in the readings? ● How does food security vary within communities and what societal or environmental factors contribute to variation (inter individually, temporally, spatially)? ● How might we as Arctic researchers support Inuit food security? <p>Video: Keeper’s of Darnley Bay; Vice Documentary - The High Cost of Arctic Living</p>
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<p>Week - 5 FEB 07</p>	<p>Inuit Self-Determination & Environmental Management</p>	<ul style="list-style-type: none"> ● Nuttall, M. (2000). Indigenous peoples, self-determination and the Arctic environment. In <i>The Arctic</i> (pp. 377-409). Routledge. ● Lyons N. 2009. Inuvialuit rising: The evolution of Inuvialuit identity in the modern era. <i>Alaska Journal of Anthropology</i>, 7: 63–79. ● Berger, 1977. (Chief Justice Berger’s Letter to the Minister, ending at xxvii) ● Arctic Council Declaration, 1996. ● Inuvialuit Final Agreement (see Table of Contents, lightly skim pages 42-52) ● Nunavut Land Claim Agreement (see Table of Contents, lightly skim Articles 5-6 on Wildlife) ● Letter: An Open Letter from Inuit Tapiriit Kanatami to Alert Canadians to False Claims to Inuit Identity ● Video: N. Obed on Inuit Priorities 	<p>Core Discussion Questions / Topics: TBD</p> <ul style="list-style-type: none"> ● What are the origins of Inuit self-determination in the Arctic? ● How does self-determination relate to environmental management? ● How do the land-claims we reviewed support self-determination? ● What is our role as researchers in supporting Inuit self-determination in the Arctic and what are some particular steps we can take to achieve this? <p>Video: CBC News Clip, CPAC Clip</p>
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<p>Week 6 - FEB 14</p>	<p>Inuit Knowledge & Science in Environmental Management</p>	<ul style="list-style-type: none"> ● Usher, P. (2000). Traditional ecological knowledge in environmental assessment and management. <i>Arctic</i>, 53(2): 183-193. ● Dowsley, M. and Wenzel, G. 2008. "The time of the most polar bears:" A co-management conflict in Nunavut. <i>Arctic</i> 61(2):177-189. ● Gilchrist, G., Mallory, M., & Merkel, F. (2005). Can local ecological knowledge contribute to wildlife management? Case studies of migratory birds. <i>Ecology and Society</i>, 10(1). 	<p>Core Discussion Questions / Topics: TBD</p> <ul style="list-style-type: none"> ● How does Inuit Knowledge and western science align within the context of environmental management? ● How can balance be achieved between these different ways of knowing in decision-making? ● How have decision-making processes worked when presented with different ways of knowing and associated conflicts between these bodies of knowledge? <p>Guest Speakers: Louise Mercer (PhD Candidate, Northumbria University)</p> <p>Assignment Due: Final paper topic and outline (1-2 pages); (please submit by the start of class; 1:00 PM on February 14)</p> <p>Video: Live-it film featuring Frank Pokiak</p>
<p>FEB 21</p>	<p>Reading Week</p>		

<p>Week 7 - FEB 28</p>	<p>Community- Researcher Relationships: Historic Legacies & Evolving Approaches</p>	<ul style="list-style-type: none"> ● Martin, P. R. (2020). Indigenous tales of the Beaufort Sea: Arctic exploration and the circulation of geographical knowledge. <i>Journal of Historical Geography</i>, 67, 24-35. ● Gearheard, S., & Shirley, J. (2006). Challenges in Community-Research Relationships: Learning from Natural Science in Nunavut. <i>Arctic</i>, 60(1), 62-74. ● Wong, C., Ballegooyen, K., Ignace, L., Johnson, M. J., & Swanson, H. (2020). Towards reconciliation: 10 Calls to Action to natural scientists working in Canada. <i>Facets</i>, 5(1), 769-783. ● Pedersen, C., Otokiak, M., Koonoo, I., Milton, J., Maktar, E., Anaviapik, A., ... & Elverum, S. (2020). SciQ: an invitation and recommendations to combine science and Inuit Qaujimagatuqangit for meaningful engagement of Inuit communities in research. <i>Arctic Science</i>, 6(3), 326-339. ● Inuit Tapiriit Kanatami: National Inuit Strategy on Research (NISR) (pages 3-7, skim additional as desired) ● Podcast: Fight at the Museum, Vox ● Short Blog Post: Canadian Science Blog on Community-Engaged Authorship 	<p>Core Discussion Questions / Topics:</p> <ul style="list-style-type: none"> ● How has research on Indigenous lands and with Indigenous peoples evolved over time? ● How might historic research legacies influence community-researcher relationships today? ● How can we contribute to more ethical research in the Arctic from our position as Arctic researchers? ● What are some approaches or practices you gravitate towards or hope to implement in your work? <p>Videos: Ikaarvik Bridges to Barriers; Ikaarvik SciQ; Signal Fire; Equity in Author Order</p> <p>Guest Speaker: Enoo Sudlovenick (PhD Candidate at the University of Manitoba)</p>
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<p>Week 8 - MAR 06</p>	<p>Frameworks & Approaches for Knowledge Bridging and Co-production</p>	<ul style="list-style-type: none"> ● Overview of Current Practices (Lightly skim): Alexander, S. M., Provencher, J. F., Henri, D. A., Taylor, J. J., Lloren, J. I., Nanayakkara, L., ... & Cooke, S. J. (2019). Bridging Indigenous and science-based knowledge in coastal and marine research, monitoring, and management in Canada. <i>Environmental Evidence</i>, 8(1), 1-24. ● Knowledge Co-production: Norström A. V., Cvitanovic C., Löf M.F., West S., Wyborn C., Balvanera P., et al. 2020. Principles for knowledge co-production in sustainability research. <i>Nature Sustainability</i>. ● Two-eyed Seeing: Reid, A. J., Eckert, L. E., Lane, J. F., Young, N., Hinch, S. G., Darimont, C. T., ... & Marshall, A. (2021). "Two-Eyed Seeing": An Indigenous framework to transform fisheries research and management. <i>Fish and Fisheries</i>, 22(2), 243-261. ● Multiple-evidence Based Approach: Tengö, M., Brondizio, E. S., Elmqvist, T., Malmer, P., & Spierenburg, M. (2014). Connecting diverse knowledge systems for enhanced ecosystem governance: the multiple evidence base approach. <i>Ambio</i>, 43, 579-591. 	<p>Core Discussion Questions / Topics:</p> <ul style="list-style-type: none"> ● What are the core attributes of the frameworks described in the readings? ● How are these frameworks similar or different from one another? ● In what contexts are knowledge bridging and co-production most applicable? ● What are some of the considerations a researcher should take when attempting to operationalize these frameworks? <p>Guest Speaker: Lena Popova, PhD student at the University of Freiburg, Switzerland (presentation topic: Science and traditional knowledge of Arctic Indigenous peoples in the Anthropocene / Sakha culture)</p> <p>Assignment Due: Plain language summary and/or infographic explaining your research to non-scientists (1 page) (please submit by March 05, 2024 at 8:00 PM)</p>
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<p>Week 9 - MAR 13</p>	<p>Collaboration in Action – Case Studies in Wildlife Research</p>	<ul style="list-style-type: none"> ● Muskoxen: Tomaselli, M., Kutz, S., Gerlach, C., & Checkley, S. (2018). Local knowledge to enhance wildlife population health surveillance: Conserving muskoxen and caribou in the Canadian Arctic. <i>Biological Conservation</i>, 217, 337-348. ● Caribou: Hanke, A., Niptanatiak Dumond, A., Di Francesco, J., Adams, C. L., Milton, T., Leclerc, L. M., ... & Kutz, S. Supporting Inuit food sovereignty through collaborative research of an at-risk caribou herd. <i>Frontiers in Sustainable Food Systems</i>, 7, 1306521. ● Seals: Gryba, R., Huntington, H. P., Von Duyke, A. L., Adams, B., Frantz, B., Gatten, J., ... & Auger-Méthé, M. (2021). Indigenous Knowledge of bearded seal (<i>Erignathus barbatus</i>), ringed seal (<i>Pusa hispida</i>), and spotted seal (<i>Phoca largha</i>) behaviour and habitat use near Utqiagvik, Alaska, USA. <i>Arctic Science</i>, 7(4), 832-858. ● Eider Ducks & Practical Insights: Richard, S., Gilchrist, H. G., Hennin, H. L., & Nguyen, V. M. (2023). Collaboration between local Indigenous and visiting non-Indigenous researchers: Practical challenges and insights from a long-term 	<p>Core Discussion Questions / Topics:</p> <ul style="list-style-type: none"> ● What are your thoughts/reflections on the methods used in each case study? ● What are the strengths and/or weaknesses of each of the approaches described? ● If you were designing your own collaborative wildlife study, what approach and methods would you use based on the readings this week and in the class more generally? <p>Guest: Kevin Scharffenberg (topic: collaborative beluga research in Darnley Bay; opportunities and challenges)</p>
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		<p>environmental monitoring program in the Canadian Arctic. <i>Ecological Solutions and Evidence</i>, 4(3), e12258.</p>	
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<p>Week 10 - MAR 20</p>	<p>Qualitative Methods in Environmental Research</p>	<ul style="list-style-type: none"> ● Qualitative Methods: Drury, R., Homewood, K., & Randall, S. (2011). Less is more: the potential of qualitative approaches in conservation research. <i>Animal conservation</i>, 14(1), 18-24. ● Positionality: Jafar, A. J. (2018). What is positionality and should it be expressed in quantitative studies?. <i>Emergency Medicine Journal</i>. ● Reflexivity: Beck, J. M., Elliott, K. C., Booher, C. R., Renn, K. A., & Montgomery, R. A. (2021). The application of reflexivity for conservation science. <i>Biological Conservation</i>, 262, 109322. ● Example from Kendall Island: Ovitz, K. L., Matari, K. G., O'Hara, S., Esagok, D., Hunters, I., Trappers Committee, & Loseto, L. L. (2023). Observations of social and environmental change on Kendall Island (Ukiivik), a traditional whaling camp in the Inuvialuit Settlement Region. <i>Arctic Science</i>. ● Podcast: The Belfast Project 	<p>Core Discussion Questions / Topics:</p> <ul style="list-style-type: none"> ● In what ways can qualitative methods contribute to wildlife research? ● How do the concepts of positionality and reflexivity apply to wildlife research? ● What personal attributes and experiences shape your positionality and reflexivity as a researcher? ● What do these resources reveal about considerations researchers should have when implementing collaborative and community-engaged research using qualitative or mixed methods? <p>Guest Speaker: Grace O'Hanlon (UM Reference Librarian on locating and accessing relevant resources, citation, and attribution)</p>
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<p>Week 11 - MAR 27</p>	<p>Arctic Change – Development and Industrialization</p>	<ul style="list-style-type: none"> ● Funk, M. (2015). <i>Windfall: The booming business of global warming</i>. Penguin. (Chapter 1) ● Bernauer, W., & Peyton, J. (2021). Energy extraction, resistance, and political change in Inuit Nunangat. In <i>The Inuit World</i> (pp. 340-358). Routledge. ● Nuttall, M. (2021). Greenland and the geopolitics of critical minerals. <i>One Earth</i>. ● Dawson J., Pizzolato L., Howell S.E.L., Copland L., Johnston M.E. 2018. Temporal and spatial patterns of ship traffic in the Canadian arctic from 1990 to 2015. <i>Arctic</i>, 71: 15–26. <p><i>Further Reading (short news articles):</i></p> <ul style="list-style-type: none"> ● Narwhal News Article ● New York Times: Greenland Mining ● Globe and Mail Op Ed 	<p>Core Discussion Questions / Topics: TBD</p> <p>Potential Videos (alternative narratives and solutions): SHIFT; North of the Sun; Great Lakes Bad Lines; A Salmon Nation; Damnation</p> <p>Guest Speaker: Warren Bernauer, Postdoctoral Fellow, University of Manitoba</p> <p>Assignment Due: Statement on your researcher positionality (1 page) please submit by March 26, 2024 at 8:00 PM)</p>
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Week 12 - APR 03	Arctic Change – Multiple Perspectives	<ul style="list-style-type: none"> ● Huntington H.P., Danielson S.L., Wiese F.K., Baker M., Boveng P., Citta J.J., et al. 2020. Evidence suggests potential transformation of the Pacific Arctic ecosystem is underway. <i>Nature Climate Change</i>, 10: 342–348. ● Ford, J. D., Pearce, T., Canosa, I. V., & Harper, S. (2021). The rapidly changing Arctic and its societal implications. <i>Wiley Interdisciplinary Reviews: Climate Change</i>, 12(6), e735 ● Tuck, E. (2009). Suspending damage: A letter to communities. <i>Harvard educational review</i>, 79(3), 409-428. ● Podcast: On Thin Ice 	Core Discussion Questions / Topics: TBD
Week 13 - APR 10	Student Presentations	<i>Students to each select and assign a reading related to their presentation topic</i>	Assignment Due: 20-minute oral presentation on your final paper followed by a 10-minute Q&A
Week 14 - APR 12	No Class		Assignment Due: Final paper

Literature Search Resources:

University of Manitoba Library - [Environment, Earth, and Resources Library Guide](#)

- This links to the major databases like Scopus and Web of Science

[Canada Federal Science Library](#)

- Search platform for federal reports and publications
- May be useful for locating older archival materials

[Arctic Discovery and Access Database](#) (ADA, formerly ASTIS)

- Useful for searching Arctic-related documents including gray literature, conference abstracts

[Marine Protected Areas in Canada](#)

- Information and links related to Canadian MPAs

[NWT Archives](#)

- Search platform for historic images and other documents from the NWT

[Google Scholar](#)

- Remember to adjust the date range and sort criteria accordingly

Regional Websites for Arctic Communities (some examples)

- [Inuvialuit Regional Corporation](#)
- [Joint Secretariat](#)
- [Mushkegowuk Council](#)
- [Qikiqtani Inuit Association](#)

Additional Links and Resources:

Podcast: [The Belfast Project](#)

Podcast: [On Thin Ice](#)

Video: [Ikaarvik Bridges to Barriers](#)

Video: [Ikaarvik SciQ](#)

Video: [Keeper's of Darnley Bay](#)

Video: [Tallurutiup Imanga](#)

Video: [What is a research paradigm?](#)

Video: [Arctic Council Vimeo](#)

Video: [Equity in Author Order](#)

Website and Reports: [ICC - Alaska Food Security](#)

Podcasts: [SEARCH Podcast Library](#)

Book: [Pollution is Colonialism](#) (available for free through UM library)

Book: [Unfreezing the Arctic](#) (available for free through UM library)

Book: Sacred Ecology (available for free through UM library)

Website: [Arctic Council - Arctic Indigenous Languages](#)

Website: [University of Lapland - Maps of the Arctic](#)

Website: [Nordregio - Maps of Indigenous Populations in the Arctic](#)

Activity: [Harvard Implicit Bias Test](#)