Public and Private Management of the Environment
Yale School of Management, MGT 528
(Cross-listed at Yale School of Forestry and Environmental Studies, FES 94110)

Professor Erin Mansur (erin.mansur@yale.edu)
Class hours: Mondays and Wednesdays, 1:00 – 2:20 P.M.
Class location: A48 (in SOM)
Office hours: By appointment. 55 Hillhouse (Room 309)

COURSE SYLLABUS

OVERVIEW

This course explores environmental management from the perspectives of government regulators, private corporations, and nonprofit organizations. The first half of the course centers on innovative market-based approaches to environmental policy, such as tradeable pollution permits. We also consider a variety of market-driven non-governmental initiatives, such as eco-labeling and certification. In the second half of the course, we focus on proactive corporate environmental strategies through a series of case studies. Can firms shape regulation to secure competitive advantage? Can firms earn cost savings by reducing their environmental impacts? What is the potential for product differentiation along environmental lines? What is the role of “socially responsible investment” in the environmental realm? In short, does it “pay to be green”?

Throughout the course, we will emphasize the interactions among the public, private, and nonprofit spheres of activity. Designing sound environmental policies, for example, requires creating the proper incentives for regulated firms to reduce their pollution. In turn, appropriate environmental strategies in the private and nonprofit sectors depend closely on the regulatory environment. The major theme of the course is the interaction between markets and the environment. How can environmental policies be designed to create or mimic markets, in order to provide regulated firms with the right incentives for environmental protection? What profit opportunities do markets provide innovative firms?

We also examine the roles played by nonprofit organizations in influencing corporate environmental actions, whether by confrontation or collaboration. While this course is concerned with environmental strategy and policy, the tools we develop will be useful to anyone interested in competitive strategy, corporate social responsibility, or the design of public policy.

ORGANIZATION OF THE COURSE

The first part of the course reviews the basic economic framework for thinking about environmental issues. We review the concepts of externalities and public goods; show how they relate to the famous “tragedy of the commons” and the problem of “collective action”; discuss the moral justification for doing benefit-cost analysis; and explore the nature of benefits that people might derive from environmental quality (and be willing to pay for). The main message of this opening section is that even though people may derive substantial benefits from environmental amenities (such as clean air or endangered species) they have strong economic incentives not to pay for them. This
sets up the main question we grapple with in the rest of the course: how can governments, firms, and non-government organizations correct or overcome those incentive problems?

In the second part of the course, we examine the growing use of markets for environmental protection. We start by examining the economic theory and practice behind “market-based” or “incentive-based” instruments for environmental protection, such as emissions taxes and tradeable permits. We develop the economic rationale for such policies, comparing them with conventional “command-and-control” approaches. We then explore their implementation in a variety of real-world settings, from sulfur dioxide regulation to global climate change to the protection of fisheries and endangered species. We consider both government-driven efforts to create new markets (such as the sulfur dioxide trading system in the United States) with more recent efforts to create markets for ecosystem services in the private sector. This section of the course ends by assessing the hypothesis advanced by Michael Porter that environmental regulation will lead to cost savings for regulated firms.

The third part of the course centers on proactive corporate environmental strategies. By “proactive,” we mean corporate strategies that go beyond compliance with regulation. Proactive strategies actively seek to use the environment as a tool of competitive strategy: as a means of managing risk, securing strategic advantage over competitors, differentiating products, or identifying new market opportunities. After an overview, we examine each type of strategy in detail, through a particular case study. For example, a case on Du Pont highlights the strategic opportunities available to firms that position themselves to take advantage of new environmental regulations. Later on, a case on British Petroleum points out the opportunities and risks inherent in moving ahead of regulatory action. Two cases on product differentiation – one by StarKist and another by Patagonia – explore the potential for capturing the value of environmental quality.

Throughout the second half of the course, we consider the interaction between the private sector and non-governmental organizations. Two cases that center on NGOs make this link explicit. A case on Greenpeace demonstrates the risks firms face if they fail to account for public opinion and the ability of NGOs to leverage it. A very different role for the non-profit sector is profiled in a case on Environmental Defense, which has developed a sterling reputation for collaboration with private firms.

**COURSE REQUIREMENTS**

Course readings, case study questions, problem sets, and problem set answers will be posted on the course web page available through [https://classesv2.yale.edu/portal/](https://classesv2.yale.edu/portal/).

**Class participation**

Class participation will be evaluated as part of your course grade. While class participation is encouraged in lectures, it is absolutely essential to the case discussions in the later part of the course.

You are responsible for the material in each case. I will occasionally “cold-call” to start the discussion, but will generally rely on volunteers. Sheer volume is not a substitute for quality in your comments. Instead of maximizing “airtime,” you should aim for consistent
and active contribution. Come to class prepared to make cogent and concise comments that offer original insights and analysis of the case. In building those arguments, you should draw on specific facts or evidence from the case, as well as your own calculations and material from other required readings (where relevant).

I will post case discussion questions on the course website well in advance of each case discussion. You should use these questions to help you prepare the case.

Readings and cases

A detailed reading list follows this course description. All required reading is marked with an asterisk (*). Articles without asterisks are included in the hopes that they will be of interest, and to give you more material on the topic at hand; but they are not required reading for the course.

Most of the readings used in the course are included in two books:


Both are available at the Yale bookstore or online. A copy of each book is available on reserve at the Social Science Library, but you are encouraged to buy them. In addition to these books, there is a required reading packet, which includes most of the cases. The packet is available in the SOM mailroom (i.e., The Hub). A few of the cases (noted on the syllabus) are available on the course website.

Problem sets

In the first half of the course, we will reinforce the lessons of economic theory with three problem sets. The problem sets are meant to give you practice in analyzing environmental policies from the viewpoint of economic theory. Problem sets 1 and 3 should be turned in at the beginning of class on the day they are due. Problem set 2 will be an in-class exercise, to be handed in at the end of the class session.

Case write-ups

In the second half of the course, which relies more heavily on case discussions, you will each write one case write-up. The write-up should be four to five double-spaced pages long, and should provide cogent and concise analysis of the case at hand. You are free to choose which case to write up. The assignment is due by 10:00 am on the day the case will be discussed in class. Please submit your write-ups by email.

Note that an analysis is not just a summary of the case. Your analysis should discuss how the organization in the case approached a particular challenge or set of challenges and whether the strategy they chose was, in your view, the best one to follow. In other words, you should make an argument in your write-up, and back it up with facts from the
You should use the case preparation questions posted on the website to help structure your analysis; in particular, you may choose to focus on one or two of the study questions in your write-up.

You may discuss both the problem sets and the case write-up in groups, but in both cases the final product must be your own work (see discussion of academic integrity below).

Midterm Exam

There will be a take-home midterm exam.

Final Project

The final project is a paper analyzing the environmental policy or approach taken by a firm, nongovernmental organization, or even government agency of your choosing, not covered by the cases in the class. Your paper should analyze the strategic environment of the organization (firm, NGO, or even government organization), evaluate its response to the environmental issues facing it, and explain why and to what degree the chosen strategy is or is not likely to be effective (or was/was not effective, if your paper reviews a past strategy). You should employ concepts from class discussions and readings where relevant, but also feel free to introduce novel ideas of your own. As with the case write-up, the central task is analysis – independent, critical thought – rather than description.

The term “environmental policy” is deliberately broad. Corporate environmental policies might include, for example: a change in how a product is made, in response to environmental concerns; the introduction of a new “green” product; a voluntary program to offset a company’s environmental impacts through other measures (e.g., planting trees to offset CO₂ emissions); or a company’s formal approach towards a particular regulatory decision. NGOs’ environmental policies could include lobbying efforts, legal measures, World-Wide-Web-based campaigns, independent actions (e.g., land preservation by the Nature Conservancy), boycotts, publicity campaigns, cooperative partnerships with the private sector, or other activities. A report on a nonprofit could also focus on the general “approach” taken by the organization, especially in the case of a relatively small organization with a well-defined and narrow approach to environmental issues.

Despite the broad range of possible topics, your paper should be focused enough to allow for substantial and specific analysis of a particular policy or strategy chosen by an organization. You are encouraged to choose an organization for which substantial information is available, either through public reports (e.g., corporate financial statements or NGO annual reports) or through contacts with people inside the organization. I will assist you as best I can in contacting people who might be able to provide information. I am happy to help you identify possible topics.

The papers should be 15-20 pages double-spaced, not counting exhibits. Each report should include:

- a brief introduction describing the environmental problem facing the organization or decision-makers (approx. 2-3 pages);
• description of the organizational context (background on the firm or nonprofit organization or regulatory body and/or on the people involved in making the decision or designing the policy) (approx. 4-6 pages);
• discussion of the policy chosen by the organization and examination of its success or failure (approx. 4-6 pages);
• analysis of alternative options or policies (approx. 3-5 pages); and
• relevant exhibits (charts, graphs, figures, illustrations, tables, copies of documents, etc.) to illustrate the policy or provide numerical/factual support for your analysis.

You will work on the project in groups of three or four. (A solo-authored paper may be acceptable with prior approval from me.) To the extent possible (depending on course enrollment), each group should include both SOM and FES students. I will help out in “matchmaking” for groups wishing to add members or for students not yet attached to a group.

A one-page proposal of your project topic will be due on November 2. That proposal should describe the organization you will study, the environmental policy you expect to analyze, and the sources of information you plan to draw on. During the last few class meetings, each group will give a brief presentation of their work in progress.

The final paper is due by the end of the day on Monday, December 14. Please send your report in to me (preferably in Microsoft Word or PDF) by email. There will be no final exam.

Grading

The problem sets will be graded check, check plus, or check minus. A check plus denotes excellent work; a check denotes work in line with expectations; and a check minus (which is rare) is a signal of poor work with significant errors. The case write-up will be graded on a scale of 1 (worst) to 5 (best).

The final course grade will be calculated as follows:
• class participation 20%
• problem sets 15%
• case write-up 10%
• midterm 25%
• research paper 30%
ACADEMIC INTEGRITY

Citation of source material

You are required and expected to adhere to the highest standards of academic integrity in all your work. In particular, you may not use any material from any outside source without supplying a careful and comprehensive citation.

For the case write-up only, your reliance on the case at hand is understood; hence you need not cite the case itself when drawing on background information or general points contained in the case (although you should provide the relevant page numbers or exhibits when citing specific material from the case, e.g., financial data on company performance). Similarly, in citing required readings you may simply give the author and title of the work being cited. In the context of this class, standard concepts of strategy and economics (e.g., “Porter’s Five Forces,” Pareto efficiency, cost-effectiveness, Pigouvian tax, etc.) may also be referred to without further citation.

For the final projects, you must cite your sources fully. This includes full citation of case studies read for the class, as well as acknowledgement of sources for quotations, financial data, and concepts used in your final paper. Citations should follow the standard format in the Chicago Manual of Style (i.e., author’s name, title, journal (if applicable), publisher and place of publication (for a book), and date.) If you have questions, please visit the excellent guide to source citation at: http://www.dartmouth.edu/~sources.

Phrases and sentences taken from other sources must be surrounded by quotation marks, with the source cited in a footnote. If you take more than two sentences or so in a row, you must set the quotation off from the rest of the text, and include a proper citation of the source.

You must also cite ideas taken from another source, even if expressed in your own words, as well as facts that are not generally known or direct quotations of statements made by individuals. Note that changing one or two words in a sentence is usually not sufficient to qualify as “writing in your own words.”

The best rule to follow: When in doubt, cite your source. There is almost no cost to including too many citations, but there are serious penalties from failure to include enough.

A common way of getting yourself in trouble is the lazy approach of importing text whole from another source into a draft paper, thinking you will edit it later. If “later” never comes, you can end up in front of a disciplinary committee and risk serious punishment. Never cut and paste anything from another source into a document without immediately putting it in quotation marks and including a footnote citing the source. To be safe, try to avoid ever pasting outside material into your documents unless it is absolutely necessary to include the quotation (e.g., what a person actually wrote has bearing on your argument).
Group work

Group work is encouraged in several of the assignments, including the problem sets, case write-up, and final projects. Each group will produce only one final paper, which is handed in by the group as a whole. On the other hand, as already noted, each student must hand in her own work for the problem sets and case write-up.

Examples of acceptable collaboration in case write-ups and problem sets:

- Two students get together to work on a case write-up. They discuss the case together and share ideas about it, offering possible analyses and critiquing each other’s ideas. After their meeting, on their own, they each write up their case analysis in their own words.
- In a group meeting to work on a problem set, one student knows how to set up or solve a problem or how to draw a graph that the other students are confused by. She does it on the board and the rest of the students in the group take notes that they use when writing up their own solutions to the problem set.

Examples of unacceptable collaboration:

- One student lends another student the problem set solution she intends to hand in. He either copies verbatim or rewrites the first student’s problem set in his own words and hands it in.
- After working in a group to discuss a case, one of the students emails a draft of his case write-up to his group members so they can compare it with their own or give him feedback on his.
- A student usually works with a study group, but can’t make it to the session where the group has worked on a particular problem set or case write-up. One of the students in the group gives the missing student her notes from the group.
# COURSE PLAN

## I  FUNDAMENTALS

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9/2</td>
<td>Course introduction and overview</td>
<td>Lecture</td>
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<tr>
<td>2</td>
<td>9/9</td>
<td>Tragedy of the commons</td>
<td>Lecture</td>
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<tr>
<td>3</td>
<td>9/11</td>
<td>Why do benefit-cost analysis?</td>
<td>Lecture</td>
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<tr>
<td>4</td>
<td>9/14</td>
<td>The willingness to pay for environmental quality</td>
<td>Lecture</td>
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## II  MARKETS FOR ENVIRONMENTAL PROTECTION

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<tr>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>5</td>
<td>9/16</td>
<td>Introduction to regulatory design</td>
<td>Lecture</td>
</tr>
<tr>
<td>6</td>
<td>9/21</td>
<td>Market-based instruments</td>
<td>Lecture</td>
</tr>
<tr>
<td>7</td>
<td>9/23</td>
<td>Tradeable permits in practice: U.S. Acid Rain program</td>
<td>Discussion</td>
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<tr>
<td>8</td>
<td>9/28</td>
<td>Market-based solutions to common property problems</td>
<td>Case</td>
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<tr>
<td>9</td>
<td>9/30</td>
<td>Policy instruments for global climate change</td>
<td>Discussion</td>
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<tr>
<td>10</td>
<td>10/5</td>
<td>Markets for global climate change</td>
<td>Case</td>
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<td>11</td>
<td>10/7</td>
<td>Can firms profit under cap-and-trade?</td>
<td>Case</td>
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<tr>
<td>12</td>
<td>10/12</td>
<td>Markets for ecosystem services</td>
<td>Discussion</td>
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<tr>
<td>13</td>
<td>10/14</td>
<td>Eco-labeling and certification programs</td>
<td>Case</td>
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<tr>
<td>14</td>
<td>10/26</td>
<td>Does regulation produce cost savings?</td>
<td>Discussion</td>
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Take home mid-term exam

## III  STRATEGIES IN THE PRIVATE AND NON-PROFILE SECTORS

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<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Type</th>
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<tbody>
<tr>
<td>15</td>
<td>11/2</td>
<td>An overview of corporate environmental strategy</td>
<td>Lecture</td>
</tr>
<tr>
<td>16</td>
<td>11/4</td>
<td>Managing risk through self-regulation</td>
<td>Lecture</td>
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<tr>
<td>17</td>
<td>11/9</td>
<td>NGOs: Forcing accountability through confrontation?</td>
<td>Case</td>
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<tr>
<td>18</td>
<td>11/11</td>
<td>Managing competitors: Strategic use of regulation</td>
<td>Case</td>
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<tr>
<td>19</td>
<td>11/16</td>
<td>Cost savings and product differentiation</td>
<td>Case</td>
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<tr>
<td>20</td>
<td>11/18</td>
<td>Managing competitors: Product differentiation</td>
<td>Case</td>
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<tr>
<td>21</td>
<td>11/23</td>
<td>Private-sector responses to global climate change</td>
<td>Case</td>
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<tr>
<td>22</td>
<td>11/30</td>
<td>NGOs: Facilitating “win-wins” through collaboration?</td>
<td>Case</td>
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## IV  STUDENT PRESENTATIONS

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<thead>
<tr>
<th>Day</th>
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<th>Topic</th>
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<tbody>
<tr>
<td>23</td>
<td>12/2</td>
<td>Student presentations of final projects</td>
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<td>24</td>
<td>12/7</td>
<td>Student presentations of final projects</td>
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<tr>
<td>25</td>
<td>12/9</td>
<td>Student presentations of final projects</td>
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READING LIST

All cases and starred readings (*) are required. Non-starred articles are recommendations for further reading, but are not required. Most articles are on the class web site [web], one of the texts [K&O or Reinhardt], or in the reader [reader].

CALENDAR:

I  FUNDAMENTALS

Wednesday, September 2 – Class 1: Course introduction and overview
  * K&O, ch. 1, “Introduction”
  * K&O, ch. 2, “Economic Efficiency and Environmental Protection”
  K&O, ch. 4, “The Efficiency of Markets”

Wednesday, September 9 – Class 2: Tragedy of the commons
  * K&O, ch. 5, “Market Failures in the Environmental Realm”

Friday, September 11 – Class 3: Why do benefit-cost analysis?
  * K&O, ch. 3, “The Benefits and Costs of Environmental Protection”

Monday, September 14 – Class 4: The willingness to pay for environmental quality

II  MARKETS FOR ENVIRONMENTAL PROTECTION

Wednesday, September 16 – Class 5: Introduction to regulatory design
  Problem Set 1 due at beginning of class
  * K&O, ch. 8, “Principles of Market-Based Environmental Policy”

Monday, September 21 – Class 6: Market-based instruments
  * K&O, ch. 9, “The Case for Market-Based Instruments in the Real World”
Wednesday, September 23 – Class 7: Tradeable permits in practice: U.S. Acid Rain Program

Problem Set 2 due at end of class

Monday, September 28 – Class 8: Market-based solutions to common property problems
* Case: “The Red Snapper Fishery,” parts 1&2 and selected exhibits. [web]


Wednesday, September 30 – Class 9: Policy instruments for global climate change

(Lots of suggested readings for those interested in topic)
Lawrence Goulder and William Pizer, “The Economics of Climate Change,” RFF DP 06-06, 2006 [web].
Jeffrey Ball, “To Cut Pollution, Dutch Pay a Dump In Brazil to Clean Up,” Wall Street Journal, August 11, 2005 [web].

Monday, October 5 – Class 10: Markets for global climate change
* Case: “The Chicago Climate Exchange” [web]
Thomas Lyon, “Voluntary versus Mandatory Approaches to Climate Change Mitigation,” RFF Issue Brief 03-01, 2003. [web]

Wednesday, October 7 – Class 11: Firm profits and environmental regulation
* Case: Yale SOM case material of EU ETS: http://cases.som.yale.edu/carbonA

Monday, October 12 – Class 12: Markets for ecosystem services

Problem Set 3 due at beginning of class

**Wednesday, October 14** – Class 13: Eco-labeling and certification programs
- *Case*: "Marine Stewardship Council" [reader].

**Monday, October 26** – Class 14: Does regulation produce cost savings?
- Reinhardt, ch. 4, "Reducing Costs Within the Firm"

**Wednesday, October 28** – No class
*MIDTERM EXAM (Take-home) due by Friday, October 30*

**III STRATEGIES IN THE PRIVATE AND NON-PROFIT SECTORS**

**Monday, November 2** – Class 15: An overview of corporate environmental strategy
*1-page research project proposal due at beginning of class*
- Reinhardt, ch. 1, "The Environment as a Business Problem"
- Reinhardt, ch. 6, "Managing Risk and Uncertainty"

**Wednesday, November 4** – Class 16: Managing risk through self-regulation
- *Case*: "Responsible Care" [reader].
- Reinhardt, ch. 3, "Managing Competitors" pp. 45-60.

**Monday, November 9** – Class 17: NGOs: Forcing accountability through confrontation?
- *Case*: "Sunk Costs: The Plan to Dump the Brent Spar" [reader].

**Wednesday, November 11** – Class 18: Managing competitors: Strategic use of regulation
- *Case*: "Du Pont Freon Products Division (A)" [reader].
- Reinhardt, ch. 3, "Managing Competitors" pp. 60-77.
Monday, November 16 – Class 19: Cost savings and product differentiation
   Guest speaker: Nate Paulson, Patagonia
   * Case: “Patagonia” [reader].

Wednesday, November 18 – Class 20: Managing competitors: Product differentiation
   * Cases: “StarKist (A) and (B)” [reader].
   * Reinhardt, ch. 2, “Environmental Product Differentiation”

Monday, November 23 – Class 21: Private-sector responses to global climate change
   * Case: “Global Climate Change and BP Amoco” [reader].
   * Browse case studies on voluntary emissions reductions at the Climate Group website: http://www.theclimategroup.org/about/members_and_partners/members

Monday, November 30 – Class 22: NGOs: Facilitating “win-wins” through collaboration?
   Guest speaker: Gernot Wagner, EDF
   * Case: “Environmental Defense” [reader].
   * Case: “Global Climate Change and the Environmental Defense Fund” [web].
   * Environmental Defense Strategic Plan (1997) [web].
   * Browse: http://www.environmentaldefense.org (including alliance and corporate innovation pages).

IV STUDENT PRESENTATIONS

Wednesday, December 2 – Class 23: Student presentations of final projects.

Monday, December 7 – Class 24: Student presentations of final projects.

Wednesday, December 9 – Class 25: Student presentations of final projects.