



Controversy in Fisheries Science EVPP 692/991-001 Syllabus



Instructor: **Dr. Kim de Mutsert**
 Assistant Professor, Environmental Science and Policy

Course Description and Goals: This course is an overview of the background, advances and controversies in fisheries science. Student will learn about different tactics to prevent overfishing. It provides insight on different viewpoints on the state of fisheries ecosystems and how to best regulate fisheries. The topics of the student presentations are purposely selected to have generated opposing views; this helps students to think critically. After the course, students will be familiar with approaches to regulate and manage fisheries, from Beverton and Holt to an ecosystem-based approach to fisheries management. Throughout this course, student will advance their critical thinking, presentation, and discussion skills.

Course Content and Instructional Methods: The course consists of lectures and student presentations followed by discussions. Below is a list of lecture topics by week. Lectures will consist of power point presentations that will be posted to our course on the day of the lecture. Because this is a 1-2 credit course, we will meet about an hour shorter than the scheduled class time. EVPP 991 students will give two 25-minute presentations during the semester; EVPP 692 students will give one 25-minute presentation during the semester. Two students will present opposing views on a topic, after which the topic will be discussed in class. The instructor will assign one paper per presentation that will be the focus of the presentation. The presenting student will add one paper for the whole class to read. Reading and interpreting scientific papers is part of the course; your participation grade (50 pts of total) will be based on reading the assigned material and participating in the discussions. Check the course web site every week for readings that are part of the course material. Each student will prepare a short summary of all papers assigned; your assignment grade (50 pts for 991 students, 100 pts for 692 students) will be based on those summaries. EVPP 692 students will prepare a literature list of papers relevant to one of the discussion topics of their choosing. EVPP 991 students will write a 7-10-page single-spaced term paper on one of the discussion topics of their choosing. Students should use multiple sources (books or publications in scientific journals) for their term papers.

Grading:	Presentations:	200 pts total (100 pts each for 991)
	Participation:	50 pts
	Assignments:	50 pts (991); 100 pts (692)
	Literature List (692):	50 pts
	Term Paper (991):	100 pts

Honor Code: Adherence to the *GMU Honor Code* is expected of all students, specifically:

Members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.

In all assignments and communications, **plagiarism** will not be tolerated. This applies equally to oral and written communications in the context of any evaluated (graded) course assignments. In presenting quotes, paraphrasing statements or logical arguments from others in any medium (on-line, oral or written), students should properly cite their source. Any public usage of original material from this course (e.g., presentations, images, etc.) without explicit permission of its creator shall be construed as stealing. As stated in the Honor Code, infractions may result in invalidated credit for dishonorable work and lowered grade, including failure from the class, suspension or dismissal. Inquiries for clarification from the professor are welcome. Thank you in advance for your conscious attention to these issues.

Absenteeism Policy: Please inform your instructor in advance if you will be absent from class due to sickness or other reasons.

Lecture Topics and Assignments Schedule

Week	Date	Topic (Readings will be posted on Blackboard)
1	1/28	Intro to Class, Critical Thinking, and Fisheries Science
2	2/4	The Evolution of Quantitative Marine Fisheries Management + Adding a Spatial Component to Managing Marine Fisheries + What is Fishing Down?
3	2/11	Two Student Presentations: 1) Are we on our way to fishing our oceans completely empty?
4	2/18	Movie: The End of the Line
5	2/25	Two Student Presentations: 2) Are we fishing down the foodweb?
6	3/4	Single Species Approaches vs an Ecosystem Approach to Fisheries Management + Gear Selection + Environmental Factors
7	3/11	Spring Recess
8	3/18	Two Student Presentations: 3) Are bottom trawls too damaging to use as fishing gear?
9	3/25	Two Student Presentations: 4) Should we use ecosystem-based or single species management?
10	4/1	Two Student Presentation: 5) Is habitat degradation or history of overfishing causing slow stock recovery?
11	4/8	Total Allowable Catch (TAC) and its alternatives + MPAs + Collaborations between Scientists and Fishermen + Fish Farming + Artificial Reefs
12	4/15	Two Student Presentations: 6) Are individual transferrable quotas (ITQs) the answer?
13	4/22	Two Student Presentations: 7) Do marine protected areas (MPAs) work?
14	4/29	Two Student Presentations: 8) Do artificial reefs produce or attract fish biomass?
15	5/6	Two Student Presentations: 9) Could fish farming be an answer to overfishing? + Closing Lecture & Discussion

There is no Exam. Term Papers and Literature Lists are Due the Last Day of Class: May 6.

Suggested readings

I have not assigned a textbook; the most important readings are the scientific papers that will be distributed each week. However, the lectures are largely based on the following three books, and I recommend reading them if you would like to pursue the area of fisheries science.

Beverton, R.J.H and Holt, S. J. 2004. On the Dynamics of Exploited Fish Populations. Blackburn Press, New Jersey.

Payne, A., Cotter, J. and Potter, T. 2008. Advances in Fisheries Science: 50 Years on from Beverton and Holt. Blackwell Publishing Ltd, Oxford, UK.

Walters, C. J. and Martell, S. J. D. 2004. Fisheries Ecology and Management. Princeton University Press, New Jersey.