

**Geography 4431 Conservation Geography
Environmental Studies 4431**

Winter 2023 – Web-based course

Dr. Martha Dowsley

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Introduction

Welcome to Conservation Geography! This course is web-based and will not have any meetings. You should follow the schedule below to keep up with readings, assignments and to for the three quizzes. You are expected to post and read material on the course website in a timely manner.

Conservation as a discipline started in conservation biology, and thus emphasizes a scientific approach. It still often carries the name 'Conservation Biology'. However, it has become apparent over the last three decades that biology alone is not sufficient for dealing with the biodiversity crisis. The first discipline to join with biology in the mission of conservation was arguably Geography, because of its focus on spatial relationships. For example, Biogeography is the study of species and their ranges. The Theory of Island Biogeography showed mathematically some of the relationships of species richness to area and distance to other populations. For example, two islands of similar size but different distances from the mainland have different numbers of species. The closer island is the one with more species. This is because immigration is easier over shorter distances. Principles of island biogeography have been successfully applied to protected areas in a 'sea' of human-altered landscapes.

Geography has contributed in many other ways to conservation. As conservation became more widespread and interdisciplinary, the skills of geographers in examining complex human-spatial issues and working across disciplines has become key to many management and conservation plans. One particular contribution is the understanding from human geographers about the diversity of cultures and environmental histories that shape current views of conservation and thus are able to contribute to discussions of values and ethics in this field. As well, geographers' field skills have contributed much to data collection in conservation.

Unfortunately, there are no texts (that I am aware of) that deal with conservation from a solely geographic perspective. I have selected one of the many conservation biology texts that includes geography (whether explicitly or implicitly) and hope that its digital format and lack of a price tag might appeal to you. It is also not so heavy on math as some texts and is aimed at a broad audience with diverse backgrounds.

Please read the syllabus as your first task and check on the announcements board on the front page of the website for messages periodically.

Your Professor

I'm Dr. Martha Dowsley, cross-appointed in Anthropology and Geography and the Environment. My research looks at culture and environmental issues. A lot of my projects have examined different cultural understandings of



environment between Indigenous peoples and the broader society.



My Ph.D. is from McGill in Geography. My research was on polar bear conservation in Nunavut. I explored ideas of ‘property’ and resources and how these differ between Inuit and non-indigenous wildlife managers and government frameworks.

I often work on projects at the request of community members and collaborate with biologists and other social scientists on conservation and wildlife issues, including local issues such as peregrine falcon conservation.

Some of my papers (feel free to look them up online!):

Bongelli, E., M. Dowsley, M. Campbell, V.M. Velasco-Herrera and M. Taylor. 2020. Do North American migratory barren-ground caribou subpopulations cycle? *Arctic* 73(3):326-346.

York, J., M. Dowsley, A. Cornwell, M. Kuc and M. Taylor. 2016. Demographic and Traditional Knowledge Perspectives on the Current Status of Canadian Polar Bear Subpopulations. *Ecology and Evolution* 6(9):2897-2924.

Kakekaspan, M., B. Walmark, R.H. Lemelin, M. Dowsley and D. Mowbray. 2013. Developing a Polar Bear Co-Management Strategy in Ontario through the Indigenous Stewardship Model. *Polar Record*, special issue Mondes polaires conference, Paris, France. 49(3):230-236.

Taylor, M.K. and M. Dowsley. 2011. Update on Peregrine Falcons in Ontario. *Nature Northwest* 65(1):17 (Newsletter of the Thunder Bay Field Naturalists).

Dowsley, M. 2010. The value of a polar bear: Evaluating the role of a multiple use resource in the Nunavut mixed economy. *Arctic Anthropology* 47(1):39-56.

Schmidt, J.J. and Dowsley, M. 2010. Hunting with polar bears: problems with the passive properties of the commons. *Human Ecology* 38(3):377-387.

Dowsley, M. and G. Wenzel. 2008. “The time of the most polar bears”: a co-management conflict in Nunavut. *Arctic* 61(2): 77-89.

I am available via email (above) any time. If you want to meet, please email me to arrange a zoom or in person meeting. If you have questions, please don’t hesitate to ask!

Text : Conservation Biology for All

<https://www.mongabay.com/conservation-biology-for-all.html>

Free to download from the site

Week/ Date	Chapters Assigned Homework due Wed Midnight Post it to discussion Thread	Other Due Dates Quizzes open Noon Friday, close Midnight Friday
1 Jan 9	1,	
2 Jan 16	2, 3	Practice quiz to ensure we can all use the technology
3 Jan 23	4, 5	Quiz ch 1-5
4 Jan 30	6	Term Paper Outline Due Wednesday Midnight by email to the professor: mdowsley@lakeheadu.ca
5 Feb 6	7, 8	
6 Feb 13	9	
READING WEEK		
7 Feb 27	10	Term Paper Due Wednesday Midnight by email to the professor: mdowsley@lakeheadu.ca
8 Mar 6	11	Quiz ch 6 - 11
9 Mar 13	12, 13	
10 Mar 20	14	
11 Mar 27	15	
12 Apr 3	16	Quiz Ch 12-16

Homework 25% (5 x 5% each)

You must submit a total of 5 homework assignments over the course of the semester. The general format is given below. However – one week each student will be assigned a special homework assignment of developing 5 multiple choice questions for the class on an assigned chapter (this counts as one of the 5 homework posts). More details on format will be posted on the website.

Regular format homework assignments (4 to be completed over the semester): **By Wednesday at midnight** of a given week, you need to upload ONE report inspired by the chapter/s assigned that week. By inspired, I mean to consider an important person who is mentioned - or even the author of the chapter (example from Chapter 1- Aldo Leopold), a concept you found interesting or not well covered (ex. island biogeography, wildlife corridors, or coral reef conservation), or a historic event or document with a bearing on conservation (like the Dust Bowl, the Brundtland Report). You need 2 illustrations (ex. figures, photos, map, chart etc. – just pull these from the web and reference the site) and you must refer to the illustrations and explain them in your text. Include citations, including for the illustration (more than 1 citation is therefore needed, average around 3-5 per assignment – at least half of these should be peer-reviewed (or 2/3, or 3/5), and you must use specialized sources that focus on conservation or the topic at hand for non-peer-reviewed sources, such as a textbook or an official website of an organization like the IUCN). Length should be 10 - 12 sentences.

PLEASE NOTE: content from homework assignments may appear on quizzes. Take the time to read your classmates' work and attempt their practice questions. Be sure to also complete the discussion response assignment.

Discussion Thread Responses 10% (5 x 2% each)

Each student is responsible for posting comments on the submissions of other students. These comments should be 3 or more sentences long. They may ask for clarification (in which class the original post author should reply), share experiences or expand on the topic under discussion.

Each student should submit 5 over the course of the semester, but not more than 2 in any one week. **Comments are due Friday by 9 am** for a post from Wednesday that week. If you posted a homework assignment, please check Friday morning to see if any questions or comments have been added to your thread and reply to them appropriately. That will allow us to resolve any issues before quizzes which will take place Friday afternoons or evenings.

Quizzes 36% (13% each)

Students will be evaluated through multiple choice or other short answer quiz questions. There will be 3 quizzes over the semester. The material from the text AS WELL AS material presented by students for their homework and in the discussion threads can appear on the quizzes. The quizzes are on-line and therefore are necessarily open book, but they are tightly timed. So, a student who is not familiar with the material will not be able to complete in time by looking everything up. The quiz questions are randomly drawn from a question bank, so working with others or passing along answers from one version will not improve grades. **Quizzes will be on Friday afternoon or evening.**

Term Paper 29% (outline 4%, full paper 25%) Evaluation of Conservation Actions and Concepts

Choose a conservation theory, idea or problem. For example, a specific class of protected area, a problem like logging in Indonesia, or perhaps a conservation solution like ecotourism with small villages in Africa. Examine the topic, its history and discuss what is being done to improve conservation outcomes. About half the paper should be evaluative rather than descriptive. An example of the desired style is Box 1.2 on conservation in the Philippines -though it is too broad for our endeavor- if this were in fact your topic it would be best to narrow it further.

For example, you might select a particular conservation area (national park, indigenous park, landscape managed to conserve a certain species). Descriptive information could include: The history of that protected area, sources of revenue, resources etc. Evaluative information could include: Explain the category of conservation area – why was that designation chosen? How does it differ from other designations? What are the particular problems this area is trying to solve or manage? How is it doing in its mission? Should something different be done to improve conservation outcomes?

Another example might be to take a more theoretical approach, say focusing on a theoretical idea like conservation hotspots. Descriptive: what is this concept? Why is it useful to conservation? What are some of the interventions being done in some case study hotspots? Evaluative: Is this approach producing better outcomes than others? Is it cost efficient? What are its strengths and weaknesses?

A third approach could be a broad conservation problem, like the destruction of the Amazon rainforest, or the recent high numbers of deaths of North Atlantic Right Whales. Describe the problem and then evaluate different approaches being used to deal with it and argue for one or some that hold more promise of success.

In all possible topics for your paper, you might find that the topic is too broad. A narrow topic is always better. If for example, you start out with African conservation areas, but then decide to focus on one

park or one country with a unique approach (such as 'conservation hunting' of high population game animals to pay for conservation of all animals). That is better than doing the whole continent. You might consider focusing even more –for example, there maybe be sufficient references to look at one community that occupies that national park. For overfishing you might focus on the Mediterranean but then decide that a certain ecosystem in that region is quite endangered and focus your efforts just on that. If you are not sure, consider how many references you are finding. If there are more than 25 in the last decade, the topic is too broad. If there are fewer than 5, it is too narrow. Ask me by email and provide the reference list you've found if you want more help!

Outline: 4%

Provide an outline of the paper – list the descriptive and evaluative topics you will cover along with 4 references. Should be about 6-8 sentences long, in paragraph form. After you receive comments, you can expand the sentences into paragraphs for the full paper.

Paper 25%

The term paper should be 1500 words long, with 7-9 peer-reviewed references. Websites, popular media articles etc. are in addition to the minimum 7. You should include at least 2 illustrations relevant to the topic and include captions explaining them as well as refer to them in your text. For example, a map of area under discussion, a photo of the species under discussion or chart showing the effectiveness of the concept.