

Course Syllabus for GEOG 356: Resources Management

Department of Geography and Environmental Management

University of Waterloo

Instructor: Erin (Joakim) O’Connell
Office: EV1-201
E-mail: erin.oconnell@uwaterloo.ca
Office Hours: Wednesdays from 11:00am – 2:00pm or by appointment

Class Hours: 4:00 – 5:20pm T Th in AL 208

Teaching Assistants: TBD

COURSE DESCRIPTION

Calendar Description

Reviews selected theories, methods, and terminology related to economic, behavioural, institutional and decision-making aspects of resources and environmental problems.

Course Overview

This third-year course introduces the varied terminology, theories, methods and problems currently found in resources management. Through an examination of economic, behavioural, institutional and environmental aspects of decision-making in resources management, students will gain an appreciation of the challenges facing the main actors in resource management. This will be accomplished through five modules:

Module 1: Defining resources and resource management

Module 2: Exploring the evolution of and current policy approaches to resources management in Canada

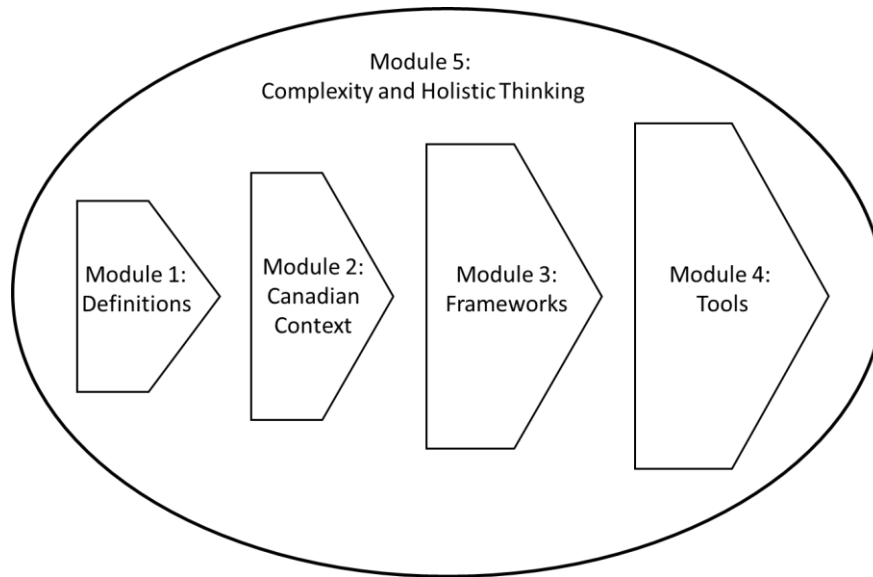
Module 3: Resource management theories/frameworks

Module 4: Understanding the complexity of managing resources and the importance of holistic perspectives

Module 5: Examining key resource management tools and processes used in resources management decision-making processes (including resource inventories, restocking inventories, forecasting and backcasting, and impact assessments).

Throughout the course, case studies and examples drawn from countries and regions around the world will be used to clarify theoretical and methodological issues, although there will be a Canadian focus. As the course proceeds, students are encouraged to question approaches currently used in resource management, to understand some of the challenges facing resource managers, and to develop a personal set of ‘core concepts’ to be applied in future resource management-linked employment settings.

Course Conceptual Model:



'Lofty' Course Goals

Overall, the course is designed to consider three big questions:

1. How can we ensure that humans can survive and flourish for generations?
2. How can we ensure that non-human species can survive and flourish for generations?
3. How can we achieve more 'positive' resource management stories (e.g. Montreal Protocol) and less 'negative' resource management stories (e.g. Lake Aral)?

Intended Learning Outcomes (ILOs)

By the end of the course, students should be able to:

1. Describe 'resources' and 'resource management'
2. Summarize key resource management (RM) frameworks
3. Compare RM frameworks to the current policy and management context in Canada and to 'real-world' case studies.
4. Identify and apply appropriate resource management tools for specific contexts and describe their benefits and limitations
5. Appreciate the complexity and contextuality of resource management decision-making factors and develop strategies to respond to these complexities

Required Readings:

A selection of readings will be available through LEARN or through the University of Waterloo library. Please see each specific week for list of required readings. Note that it is expected that students will have read the readings prior to attending lectures.

Course Evaluation

Your final mark will be determined based on: participation and reading quizzes, a resource management case study assignment, and an individual reflection assignment. There is no final exam. Details regarding each of the assignments will be provided in class and, in some cases, LEARN.

1. In-Class 'Participation' Quizzes (10% total, 1% each)
 - a. Dates will not be announced for in-class participation quizzes; twelve quizzes will be held throughout the term and ten will count towards the final grade.
 - b. Participation quizzes will include questions on concepts and ideas covered in class and will be graded to provide students with feedback on their understanding of the lecture content.
2. Readings Quizzes (10% total, 2% each)
 - a. Quizzes will be held on the assigned readings (see readings schedule for specific dates – note that some quizzes may cover multiple readings); six readings quizzes will be held throughout the term and five will count towards the final grade in the course.
 - b. Readings quizzes will include questions on the concepts and ideas covered in the assigned readings and will be graded to provide students with feedback on their understanding of the content.
3. Resource Management Assignment (60% total)
 - a. Groups will be assigned at the beginning of term and students will work through a specific resource management case study. The assignment will be comprised of a variety of different components, some formative and some summative (further instructions will be provided):
 - i. Stakeholder Overview (10%): Individual submission to outline the key perspectives and values of stakeholders involved in the selected resource management decision-making process.
 - ii. Resource Management Framework (5%): Group submission focusing on the resources management framework selected for the assignment.
 - iii. Resource Management Tools (5%): Group submission focusing on the tools used in the resource management decision-making process.
 - iv. Final Report (30%): Final report on the resources management decision-making process and connection to core concepts covered in the course.
 - v. Peer Evaluation (10%): Encompass two key components:
 1. In-class (5%): Based on attendance for in-class group-discussions and work periods, and contribution during these sessions.
 2. Peer evaluations (5%): Opportunity provided for evaluation of group-member contributions.
4. Individual Reflection on Group Assignment (20%)
 - a. Individual reflection on group assignment and connected to ILOs.

COURSE POLICIES

Citing Guidelines:

Students are expected to source/cite all materials, information, ideas, and data taken from sources (including lecture content and required readings) using APA citation formatting. Information that is paraphrased should include a citation in the author, date format (O’Connell, 2017). Information that “is quoted directly should be written in quotation marks and cited with the author, date, page/paragraph number format” (O’Connell, 2017, p. 17). Direct quotations should be used whenever five or more words in a row are copied directly; you may use terminology related to concepts and processes without needing to quote directly. A bibliography should be included at the end of each assignment, with full bibliographic information for all sources listed in alphabetical order. Note that only sources cited in-text should be included in the bibliography.

Lecture content can be cited using the following template:

O’Connell, E. (2018, January 16). Environmental Value Systems [PowerPoint Slides]. Lecture notes from ENV5 195, Faculty of Environment, University of Waterloo, Waterloo, Canada. Retrieved from: *insert url here!*

When citing lectures in-text, you can cite as follows: (O’Connell, 2018).

Recording Lectures:

Use of recording devices during lectures is only allowed with explicit permission of the instructor of the course. If allowed, video recordings may only include images of the instructor and not fellow classmates. Posting of videos or links to the video to any website, including but not limited to social media sites such as: facebook, twitter, etc., is strictly prohibited.

Course Communication:

All communication with students must be through either the student’s University of Waterloo email account or via Learn. If a student emails the instructor or TA from a personal account they will be requested to resend the email using their personal University of Waterloo email account.

Submitting Assignments:

All assignments should be submitted via LEARN unless otherwise indicated. All students must make arrangements for their assignments to be submitted to the appropriate dropbox on LEARN by the time and date indicated in the weekly schedule. Assignments should not be handed to the professor in class or emailed to the professor, unless indicated. LEARN provides a date and time stamp for all assignments submitted to the dropbox – this will be the date used to determine any late penalties that will be applied.

Late Assignments:

The assignment will be graded as per the above guidelines, and then **5% will be deducted for each day of the week that an assignment is late**. The instructor reserves the right to waive this deduction if the following prevents the student from handing in an assignment on time:

1. Valid medical reason such as illness or accident (appropriate proof such as a Doctor's note is required);
2. Personal or family emergency (with suitable proof where possible);
3. Other valid reasons beyond the control of the student (to be approved on a case-by-case basis at the discretion of the instructor).

NOTE: If you know in advance that you will not be able to meet a particular deadline **for any reason**, please contact the instructor to see if alternative arrangements can be accepted.

NOTE: late assignments will not be accepted after the date when the majority of assignments are handed back (i.e. after the markers have graded most papers and handed these back in class).

Please ensure that you are diligent in *backing up computer files* and making *draft copies* of all assignments, as computer/disk failures, printer problems, etc, will not normally be considered a valid reason to waive the late assignment deduction. NOTE: Perhaps the easiest way to prevent computer file loss is to send to yourself an email attachment of your assignment after each significant work session.

Unclaimed assignments:

Unclaimed assignments will be retained until one month after term grades become official in quest. After that time, they will be destroyed in compliance with UW's [confidential shredding procedures](#).

Turnitin:

Text matching software (Turnitin®) will be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, and are subject to the USA PATRIOT ACT, 2001; therefore, students must be given an alternative (e.g., scaffolded assignment or annotated bibliography) if they are concerned about their privacy and/or security. Students will be due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin® in this course.

INTELLECTUAL PROPERTY

Students should be aware that this course contains the intellectual property of their instructor, TA, and/or the University of Waterloo. Intellectual property includes items such as:

- Lecture content, spoken and written (and any audio/video recording thereof);
- Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);
- Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and
- Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student's educational experience. **However, sharing this intellectual property without the intellectual property owner's permission is a violation of intellectual property rights.** For this reason, it is necessary to ask the instructor, TA and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository). Permission from an instructor, TA or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights. Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).

ACADEMIC INTEGRITY POLICIES

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. The University's guiding principles on academic integrity can be found here: <http://uwaterloo.ca/academicintegrity>. ENV students are strongly encouraged to review the material provided by the university's Academic Integrity office specifically for students: <http://uwaterloo.ca/academicintegrity/Students/index.html>.

Students are also expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. Students may also complete the following tutorial: <https://uwaterloo.ca/library/get-assignment-and-research-help/academicintegrity/academic-integrity-tutorial>.

When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of

penalties, students should refer to Policy 71 - Student Discipline: <https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-71>.

Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance: <https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70>.

OTHER COURSE POLICIES & INFORMATION

Research Ethics:

Please note that the University of Waterloo requires all research conducted by its students, staff, and faculty which involves humans as participants to undergo prior ethics review and clearance through the Director, Office of Human Research and Animal Care (Office). The ethics review and clearance processes are intended to ensure that projects comply with the Office's Guidelines for Research with Human Participants (Guidelines) as well as those of provincial and federal agencies, and that the safety, rights and welfare of participants are adequately protected. The Guidelines inform researchers about ethical issues and procedures which are of concern when conducting research with humans (e.g. confidentiality, risks and benefits, informed consent process, etc.). If the development of your research proposal consists of research that involves humans as participants, please contact the course instructor for guidance and see <http://iris.uwaterloo.ca/ethics/>

Note for students with disabilities:

The AccessAbility Office located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AccessAbility Office at the beginning of each academic term.

Mental Health:

The University of Waterloo, the Faculty of Environment and our Departments consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges - physical and / or emotional. **Please note that help is available.** Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services (www.uwaterloo.ca/counselling-services) is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

Writing and Communication Centre

The Writing and Communication Centre (WCC) works with students as they develop their ideas, draft, and revise. Writing and communication specialists offer one-on-one support in planning assignments, synthesizing and citing research, organizing papers and reports, designing presentations and e-portfolios, and revising for clarity and coherence.

You can make multiple appointments throughout the term, or you can drop in at the Library for quick questions or feedback. To book a 25- or 50-minute appointment and to see drop-in hours, visit uwaterloo.ca/wcc. Group appointments for team-based projects, presentations, and papers are also available.

Please note: communication specialists guide you to see your work as readers would. They can teach you revising skills and strategies but will not change or correct your work for you.

Religious Observances:

Student needs to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

Grievance:

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please contact your Undergraduate Advisor for details.

Appeals:

A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

COURSE STRUCTURE

The Course is organized in five modules, generally corresponding to the intended learning outcomes for the course. 30°

Mod.	Lec.	Date	Topic	Readings & Assignments
Module 1: Definitions	1	Sept 6	Course Introduction & Overview	No readings
	2	Sept 11	Defining Resources and Resources Management	<u>Assigned Readings:</u> None <u>Case Study:</u> Southland documentary <u>Group Meetings:</u> No group meetings Assignments: <ul style="list-style-type: none"> • None
	3	Sept 13		
	4	Sept 18	Defining Stakeholders, Actors and Public Participation	<u>Assigned Readings:</u> <ul style="list-style-type: none"> • Gathaara, G.N. (1999). Aerial Survey of the Destruction of Mt. Kenya, Imenti and Ngare Ndare Forest Reserves. Nairobi: Kenya Wildlife Service. • Reed, M.S. (2008). Stakeholder participation for environmental management: a literature review. <i>Biological Conservation</i>, 141, 2417-2431.
	5	Sept 20	Stakeholders / Actors Activity	<u>Case Study:</u> Kenyan Forest Reserves + Bali Forest Reserves <u>Group Meetings:</u> <ul style="list-style-type: none"> • Lecture 5 – Ice-breaker + Activity (prep) Assignments: <ul style="list-style-type: none"> • Readings Quiz 1: Due by the beginning of Lecture 4
Module 2: RM in Canada	6	Sept 25	Evolution of Canadian Resources Management	<u>Assigned Readings:</u> <ul style="list-style-type: none"> • Bennett Jones (2013, Feb 23). A Summary of Canadian Environmental Law for Non-Canadian Practitioners. In <i>International Environmental Law</i>, Chapter 18, American Law Association. <u>Case Study:</u> Great Bear Rainforest Agreement + Oil resources in Alberta
	7	Sept 27	Current Resources Management Policy Context in Canada	<u>Group Meetings:</u> <ul style="list-style-type: none"> • Lecture 6 – Assignment Topic Selection Assignments: <ul style="list-style-type: none"> • Start working on Stakeholders assignment after topic selected

Module 3: Resources Management Frameworks	8	Oct 2	Ecosystem Approach to Management	<p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Eriksson et al. (2016). An ecosystem approach to small-scale fisheries through participatory diagnosis in four tropical countries. <i>Global Environmental Change</i>, 36, pp 56 – 66. Garcia, S.M. & Cochrane, K.L. (2005). Ecosystem approach to fisheries: a review of implementation guidelines. <i>Journal of Marine Science</i>, 62, 311-318. <p><u>Case Study:</u> Grand River Watershed Management + Small-Scale Fisheries Around the World</p> <p><u>Group Meetings:</u></p> <ul style="list-style-type: none"> Lecture 8 – Group Organization (for assignment) Lecture 9 – Case Study Discussion (prep) <p>Assignments:</p> <ul style="list-style-type: none"> Readings Quiz 2: Due by the beginning of Lecture 9 Key stakeholders overview due by October 5
	9	Oct 4		
	<i>Fall Break (No class on October 9)</i>			
	10	Oct 11	Co-Management, Adaptive Management & Adaptive Co-Management	<p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Berkes, F. (2009). Evolution of co-management: Role of knowledge generation, bridging organizations and social learning. <i>Journal of Environmental Management</i>, 90, 1692-1702. <p><u>Case Study:</u> Forest Management in Northern Thailand</p> <p><u>Group Meetings:</u></p> <ul style="list-style-type: none"> Lecture 11 – Case Study Discussion (prep) Lecture 12 – RM Frameworks (for assignment - come prepared to discuss the RM framework used in your resource case study) <p>Assignments:</p> <ul style="list-style-type: none"> Readings Quiz 3: Due by the beginning of Lecture 12 RM Framework overview due by October 23
	11	Oct 16		
	12	Oct 18	Group Assignment Work Period	
Module 4: Resource Management Tools	13	Oct 23	Impact Assessments	<p><u>Assigned Readings:</u></p> <ul style="list-style-type: none"> Sinclair, A.J. & Doelle, M. (2015). Environmental Assessment in Canada: Encouraging Decisions for Sustainability. In B. Mitchell (Ed.), <i>Resource and Environmental Management in Canada</i> (pp. 112-141). Don Mills, ON: Oxford University Press. Tilman et al. (2001). Forecasting Agriculturally Driven Global Environmental Change. <i>Science</i>, 292, 281-284. <p><u>Case Study:</u> The Veluwe Forest Region, Netherlands</p> <p><u>Group Meetings:</u> No group meetings</p> <p>Assignments:</p> <ul style="list-style-type: none"> Readings Quiz 4: Due by the beginning of Lecture 14
	14	Oct 25	Forecasting, Exploratory Scenarios, and Backcasting	

GEOG 356 – Resources Management
Fall 2018

	15	Oct 30	Resource Inventories	<u>Assigned Readings:</u> <ul style="list-style-type: none"> Ripple, W.J. & Beschta, R.L. (2012). Trophic Cascades in Yellowstone: The first 15 years after wolf reintroduction. <i>Biological Conservation</i>, 145, 205-213. Optional Reading: Morehouse, A.T. & Boyce, M.S. (2016). Grizzly Bears Without Borders: Spatially Explicit Capture-Recapture in Southwestern Alberta. <i>Journal of Wildlife Management</i>, 80(7), 1152-1166. <u>Case Study:</u> Alberta's Grizzly Bears + Wolves of Yellowstone <u>Group Meetings:</u> No group meetings Assignments: Readings Quiz 5: Due by the beginning of Lecture 17
	16	Nov 1	Restocking Inventories	
	17	Nov 6	Catch-up and Group Assignment Work Period	<u>Assigned Readings:</u> No Readings <u>Case Study:</u> Andean Grasslands Management + Columbian Seaflower MPA <u>Group Meetings:</u> <ul style="list-style-type: none"> Lecture 17 – RM Tools (for assignment) Assignments: <ul style="list-style-type: none"> RM Tools overview due by Nov 11
	18	Nov 8	Payment for Ecosystem Services	
Module 5: Holistic Resources Management	19	Nov 13	Indigenous Peoples and Resources	<u>Assigned Readings:</u> <ul style="list-style-type: none"> McMillan, L.J. & Prosper, K. (2016). Remobilizing <i>netukulimk</i>: indigenous cultural and spiritual connections with resource stewardship and fisheries management in Atlantic Canada. <i>Reviews in Fish Biology and Fisheries</i>, 26(4), 629-647. Madden, F. & McQuinn, B. (2014). Conservation's blind spot: The case for conflict transformation in wildlife conservation. <i>Biological Conservation</i>, 178, 97-106. <u>Case Study:</u> TBD <u>Group Meetings:</u> <ul style="list-style-type: none"> Lecture 20 – Short group meeting (for assignment) Assignments: <ul style="list-style-type: none"> Readings Quiz 6: Due by the beginning of Lecture 20
	20	Nov 15	Conflict, Complexity, and Uncertainty	
	21	Nov 20	Defining Values and Goals	<u>Assigned Readings:</u> No Readings <u>Case Study:</u> TBD <u>Group Meetings:</u> <ul style="list-style-type: none"> Lecture 22 – Final Report work period (for assignment) Assignments: <ul style="list-style-type: none"> Final Report due by Nov 27
	22	Nov 22	Catch-up and Group Assignment Work Period	
Course Wrap-Up	23	Nov 27	Gasland Case Study + Course Wrap-Up	<u>Assigned Readings:</u> No Readings <u>Case Study:</u> Gasland Case Study <u>Group Meetings:</u> No group meetings Assignments: Reflection Assignment due by Dec 3
	24	Nov 29		