



**FW445/MC445: Policies and Strategies for the Conservation of Biodiversity  
Spring 2012**

**Course Information**

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Tuesday and Thursday: 2:40 – 4:00 p.m.  
Classroom: 335A Case Hall

**Instructor Information**

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Professor Daniel Kramer  
Office: 370 North Case Hall  
Phone: (517) 432-2199  
Email: dbk@msu.edu  
Office Hours: Thursday 9:00 – 11:00 a.m.

The best way to reach me is during my office hours or by email. I am also readily available by appointment. Please make an effort to stop in and chat.

**Course Overview**

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*"For if one link in nature's chain might be lost, another might be lost, until the whole of things will vanish by piecemeal."*

**Thomas Jefferson**

*"To save every cog and wheel is the first precaution of intelligent tinkering."*  
**Aldo Leopold, Round River, 1953**

Biodiversity is the variety of all forms of life from genes to species to ecosystems. Biodiversity provides food, drink, medicine, industrial materials, ecological services, and leisure, cultural and aesthetic values to humankind. Conservation biology is the science of preserving biodiversity. It is a synthetic discipline which draws upon the fields of ecology, evolution, genetics, economics, sociology, anthropology, political science, and philosophy. The goal of conservation biology is the development of strategies for preserving populations, species, biological communities, and entire ecosystems.

This course is intended to introduce students to a broad range of ideas and methods from the social sciences that are relevant to the conservation of biodiversity. Since most of the threats to biodiversity originate in human actions, understanding human behavior and the social, policy and economic systems in which people operate is an essential component for those interested in conserving biodiversity. Fundamentally, the core continually examines the conflicts between human development and conservation. We will first consider many of the fundamental tenets of conservation biology and how they inform social science thinking including island biogeography and minimum viable populations. Next, we'll address the social science theoretical frameworks related to the conservation of biodiversity including tragedy of the commons, environmental valuation, ecosystem services, conservation ethics, and conservation triage. Finally, we'll consider a series of strategic approaches to the

conservation of biodiversity including policy approaches (e.g. ESA, CBD, CITES), market (ecotourism, species banking), and community-based management.

We will end with an eye towards the future of conservation

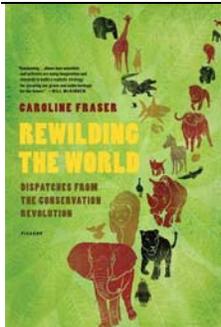
### Course Objectives

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- To become familiar with different social, economic, and policy considerations and strategies to address the conservation of biodiversity
- To compare and contrast conservation strategies in the developed and developing world
- To understand the importance of economic, political, and social context in crafting and implementing conservation strategies
- To provide a foundation of conceptual frameworks and factual knowledge important for students planning to work as social scientists and policy makers in the field of conservation biology
- To strengthen students' skills in comparative policy analysis
- To gain a basic familiarity with the major institutions, organizations, agreements and treaties used to address the conservation of biodiversity
- To promote more effective oral and written communication
- To develop presentation skills
- To improve critical reading and summarization skills

### Required Texts

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Caroline Fraser. *Rewilding the World: Dispatches from the Conservation Revolution*.

### Journal Articles

Most of our reading comes from peer-reviewed journals. Articles which are required reading will be posted to Angel.

### New York Times Articles

The college provides access to the *New York Times* free of charge. I strongly encourage students to utilize this valuable resource. Periodically, articles from the *New York Times* will be assigned in and out of class in order to provide a contemporary perspective on current international environmental problems and policies. In addition, I will award extra credit to students that present at least two articles to the class from the *New York Times*.

### Grading

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This course utilizes a number of different methods of evaluation. Offering a diversity of evaluation methods best represents the skills of a diverse group of students. Your grade will be based on the following tasks:

Assignment	Grade Percentage	Due Date
Participation	15%	
Three Daily Response Questions	15%	10 a.m. Before Each Class
Op-Ed #1	10%	February 7
Midterm Exam	25%	March 1

Op-Ed #2	10%	April 10
Final Exam	25%	April 30

### ***Participation***

Class meetings are designed to be a series of discussion meetings with full participation by all students rather than solely lectures. Active student participation will be an important part of the class and students should come prepared to speak their mind and to be called upon to speak their mind! Finally, each student will at some point be responsible for co-leading a discussion based on a course reading. Your preparation for and performance of this task will be included in your participation grade. The criteria for my evaluation of your participation and collegiality are below.

- **4.0** - Students who earn a 4.0 are consistently excellent colleagues. They are always present and prepared for class, and they bring interesting and relevant questions and comments to bear on the subject material. They are equally good listeners and show a genuine interest in their fellow students' thoughts. These students make the class better for all through their contributions, energy, and hard work.
- **3.0** - A student who earns a 3.0 may have missed two or three classes throughout the semester, but generally has been an active and enthusiastic participant in the course. Other students who earn a 3.0 may have been in class and prepared for class every day, but will have occasionally articulated ideas without reference to the direction of the conversation; that is, they actively participated in discussions without listening to their colleagues' previous statements.
- **2.0** - A student who earns a 2.0 is very much an average student. He or she will miss two or more classes throughout the semester or will come to class several times during the semester without having fully read and understood the assigned materials. Other such students will be prepared for class and will come to every class meeting, but will not fully participate in class activities and discussion; instead, they hold back, waiting for others to ask the tough questions or take the chance at making a mistake. Still other students who earn a 2.0 will occasionally dominate a class discussion and use rhetorical tactics that limit other students' participation.
- **Lower than 2.0** - Students who earn a 1.0 or a 0 in the participation and collegiality portion of their grade will have missed more than three classes or will have come to class several times without being fully prepared for the class meeting. In the class discussions and activities, lower than average colleagues will avoid participating or will occasionally attempt to dominate the discussions.

### ***Three Daily Response Questions***

For each class, each student is required to submit 3 questions reflecting the day's reading assignment. The questions are intended to 1) signal to the instructor ideas, concepts, and arguments from the readings that require clarification and 2) provoke classroom discussion. The questions should be emailed to the instructor by 10 a.m. the day of class. You either get full or no credit for each set of daily response questions.

### ***Midterm and Final Exams***

Exam questions will be based on the reading material, class discussions, and lectures. I will use short answer essay questions.

### ***Op-Eds***

Increasingly, conservation experts have realized the critical importance of the transfer of knowledge from experts to lay audiences. Op-Eds are one such vehicle for this transfer of knowledge. Op-Eds must 1) address an issue of current importance, 2) hold readers' attentions and be memorable, 3) present a clear and coherent argument, and 4) convey complex ideas in simple terms. Perhaps most challenging, these tasks must be accomplished using between 750 and 1000 words. My evaluation of your Op-Eds will be based on how well you have performed these tasks. If during the course of the semester your Op-Ed is published in any municipal, regional, or national newspaper, you will receive an automatic 4.0 for the assignment.

### ***Evaluation Criteria for All Written Work Including Essay Portions of Exams***

- **4.0** - Your work is excellent relative to the level necessary to meet course requirements. You not only make strong, organized arguments that make good use of evidence and link theory to empirical cases, but

also are able to recognize the limits of those arguments through thoughtful assessments of alternative explanations. Your work is probing, perceptive, and well expressed.

- **3.0** - Your work is good relative to the level of course requirements. It demonstrates very good command of the materials, is well written, and insightful.
- **2.0** - Your work meets requirements of the assignment, demonstrates adequate command of materials, and is fairly well expressed. Please note that an average grade is a 2.5.
- **Lower than 2.0** - Your work meets minimum requirements for credit but shows weaknesses in the mastery of material and expression.

### ***Honors Option***

Each student may choose to take the honors option for this course. There are two ways to fulfill the honors option.

- Complete a 10 to 12 page book review. See me for a list of book options.
- Attend four university research seminars, presentations, or brown bag discussions related to social, economic, or policy aspects of conservation biology. I will provide a schedule of events which meet these criteria. I may be unaware of others so see me to approve other events or discussions.

## Course Readings and Calendar

Date	Day	Topic	Readings & Class Materials	Due
10-Jan	Tues	Introductions	None	
		Biodiversity: Where we are and why it matters	Quammen - <i>Planet of weeds</i> Fraser - <i>Rewilding the World</i> , Introduction	
12-Jan	Thurs	Foundations: Island Biogeography	Laurance - <i>Theory meets reality</i> Fraser - <i>Rewilding the World</i> , Chapter 1	
17-Jan	Tues	Foundations: Minimum Viable Populations	Shaffer - <i>Minimum population sizes for species conservation</i> Fraser - <i>Rewilding the World</i> , Chapter 2	
19-Jan	Thurs	Foundations: Tragedy of the Commons	Hardin - <i>The tragedy of the commons</i> Ostrom et al - <i>Revisiting the commons: Local lessons, global challenges</i>	
		Foundations: Threats to Biodiversity	Malakoff - <i>Be fruitful and multiply</i> Sagoff - <i>Do We Consume Too Much?</i>	
24-Jan	Tues		Ehrlich et al - <i>There is No Middle Way on the Environment</i>	
26-Jan	Thurs	Foundations: Biodiversity and Ecosystem Services	Ehrlich & Mooney - <i>Extinction, substitution, and ecosystem services</i> Wallace - <i>Classification of ecosystem services: Problems and solutions</i>	
		Foundations: Valuing Nature	Costanza et al - <i>The value of the world's ecosystem services and natural capital</i> McCauley - <i>Selling out nature</i> Costanza - <i>Response to McCauley</i>	
31-Jan	Tues	Foundations: Conservation Ethics	Callicott - <i>Whither conservation ethics</i> Quammen - <i>Jeremy Bentham, the Pieta, and a precious few grayling</i>	
2-Feb	Thurs			
7-Feb	Tues	<b>Film: The Cove</b>		Op-Ed #1
		Conservation Triage	Bottrill et al - <i>Is conservation triage just smart decision making?</i> Jachowski et al - <i>Allowing extinction, should we let species go?</i> Parr et al - <i>Why we should aim for zero extinction</i>	
9-Feb	Thurs			
14-Feb	Tues	<b>Class Cancelled</b>		
16-Feb	Thurs	The Endangered Species Act & The Problem of Private Lands	Polasky - <i>Endangered species conservation on private land</i> Bean - <i>Safe harbor agreements</i>	
		Land Trusts, Leasing, Easements, and Direct Payments	Merenlender et al - <i>Land Trusts and Conservation Easements: Who is Conserving What for Whom</i> Ferraro et al - <i>Direct Payments to Conserve Biodiversity</i> Ellison - <i>Renting biodiversity: the conservation concessions approach</i>	
21-Feb	Tues			
23-Feb	Thurs	Species Banking and Transferable Development Rights	Ellison - <i>Making conservation profitable</i> Fox et al - <i>Status of Species Conservation Banking in the United States</i>	
		International Policy: The Convention on Biological Diversity & The Convention on the Trade of Endangered Species	Balmford et al - <i>The convention on biological diversity's 2010 target</i> Fox - <i>Healing powers</i> Nichols - <i>Lunch with a turtle poacher</i>	
28-Feb	Tues			
1-Mar	Thurs	<b>Midterm Examination</b>		
6-Mar	Tues	<b>Spring Break</b>		
8-Mar	Thurs	<b>Spring Break</b>		
13-Mar	Tues	Eco-labeling, Eco-tourism, Trophy Hunting, and Wildlife Farming	Kiss - <i>Is community-based ecotourism a good use of biodiversity conservation</i> Brownstein - <i>Harnessing consumer power for ocean conservation</i>	
15-Mar	Thurs	Biodiversity Hotspots and Conservation Priorities	Myers et al - <i>Biodiversity hotspots for conservation priorities</i> Brooks et al - <i>Global biodiversity conservation priorities</i>	
		Conservation, Poverty, and Hunger	Adams et al - <i>Biodiversity conservation and the eradication of poverty</i> Pearce - <i>The protein gap</i> Mikkelsen - <i>Economic inequality predicts biodiversity loss</i>	
20-Mar	Tues			
22-Mar	Thurs	Parks and People	West - <i>Parks and people: The social impacts of protected areas</i> Brockington - <i>Community Conservation, Inequality and Injustice: Myths of Power in Protected Area Management</i> Christensen - <i>Win-win illusion</i>	
27-Mar	Tues	Conservation and Human Conflict	Hanson - <i>Warfare in biodiversity hotspots</i> Hart - <i>Rules of engagement for conservation: Lessons from the DRC</i>	
29-Mar	Thurs	Biodiversity Reserves	Pressey - <i>Beyond opportunism: Key principles to systematic reserve selection</i>	
3-Apr	Tues	<b>Class Cancelled</b>		
5-Apr	Thurs	Parks and Biodiversity	Fraser - <i>Rewilding the World</i> , chapters 5, 6, 7, & 8	
10-Apr	Tues	<b>Film: Milking the Rhino</b>		Op-Ed #2
12-Apr	Thurs	Community-Based Conservation	Fraser - <i>Rewilding the World</i> , chapters 9 & 10	
		Payments for Ecosystem Services	Jack - <i>Designing payments for ecosystem services</i> Redford - <i>Payment of ecosystem services and the challenge of saving nature</i>	
17-Apr	Tues			
19-Apr	Thurs	Social Networks and Social Capital	Pretty - <i>Social Capital and Biodiversity Conservation and Management</i>	
		Conservation Medicine	Quammen - <i>Deadly contact</i> Daszak - <i>Emerging infectious diseases of wildlife</i>	
24-Apr	Tues			
26-Apr	Thurs	The Future of Biodiversity Conservation	Fraser - <i>Rewilding the World</i> , chapters 11 - 13	
30-Apr	Thurs	<b>Final Examination, April 30th, 3 - 5 p.m.</b>		

## **Policies**

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### **Attendance**

Attendance is required for this class. I understand that occasional emergencies (illness or family emergencies) may occur. In such cases, you should notify me before class begins that you cannot attend. If you don't speak to me in person, you can leave a voice mail or email message with your phone number and the reason you won't be attending class that day. You are responsible for finding out what you missed in class.

### **Classroom Conduct**

Students whose behavior is disruptive either to the instructor or to other students will be asked to leave the class. Everyone's experience and opinions will be valued. Not everyone must agree, even with the instructor, however, differing points of view must be communicated respectfully.

### **Diversity**

This course is intended for students with a variety of interests and backgrounds. The diversity of ethnicities, cultural backgrounds, races, perspectives, experience, and ways of addressing problems among students is one of the most enriching aspects of any course. I will encourage students to acknowledge classroom diversity by listening attentively and politely to one another especially when opinions of students differ.

### **Grading Grievances**

Students with a grievance regarding grading should submit to me in writing the nature of their grievance and their proposed remedy within 48 hours of having received the returned assignment. I will then discuss the grievance with the student.

### **Late Work**

This course is not intended to run or ruin your life. So when exceptional circumstances prevent you from completing an assignment on time, you may request an extension and it will be granted where possible and appropriate. In the absence of a granted extension, a 5% reduction of grade will be assigned for each day an assignment is late beyond the required due date.

### **Academic Dishonesty**

The principles of truth and honesty are fundamental to the educational process and the academic integrity of the University; therefore, no student shall:

- claim or submit the academic work of another as one's own.
- procure, provide, accept or use any materials containing questions or answers to any examination or assignment without proper authorization.
- complete or attempt to complete any assignment or examination for another individual without proper authorization.
- allow any examination or assignment to be completed for oneself, in part or in total, by another without proper authorization.
- alter, tamper with, appropriate, destroy or otherwise interfere with the research, resources, or other academic work of another person.
- fabricate or falsify data or results.

In accordance with James Madison College's policy on academic dishonesty, any student turning in work that is in violation of MSU academic integrity standards will automatically receive a grade of zero in the course and the matter will be referred to the JMC Dean's office. For your reference, the James Madison College policy on academic dishonesty is as follows (Source: <http://www.jmc.msu.edu/cs/docs/hb0506.htm> ).

*The faculty recognize that it is the responsibility of the instructor to take appropriate action if an act of academic dishonesty is discovered. It is further understood that a student may appeal a judgment of academic dishonesty to the Student-Faculty Judiciary. The Faculty Assembled recommend that in cases involving proven academic dishonesty, the student should receive, as a minimum, a 0.0 in the course and that a record of the circumstances, sanctions, and any appeal, be placed in the student's confidential file.*

*(In accordance with University policy, the record may be made available to faculty if such information is deemed necessary in the discharging of their respective responsibilities). The individual faculty member or the Dean may recommend further action, including dismissal from the University, to the Student-Faculty Judiciary. If a second case of academic dishonesty should occur, the recommendation is that the faculty, through the Office of Academic Affairs, should seek the student's dismissal from the College and the University. In accordance with University policy, all records of academic dishonesty will be retained for five years after the graduation of the student or five years after the non-graduate withdraws from the University.*

*The Faculty Assembled declare it a violation of College standards to submit the same written work for more than one course without prior express consent of the instructor(s) involved. It should be understood that violation of this standard may result in sanctions being applied, and at the discretion of the instructor these sanctions may include those that are applied in cases of academic dishonesty.*

*Any student assigned a penalty grade based on academic dishonesty is entitled to challenge the charge. The student should first consult with the Dean. If the issue cannot be resolved, a College-Level hearing will be held. Subsequent challenges may be referred to the appropriate University-Level hearing board. Students should consult the Academic Freedom Report*

**Students with Disabilities** (Source: <http://www.rcpd.msu.edu/Home/>)

Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All discussions will remain confidential. Such students also should contact *The Resource Center for Persons with Disabilities* (RCPD), 120 Bessey Hall, (517) 353-9642.