ACR 848  
Community-Based Natural Resource Management in Developing Countries  

Spring 2011

Schedule: 4:10 – 7:00 PM Thursdays  
Location: Natural Resources Building, Rm 1  

Instructor

Name: John Kerr  
Office Address: 325 Natural Resources  
Office Phone: 353-0762  
Email: jkerr@msu.edu  
Office hours: by appointment

Course Description

This course examines the prospects for natural resource management that succeeds in meeting productivity, conservation and poverty alleviation objectives in rural areas of developing countries. Weekly themes in the course are as follows:

- The role of natural resources in rural livelihood systems  
- Overview of the role of social institutions in natural resource management  
- Indigenous knowledge and conservation; understanding people’s perceptions and interests  
- Population-poverty-natural resource management links  
- Property rights overview  
- Property rights and secure tenure on individually managed land  
- Commonwealth and collective management  
- Insights about collective action from game theory  
- Insights from experimental economics and psychology  
- Inequality and collective action; community organizing for collective action  
- Co-management, decentralization and democratization: implications for natural resource management  
- Overview of institutional arrangements to encourage conservation for off-site benefits (e.g. biodiversity)  
- Tourism, conservation and local livelihoods  
- Payment for environmental services

Throughout the course there will be an emphasis on understanding how institutional arrangements governing natural resource management operate in the context of given cultural, economic, legal, policy and biophysical conditions.

This course is intended as companion to FW 813, Democracy and Environment, taught by Mark Axelrod. This could focuses more on micro-level factors determining natural resource management, while that one focuses more on the role and impact democratic institutions in managing the environment and natural resources. They are designed to have minimal overlap and high complementarity.
Introduction, Aims, Objectives

Billions of people in developing countries earn their livelihoods from direct utilization of natural resources such as agricultural land and water, rangelands, forests and fisheries. Widespread degradation of these resources has made them less productive, causing disproportionate hardships on the poorest people who depend on them most directly. Theories abound about the causes of and possible solutions to natural resource degradation problems, covering issues such as population growth, technology, markets, economic policies and social institutions. Efforts to improve natural resource management often have involved government controls on local people’s access and use, while numerous development projects have undertaken financial investments to introduce improved technology. Price policies and market reforms also have been used to influence resource management. Elements of these approaches have contributed to improved natural resource management, but evidence suggests that lasting solutions will remain elusive unless they include locally acceptable and enforceable institutional arrangements governing the use of natural resources. Important institutional issues include:

- the specification and assignment of rights that dictate who may use a natural resource in a given way, and responsibilities that guide people to manage natural resources and protect them from degradation;

- the extent of collective action whereby people jointly protect or improve a natural resource;

- the extent to which government policy and practice plays a supporting role in specifying rights and responsibilities and promoting collective action.

Since the late 1980s the literature on property rights and collective action for natural resource management has grown rapidly. It points to a range of natural resource management successes and failures under different property regimes, and it is steadily gaining insights into the elements of effective management institutions. This literature is highly interdisciplinary, drawing on all the social sciences and applied to a great variety of biophysical, socioeconomic and cultural contexts. It offers students interested in natural resource management and development exposure to a wide range of conceptual tools and analytical methods associated with both unidisciplinary and interdisciplinary inquiry.

At the same time, it is also important to recognize that “community-based natural resource management” has become a development buzzword. At times policymakers and project managers promote it unquestioningly, without sufficient understanding of what conditions are necessary to make it likely to succeed in promoting productivity, conservation, and equity. In fact, it is at least as easy to find cases of failures as successes in community-based natural resource management. Debates about how to promote better natural resource management are as strong as ever.

Aims: This course has three specific aims:

- to introduce students to the role of institutional arrangements in natural resource management and the forces behind the evolution of property regimes

- to encourage students to think critically about the characteristics of appropriate and inappropriate institutional arrangements under a variety of socioeconomic and biophysical conditions

- to expose students to a large and growing literature and a range of concepts and analytical methods associated with the interdisciplinary study of institutional arrangements in natural resource management.

Objectives: On completion of this course, students should be able to:
- Critically evaluate the strengths and weaknesses of various theories and arguments related to rural natural resource management in developing countries.

- Explain the links between institutional arrangements and the incentives that guide people, individually or collectively, to conserve or degrade natural resources.

- Understand links among productivity, conservation and equity under a range of institutional arrangements for natural resource management.

- Apply these concepts to a natural resource management problem of particular interest to them.

**Format**

Class sessions will follow a seminar format. Class discussion will focus on concepts and problems raised in weekly readings that each student is expected to have read prior to each session. Each week a group of students will make a short presentation and help guide the discussion.

**Assignments and Evaluation**

Mini-paper

Each week one or two students will write a mini-paper – a short paper that focuses on key themes from the readings. Aim for about 750-1000 words (or about 1.5 to 2 pages, single spaced), not including references. Each student will write two such papers during the semester, one before spring break and one after. In a way the mini-paper is just a more formal version of a reflection paper. There is flexibility in how you approach this paper; please discuss it with me if you have an idea you would like to pursue.

The simplest approach is simply to summarize the required readings and discuss a common theme that they all address. Another would be to focus on some extension of the theme without going into any detail on the required readings. If you take this approach it is important to begin by linking whatever you decide to discuss to the required readings – show how your focus is relevant to what everyone else in the class has read. If you take this approach you could focus on a reading from the recommended list and discuss ways in which it expands on a common theme from the required readings. Or you could choose an issue of interest to you and apply themes from the readings to that issue. You should try to introduce some aspect of each reading in your discussion, but I realize that sometimes that might not be very easy and we can discuss it and decide together if a slightly different approach is okay. Of course you may bring in other readings as well. (In general, discussing your approach to paper with me is a good idea so that we can discuss ideas and jointly come up with an idea that works for you.)

The two mini-papers are worth 10 points each out of a total of 100 for the class. Grading criteria are that the paper should be well written, be clearly linked to the week’s readings, focus on key issues (as opposed to getting distracted by less important issues), raise interesting analytical points that are useful for discussion, stay within the space range, and be posted on time.

Note that the mini-paper is different from a reflection in that it **has to be written in the formal style** of a research paper. How well it is written is part of the grade, and you should use citations. Part of the idea is to help you practice formal writing. If you would like to improve your writing, you might consider scheduling an appointment at the Writing Center for the week when you hand in a mini-paper. (Note that I realize that non-native speakers have a disadvantage in writing in English and I am not as picky if they make small mistakes.)
Presentations

The students who write the mini-papers will each give a short presentation on key issues. It will be timed and part of the grade is to keep it between 5 and 7 minutes. The main purposes of this assignment are: 1) raise some good points for discussion, 2) practice giving a good, short presentation.

Please keep in mind that it is very difficult but very important to be able to give a good but concise presentation. It would be much easier to talk for 10 or 15 minutes than 5-7 but the point of the assignment is to keep it very short. We will use a timer and enforce the time strictly.

The presentations are worth 5 points each. Assessment criteria are that it should be clearly presented, well organized, linked clearly to other readings so that other students understand why it belongs, get interesting points across, stay within the time allotted, and have useful visual aids as appropriate. (Sometimes visual aids aren’t needed and you don’t have to use powerpoint if you prefer not to.) The exact rubric will be posted on Angel.

Helping organize the class session in conjunction with your paper and presentation

Each week the students who prepare a mini-paper will be responsible for working with me to organize the week’s class. This can be done by raising useful discussion questions and/or coming up with an interesting and instructive approach that raises interesting points. It can involve identifying an interesting video, helping lead a useful discussion session, designing a role play activity that demonstrates some useful points, or some combination of these things. Of course I’ll work closely with students in this and I already have a lot of ideas from previous years. I am completely open to suggestions about customizing this assignment if someone has a good idea.

Your work in helping organize the class session contributes to your participation grade.

Weekly Reflections

Everyone else should also write brief reflections nearly every week (eight times during the semester in addition to the mini-papers, a few weeks off). These can be short – a page to a page and a half single spaced, or around 500-750 words. The main idea is just to spend some time thinking about some key issues raised in the week’s readings; this will help generate discussion. What you write should demonstrate that you’ve actually read the papers but there’s no need to summarize everything. It’s important that you focus on broad issues rather than, for example, just focus narrowly on one small detail. The writing style is not part of the grade – the idea is to let your thoughts flow without worrying about style. You should aim to raise interesting, thoughtful points for discussion (as opposed to just regurgitating what’s in the readings).

In class we’ll jointly agree on a reasonable time by which these should be due so that others have time to read what you’ve posted.

For the whole semester, these reflections are worth 20 percent of the class grade. They will be graded on a scale of 1-5; an exact rubric will be posted on Angel. You only get graded for 8 reflections. If you do more than 8 you can throw out the one with the lowest grade.
Term paper

Each student will write a term paper on a topic of their choice, subject to the condition that it should be relevant to the main topics of the course. There are a lot of different ways to do this. One useful approach is to take a topic that you are interested in researching, possibly for your masters or PhD thesis, and add an angle related to ideas covered in the class (such as property rights or collective action) that you had not previously considered. Another approach would be to write a literature review on a specific topic that you are interested in; you could also evaluate an existing project or write a project proposal (presumably a hypothetical one). Frequently there are special journal issues that focus on a topic relevant to this class; you could review all the articles in such a special issue if you wanted to. (Examples are several recent issues of Ecological Economics with special sections on payment for environmental services, one from 2011 on experimental approaches to studying collective action in rural areas of developing countries, and one from Agricultural Systems in December 2004 that focused on research methods for studying collective action.) You could also review a book or books.

Papers should be concise (about 3500-4500 words excluding references) and analytical, focusing more on applying concepts from this class to a selected research problem and less on describing the case. For example, if say you are interested in soil conservation, one good approach for the paper would be to ask how to examine soil conservation from the perspective of different themes we cover in class. I will work closely with each student on how to make this assignment as useful as possible to you and to make sure you understand what I am asking for. The word limit of 4500 words is strict!

I encourage everyone to write a first draft to give me for feedback. This will help you to write a better paper and get more out of the assignment.

Presentation of the term paper

For the time being, we will plan that each student will present their paper to the class at the end of the semester, with a time limit of 5-7 minutes depending on how many people we have. (With a larger class we might skip the presentations as it is hard to manage a large number of them. Or we might stagger them over the last 2-3 weeks of class.) Grading criteria are the same as for the presentation of the reflections: it should be clearly presented, well organized, get interesting points across, stay within the time allotted, and have useful visual aids as appropriate. The exact rubric is posted on Angel.

Out of the total of 40 points for the term paper, 5 points are for the presentation. (If by chance we do not have the presentations, the entire grade will be for the paper. In 2011 we decided not to do the presentations.)

Participation

Class participation is worth 10 points toward your overall grade. There are many ways to participate and this is less a matter of speaking up all the time and more about being engaged and giving a good effort. Helping organize class sessions contributes to your participation grade. The grade will be established as follows: everyone begins with a score of 85/100 and it goes up or possibly down based on my assessment. Normally it will go up for anyone who is engaged in the class.

Other

I reserve the right to raise the overall grade a bit for students who have worked hard and demonstrated that they have learned something during the semester.
Overall grading for the class

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Total points</th>
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<tbody>
<tr>
<td>Mini-papers: 10 points x 2</td>
<td>20</td>
</tr>
<tr>
<td>Presentations of mini-papers: 5 points x 2</td>
<td>10</td>
</tr>
<tr>
<td>Weekly reflections x 8</td>
<td>20</td>
</tr>
<tr>
<td>Term paper and presentation</td>
<td>40</td>
</tr>
<tr>
<td>Participation</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>100</strong></td>
</tr>
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Grading scale for the course

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
<th>GPA</th>
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<tbody>
<tr>
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<tr>
<td>85 to 92%</td>
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</tr>
<tr>
<td>80 to 84%</td>
<td>3.0</td>
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<td>75 to 79%</td>
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<td>70 to 74%</td>
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<td>65 to 69%</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>60 to 64%</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>&lt;60%</td>
<td>no credit</td>
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**Resource Economics Specialization and Area Studies (FLAS) Specializations**

The course can be taken to meet the requirements of FLAS students. If your FLAS fellowship requires that at least 25% of this course focuses on Africa or Latin America or some other region, we can tailor your assignments to make sure you meet that requirement. For example, since the term paper and presentation are worth 40% of the grade you can meet the requirement by focusing your term paper on a certain geographic region.

The course can also qualify as part of the CASID specialization. Be sure to clear this with CASID.

In the past this course has been eligible for credit as part of the interdepartmental specialization in Environmental and Resource Economics. Students who wish to receive credit for this specialization should double check with the specialization coordinator to make sure it is still eligible. If so, those students must focus their assignments on the relevance of the concepts and issues presented in class to their interest in resource economics, for which we can at least partially customize the reading list. The students and instructor can discuss this to jointly agree upon how the students will accomplish this.

**Please note:**

Unexpected events take place and factors out of our control can obstruct our plans. I will be highly sensitive to such things, and any students with personal circumstances that hamper their ability to carry out certain tasks on time are encouraged to contact me in advance. On the other hand, I will be much less flexible if students do not make the effort to contact me in advance.
Reading Materials

All the readings for this course will be available electronically on the class webpage on Angel.

ACR 848 Detailed Course Outline and Reading List

Note: some of this will be subject to change depending on students’ interests and if I find new readings during the course of the semester. Also, you will see that I have listed a large number of recommended readings. Let me know if sometimes you would prefer to read one of the recommended readings in place of one of the required readings so that I can let you know in which cases they are interchangeable, as opposed to when one of the required readings contain key messages I want to make sure everyone gets.

If you want to read ahead, please check with me in advance. That will help me make sure you don’t read one thing only to have me change the reading list.

1. January 12
   Introduction

2. January 19
   Natural resource management and rural livelihoods

   Required:


   Recommended:


3. **January 26**

The role of social institutions in economic development and natural resource management


**Recommended:**


See the special issue of *World Development* (Volume 33, Number 2, February 2005) on institutional arrangements for rural poverty reduction and resource conservation. *The articles are referred to in the Barrett et al. article so you can see if any of them interest you. All the articles are available electronically on the MSU Library web page. Some of them come up later in the semester.*

Randall, Alan. *Natural Resource Economics*, 2nd edition. Chpt 9, Sources of Inefficiency. *(It may be a different chapter in subsequent editions. *The key point of the chapter is that it describes the characteristics of some natural resources that make them difficult to manage. Any other natural resource economics textbook from the library will contain a similar chapter.)*

4. **February 2**

Indigenous knowledge and conservation; understanding people’s perceptions

**Required:**


Baland and Platteau, chpt 10. Were people traditionally conservationists? *(Be sure to read the first part (through figure 10.1) and the conclusion carefully. Read at least one case study from each of the four categories presented.)*


**Recommended**


5. February 9
Poverty-population environment links


Recommended:


**6. February 16**

**Property rights regimes: overview**


**Recommended:**


**7. February 23**

**Property rights and tenure security on farm land**


**Recommended:**

Deininger, Klaus. 2003. Land policies for growth and poverty reduction. World Bank. *(There are three ways in which to read this, depending on your interest and time. One is a 15-page summary written for a conference. Next is a 30 page executive summary, and third is a book length document, of which chapter 2 is the most important and runs about 70 pages. All of these are on Angel and elsewhere on the web.)*


**8. March 1**

**Common property and collective management**


**Recommended:**

*There is an on-line peer reviewed journal called the International Journal of the Commons. It will have useful articles on this topic.*

*There is a relatively new organization called Rights and Resources Initiative that focuses on land rights in forested areas around the world. It has a web site with a library of papers on communal land rights.*


**March 8: spring break, no class**
9. March 15
Insights about collective action from game theory

Required:

Davis, Morton. 1983. Game theory: a nontechnical introduction. New York: Basic Books. Please read the Author’s introduction – only the first four pages plus the top two lines of pg xvii, when it starts talking about the contents of the book.

Please read the Wikipedia entry on the prisoner’s dilemma. Read the initial overview and the short section called “strategy for the classical prisoners dilemma,” and then anything else you want. (This will help give useful background for what follows.)


Recommended:


See the entire issue of Ecological Economics on field experiments. This is the introductory article to that issue: Janssen, Marco, and John Anderies. 2011. Governing the commons: learning from field and laboratory experiments. Ecological Economics 70: 1569-1570


Baland and Platteau. 1996. Chapters 2, 4, 5, 6 and 7 in Halting degradation of natural resources: Is there a role for rural communities?

Chapter 2 has some simple beginnings about game theory related to the prisoners’ dilemma.
Chapter 4 has more detail on the prisoners’ dilemma.
Chapter 5 becomes more complex, presenting alternative contexts that change incentives.
Chapter 6 looks at moral norms and cooperation
Chapter 7 goes into more game theory based on experimental psychology.


10. March 22
Altruistic behavior, social norms, money, institutions and crowding-out

Required:


Recommended:


11. March 29
Promoting cooperation through community development and growth of social capital

Required


**Recommended**

*These focus on heterogeneity and inequality*


*These focus on organizing communities*


12. **April 5. Co-management, decentralization, and democratization: implications for natural resource management**

*Required:*

Ribot, J. C. 2002. Democratic Decentralization of Natural Resources: Institutionalizing Popular Participation, WRI, Washington. (Read pp 1-3 for the overview of key points and refer to the main text if anything is unclear.)


**Recommended (co-management)**


Lawry, Steven. 1990. “Tenure Policy Toward Common property Natural Resources in Sub-Saharan Africa.” Natural Resources Journal 30:403-422. (Not available on line – I’ll hand this out.)

**Recommended (democratization)**

Kumar, Kundan. 2004. Draft paper on democratization and decentralization in India.


Weaver, Mary Anne. 2000. “Gandhi’s daughters: India’s poorest women embark on an epic social experiment.” *New Yorker*, January 10.

**13: April 12**

**Encouraging conservation where benefits are off-site: overview**


Kerr, John, Pari Baumann, A.J. James, Vasudha Chottray, Grant Milne. 2006. Managing Watershed Externalities in India. *Journal of Environment, Development and Sustainability*. *(pages 5-15 only on the range of policy approaches used for encouraging conservation.)*


**Recommended**


Pretty, Jules, and Parmesh Shah. 1997. Making soil and water conservation sustainable: from coercion and control to partnerships and participation. *Land Degradation & Development* Volume 8, Issue 1, Date: March 1997, Pages: 39-58. *(NOTE: Only the first half of this, up to page 47, is about the coercion & control approach. The rest is optional.)*


14. April 19
Tourism, conservation, and local livelihoods

Required


Recommended


**15. April 26**

**Payments for environmental services**


**Recommended**


Economist special report on REDD, September 2010

16. May 3 (finals week)

Synthesis

There are no required readings this week but here are a couple of useful synthesis pieces:
