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2870: Sustainable Resources Management

http://shokulan.org/Courses/Courses.html

Wednesday 9:20-12:10
Room: M242
Credit: 3 hours

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Syllabus

Course Summary:
In this course, we focus on management and mismanagement of these renewable resources. Globally, many renewable resources are being managed in unsustainable ways.

Group Presentation: in small groups (2-3 people), you will select a resource and prepare a 5-minute presentation. Get my approval of the resource. Presentation should include 1) title slide, 2) introduction to the resource, 3) current management situation and problems, 4) demonstration of how resource is or is not used sustainably, and 5) proposal for future management and improvement. References should be cited where appropriate (i.e. in the slide with the information from that reference)

Tentative schedule:

Date	Lecture Topic
9/10	Introduction: Renewable and Non-renewable resources
9/197	Renewable resources used in non-sustainable ways
9/24	Transition from non-renewable resources to renewable resources
10/1	Lab: Chaos theory and intrinsic rate of increase
10/8	to be assigned
10/15	Global Fisheries & Maximum sustainable yield
10/22	Global Commons
10/29	Traditional ecological knowledge
11/5	**Midterm exam**
11/12	Management of hunted populations
11/19	Introduction to forests: natural and plantation
11/26	Lab: Effect of different harvest regimes
12/3	Air and pollution
12/10	Water and demand
12/17	Soils: global loss of top soils
12/24	Rebuilding soils
12/31	Presentations
1/7	**Final Exam**

Groups Labs (small groups of 2-3 people):

- Computer Labs: These are conducted in class. Completion and write ups may be after class. Write ups include 1) Title, your names, and date; 2) introduction to the lab and purpose, 3) models and results, and 4) conclusion and insights.
- Outdoor Labs: You will join a group lead by a student in 2877 Field Methods in Sustainability. In pairs, you will monitor traps. These traps must be checked daily, but you will be assigned certain dates. Other than insects, no animal should die. If you find a dead animal, the group responsible for the previous day will be penalized. If the group the day after you finds a dead animal, you will be penalized. All traps must be checked before 9 am.

Individual Writing Assignments:
You will write three 2-page essays on a current (2019) resource use conflict or issue discussed in the news. Submit your chosen newspaper article for my approval before you start writing. Essay should start with 1) your name, class name, and date and 2) proper reference for the article. In your essay, answer these questions in this order (at least one sentence for each answer):

1) What is the problem and where is it?
2) How does this affect each stakeholder (people, organizations, other species, ecosystems)?
3) What are actions and consequences (proposed or already taken)?
4) What is missing? Is the report one-sided? Is any stakeholder excluded?
5) What are the scientific facts? How are they used: to support the action or reject the action?
6) Follow the money. What do you think are the political and economic effects?
7) What do you think? What are your suggestions? Is there a possible resolution?

Textbook & Resources include information on the class website <http://shokulan.org/Courses/Courses.html>.

Grading: Grades are based labs (15%), essays (30%), group projects (15%), midterm exam (10%), and final exam (30%).

Course Policy:
1) In advance, tell me of problems meeting deadlines and assignments.
2) Assignments lose 20% for each week late.
3) Do your own work. Do not copy! Do not use computer translations!
4) You must cite your sources. You must give exact links for anything from the internet.
5) Copying is penalized by failure of the assignment (grade = 0%).
6) Academic fraud (including faking data) is penalized by failure of the group project.