“Sustainability” (loosely defined as the simultaneous consideration of economic, environmental and social factors) has become a key element in decision making in many areas of business and public policy. By definition, sustainability requires a multidisciplinary perspective. The new UCLA graduate emphasis on “Leaders in Sustainability” aims to provide a mechanism for graduate students from all over campus to pursue their interests in sustainability. This course is the “core” course of the emphasis: all graduate students who register for the Leaders in Sustainability emphasis must take this course at one point during their graduate studies.

This course is an introduction to the concept of sustainability and the leadership skills students will need to make a positive impact on their chosen dimension of sustainability. This class will combine environmental, social and economic perspectives in a wide range of contexts, using a mix of class formats to bring out the unique multidisciplinary nature of the audience.
Class Format
The course consists of a combination of lectures, case discussions and discussions of other materials. A group project is a major component of the course.

The first part of several sessions will be devoted to speakers who will represent a broad range of expertise and sectors related to sustainability. The second part of each session will kick off with a case discussion and it is expected that one group will present their proposed strategy to address the issue raised by the case or other materials for that session. Study groups of 4 students will be formed in the first class of the quarter.

In the final part of each session, we will step back and address the broader topic of that session based on the additional cases and readings. This means that the following preparation is required: everybody should have prepared the case and the main materials for the session in enough detail to be able to ask penetrating questions, and to participate in an intelligent discussion about the key issues.

Grading
There will be no final exam. The final grade will be determined as follows:

1. Group Presentation 20% (group presentation on case or other material and 5 slide case presentations)
2. Class Participation 20%
3. Individual Assignments 25% (there are 2 individual assignments that all students must submit)
4. Group Project 35% (report and presentation)

Class Participation
Your participation in class discussions will be evaluated based on your contribution to the class discussions and analyses, not simply on the amount of time you talk. However, without being an active participant in class discussions, it is difficult to make contributions to the discussion. Thus, quality and quantity of comments are important elements of class participation. Contributions move the class discussion forward and enhance everyone’s learning. They can take many forms, including insightful comments, thoughtful questions, sharing directly related experiences, and challenging other students’ comments that are not on point or are incomplete. Although we prefer that students voluntarily participate in class discussions, cold calls are fair game.

Class participation applies also to the sessions with speakers.

Attendance is mandatory. One absence is permissible for good cause; additional absences will adversely affect your grade regardless of the cause for those absences. Repeated absences will lead to a failing grade. If for any reason you will miss class or will be late for class, send me an email (delmas@ioe.ucla.edu) before class explaining the absence or
tardiness. If you know in advance that you will miss a class, when assigning the final course class participation grade we will consider a written analysis of the missed day’s case, if it is submitted to me before the class. Such written work will mitigate, but not eliminate the adverse effects on your classroom performance grade of missing class. If the absence is unanticipated, send me email explaining the absence within 72 hours of the missed class.

Because entering or leaving the classroom during class time is disruptive to the learning environment, your fellow classmates and we expect that you will not do so, except in an emergency.

**Required Readings**

Most of the required materials for the course are contained in the course pack or will be posted on the class website. Each week make sure you at least skim all of the assigned reading material and focus more deeply on the articles that are required.

**Note that “•” in front of the reference indicates required reading and “**” indicates optional reading.**

**Group Project**

In lieu of a final exam, students will work in an interdisciplinary team to solve a real-world environmental problem. They will produce a report on a team project related to sustainability.

The goals of the Group Project are:

- to prepare students for professional careers by providing them with training and experience in multidisciplinary real-world environmental problem-solving;
- to provide a mechanism for students to apply their technical expertise in solving complex environmental problems;
- to provide training in the management of group dynamics.

Students can choose among the projects below or suggest their own project to the faculty:

- Analysis of how to organize a green conference: what are the major environmental impacts, and how can they be mitigated?
- Analyze the challenges associated with the voluntary market carbon offset market
- Benchmarking of university programs in environmental management
- Survey of green consumers preferences regarding organic, shade-grown and fair trade coffee (More details to be provided.)
- Projects related to the work of the UCLA Campus Sustainability Committee, for instance an analysis of existing and future green purchasing programs, assessment of green building mandates on campus, analysis of transportation needs and solutions, assessment of the potential for energy efficiency and alternative energy on campus, etc.

In all cases the projects must have a multidisciplinary and academic nature.
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1. TRAGEDY OF THE COMMONS AND COLLECTIVE ACTION

You will play a simulation game called “FishBanks.” This game will allow you to experience managing your own fishing company and competing with other fishing companies in an attempt to maximize your profit.

The Fishbanks game was developed by Dr. Dennis Meadows, [http://www.unh.edu/ipssr/FishBank.html](http://www.unh.edu/ipssr/FishBank.html).

The game allows participants to experience many of the decisions and problems that “real life” fishing companies must face. Like real business executives, the teams of students need to seek out and make strategic use of available information. A computer program calculates all their financial transactions and tracks the status of the fish population, based on fish catch, births, and deaths. The company managers must contend with ecological, economic, and psychological forces. In the process, the students are actively engaged in higher-level thinking, cooperative learning, and group problem solving.

The class will be divided into fishing companies of 4-5 people. The object of the game is to maximize your assets at the end of the game, which is at 9 rounds.

Assignments

Read the simulation’s instructions (sent by email) and come prepared to manage “one of the principal fishing companies in the country.”

Reading:


2. SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY: THE PERSPECTIVE FROM CORPORATIONS AND NGOs

This session will bring issues of definition and measurement of sustainability, of the difficulty to coordinate stakeholders with various incentives as well as describing the economic rationale for ‘beyond compliance behavior’

Speaker: Mike Wallace, Vice President Trucost.

Mike Wallace, is the Vice President, North American Operations of [Trucost](http://www.trucost.com). He has over 15-years of environmental consulting experience. The first half of his career focused on conducting environmental due diligence for corporate mergers and acquisitions (M&A). He served as the M&A Program Manager for Environmental Resources Management’s (ERM) Western Region and has conducted hundreds of facility inspections for multi-national buy-side clients. In this capacity, Mr. Wallace assessed environmental liabilities for US and international corporations and quantified findings for use in deal negotiations. For the later half Mr. Wallace has
focused his due diligence expertise on the growing interest in corporate environmental transparency and the nexus between environmental performance and corporate governance. He has worked with numerous Fortune 500 companies, government agencies and international NGOs. He has authored numerous articles on corporate environmental performance, has participated in international working groups on the subject and speaks regularly on the topic of environmental transparency and governance.

Case: the Marine Stewardship Council (MSC)

The Marine Stewardship Council (MSC) is a non-government organization (NGO) - headquartered in London and established by the World Wildlife Fund (WWF) and Unilever in 1997 to set up a certification and eco-labeling system for sustainable fishing. The case describes the MSC's initial and more recent challenges including the Tragedy of the Commons, a wide range of less willing stakeholders, and the complexity of certifying fisheries on sustainability criteria. It also outlines management decisions to meet at least some of the challenges: improved transparency and engagement with stakeholders, new governance structures and certification methodologies. For the learning objectives, the participants should: (1) see the challenges associated with the certification of sustainable business practices (in general and in fisheries in particular); (2) reflect on the institutional dilemma presented by the wide range of often conflicting stakeholder demands; and (3) see the necessity to carry out strategic (i.e. focused) stakeholder engagement (find the most important allies) and establish effective governance structures.

Assignments: Please answer the following questions:
- Why did it take so long for the MSC to build momentum? Please identify the main reasons.
- How can the MSC align the conflicting interests of its stakeholders?
- Did the MSC learn from its crisis? What are the main challenges ahead and how would you deal with them?
- What are other institutional options to ensure sustainable fishing?

Readings:

What's an Agency to do? Several prominent scholars opined on the question of defining and measuring sustainability.

**In class discussion:** What is the economic rationale for “beyond compliance behavior”?

### 3. VOLUNTARY AND REGULATORY APPROACHES TO MITIGATE CLIMATE CHANGE

In this class we will discuss the different voluntary and regulatory approaches available to mitigate Climate Change. We will focus on Emissions trading is an economic policy instrument used to control emissions by providing economic incentives for achieving emission reductions.

**Speaker:** Rachel Tornek, Senior Policy Manager, California Action Registry

As Senior Policy Manager, Rachel Tornek develops new GHG accounting standards for the Registry, including emissions reduction protocols and industry-specific protocols. Rachel also plays a leading role in liaising with the state of California as it develops GHG reduction policies, and represents the Registry with a variety of stakeholder groups to help ensure the development of consistent, high quality GHG accounting standards. Rachel was previously the Manager of Member Services at the Registry, where she provided technical assistance on the protocols and developed tools and resources to help members successfully report and certify GHG emissions inventories. Prior to joining the Registry, Rachel worked on environmental issues with Toyota Motor Sales’ Environmental Coordination Office, the Climate Change and Wildlife campaign at the National Wildlife Federation and Hubbs-SeaWorld Research Institute. Rachel completed her Master’s degree in Environmental Science and Management at the Bren School at UC Santa Barbara. She earned her BS in Ecology, Behavior and Evolution at UC San Diego.

**Assignments:** Each group prepares a 1 page summary of one the following cap and trade programs as well as a 5 minute PowerPoint presentation:

- US Acid Rain Program [http://www.epa.gov/airmarkets/progsregs/arp/basic.html](http://www.epa.gov/airmarkets/progsregs/arp/basic.html)

This summary will include the following information: short history of the creation of the program, number of participants, description of how the program works including the initial allocation mechanism for credits/permits, and the price fluctuation of the credits/permits. According to you, is this program effective?

**Readings:**


  

In class discussion: How do trading permit systems work? What are the challenges associated with AB 32? Do voluntary initiatives work?

4. THE ROLE OF SOCIALLY RESPONSIBLE INVESTORS (SRI). HOW TO MEASURE CORPORATE SOCIAL RESPONSIBILITY.

In this session, you will get familiarized with publicly available US databases on environmental performance and compliance. We will study the potential and limitations of the US EPA Toxic Release Inventory (TRI) and the US EPA Enforcement and Compliance History Online (ECHO) databases. We will survey the principles and objectives of Socially Responsible Investing.

Speaker: Steve Glenn, Founder & CEO, LivingHomes.

Steve Glenn is the Founder and CEO of Living Homes, an architectural and real estate development company which utilizes progressive architects to design and develop modern, prefabricated green homes. Living Homes recently completed the first single family home to receive the United States Green Building Council's LEED Platinum certification

Exercise: You will compare the environmental performance of 14 firms in the chemical industry using TRI data and compliance data

Assignment: Please rank the following companies (Avon Products, Inc.; Clorox Company; Colgate-Palmolive Company; Dow Chemical Company; DuPont Company; Eastman Chemical Company; Ecolab Inc.; International Flavors & Fragrances Inc.; Johnson & Johnson; Lilly (Eli) and Company; Merck & Co., Inc.; Pfizer, Inc.; Procter & Gamble Company; Rohm and Haas Company) in terms of their environmental performance using the US EPA Toxic Release Inventory and the Enforcement and Compliance History Online (ECHO) databases.

http://www.epa.gov/tri/
Which company is the best performer and which one is the worst performer? Describe the criteria you choose and why. Before class, you will send me by email a 5 page PowerPoint presentation of your findings and the excel spreadsheet which contains your data.

**Readings:**


- EPA Data directory for the detailed facility report: [http://www.epa.gov/echo/dfr_data_dictionary.html](http://www.epa.gov/echo/dfr_data_dictionary.html)

**5. HOW TO REPORT AND COMPARE ENVIRONMENTAL AND SOCIAL PERFORMANCE. THE GLOBAL REPORTING INITIATIVE**

In this session, you will study information provided directly by corporations and discuss the Global Reporting Initiative and Global Compact.

**Speaker:** Nancy Sutley, Deputy Mayor for Energy and Environment, City of Los Angeles

Ms. Sutley currently serves as the Deputy Mayor for Energy and Environment for the City of Los Angeles, and is also Mayor Villaraigosa’s appointment to the Board of Directors for the Metropolitan Water District of Southern California. From 2003 to 2005, Ms. Sutley served on the California State Water Resources Control Board where she was confirmed by the California State Senate in 2003. The five-member, full-time board is responsible for protecting water quality and resources throughout California. Ms. Sutley also served as Governor Gray Davis’ Energy Advisor where she managed state and federal regulatory, legislative, financial and press matters, and served as the Deputy Secretary for Policy and Intergovernmental Relations within the California Environmental Protection Agency (Cal/EPA) from 1999-2003. During President Clinton’s administration, Ms. Sutley was a Senior Policy Advisor to the Regional Administrator for EPA, Region 9 in San Francisco and a Special Assistant to the Administrator at the Federal EPA in Washington, DC. Ms. Sutley received her Masters in Public Policy from the Kennedy School of Government at Harvard University and an undergraduate degree from Cornell University.
**Exercise:** You will compare the social and environmental performance of 14 firms in the chemical industry (same firms as in previous week) using corporate environmental reports and companies’ websites

**Assignments:**

**Group assignment:** Study the Environmental Reports of the companies that were assigned to you on day 1 of class. Compare the comprehensiveness of their reporting. You will hand me a 5 page PowerPoint presentations of your findings and the excel spreadsheet which contains your data.

**Individual assignment:** According to you, what are the main screening challenges associated with Socially Responsible Investing and what should be the principles of a good screening methodology? Please use the suggested readings as well as your ranking of the chemical companies to build your argumentation (2 pages maximum).

**Readings:**


**In class discussion:** What should be done to improve the comparability and transparency of environmental reporting? What is the rationale for the Global Reporting Initiative and the UN Global Compact? What are the rationales for firms to participate in these initiatives?
6. MEASURING ENVIRONMENTAL PERFORMANCE THROUGH OUT THE LIFE CYCLE: LIFE CYCLE ASSESSMENT FOR GREENER PRODUCTS

In this session you will become familiar with the concept of life cycle assessment (LCA), the assumptions behind LCA tools and the relation between LCA and cost assessment.

Speaker Robert Vos, USC.

Case: Alpha Motors, Ltd: Integrating Life Cycle Environmental Concerns into Product Design (WRI).

The objective of this case is to get a basic understanding of life-cycle analysis and the issues involved when integrating life-cycle tools into the product design process.

Alpha Motors Case Spreadsheet. 1997 (available on class website).

Assignment: Each group prepares and email a 5 slide PowerPoint presentation answering the case questions below:

1. Barns’ primary task was to draft a report to the XL2000 project manager outlining his material choice for the hood assembly. What should Barns’ final recommendation be? Explain assumptions, describe the scenarios considered, and discuss the sensitivity of results.

2. Should Barns use EPS in his decision-making? Was it useful? What were its weaknesses?

   2.1. Compare EPS to other life cycle analysis methods and discuss ways in which EPS is better or worse for use in product design.

   2.2. Based on Barns’ experiences, what should he recommend for utilizing life cycle methods/models into the design process? What characteristics would an ideal decision tool have?

Readings:


In class discussion: comparison of LCA methods. Environmental performance and financial performance
7. **GREEN AND COMPETITIVE: GREEN CUSTOMERS AND ENVIRONMENTAL DIFFERENTIATION STRATEGIES.**

In this session, we will study the concept of environmental differentiation. We will discuss the characteristics of green consumers.

**Speaker:** Gay Browne, Founder of Greenopia

Gay Browne is on a mission. “I want to help people lead healthier lives in an increasingly toxic world,” she says. Born on Earth Day, April 21, it seems Gay’s mission may also be her destiny — she is the creator of *Greenopia: the urban dweller’s guide to green living*, available in print and on the web at www.greenopia.com. With exhaustively researched, non-paid listings, *Greenopia* provides consumers with a resource for where to find a wide range of local green businesses, services and organizations for metropolitan cities. Gay has also created a unique, easy-to-understand Green Leaf award system that rates the level of organic and sustainable products that a listed company provides to the consumer.

Founded in 2005, Greenopia has developed guides for Los Angeles and the San Francisco Bay Area, with New York City in the works and plans underway for a 20 city rollout that includes Seattle, Portland, and Chicago among others. There are also plans to expand *Greenopia’s* web presence to create a local green community where consumers can browse *Greenopia’s* listings, buy and rate green products, share other products that they find, learn about living green, and much more. “I really want to convince consumers and their families that these businesses can help make a smooth transition to green living,” Gay says. “It doesn’t have to be all or nothing. Even small changes make a big difference.”

**Case: Patagonia (HBS)**

Patagonia was deeply committed to the environment. This commitment, at times, conflicted with the company's goal to create the most innovative products in its industry. Patagonia's founder and executives welcomed imitation of both its environmental commitment and its culture. The question remained whether Patagonia's model would work well for a wide range of companies. In 2003, Patagonia executives were considering which products and markets would fit best into their portfolio of product lines, which included alpine, skiing, snowboarding, fishing, paddling, rock climbing, surfing, kayaking, and mountain biking. There was a tradeoff between alienating their core customers and achieving growth via entry into new product markets.

**Case Questions**

1. What are the most important sources of Patagonia’s success?
2. How do you evaluate Patagonia’s environmental differentiation strategy?
3. What lessons are there to learn from Patagonia as a corporate model? To what extent is this a unique approach and to what degree are the challenges to a mainstream practice valid and generalizable?
4. How sustainable is Patagonia’s success? Could you give advice to Chouinard on the type of legacy he can leave?
Web Resources:
• Check out a few "green marketing" Internet sites, including:
  www.greenmarket.com
  http://www.ecomall.com/
  http://www.greenmarketplace.com

Reading:

In-Class Discussion:
• Who do you think the "green consumers" are? Where are they? Where do you believe the most opportunities exist for green marketing (product types, consumer types, geographic areas, etc.)? What should the message be?
• What successful and unsuccessful "green marketing" campaigns are you familiar with? Why were they (un)successful?

  8. ECO-LABELS AND DIFFERENTIATION STRATEGIES

In this session we will discuss how eco-labels are designed and how their ecological criteria are defined.

Speaker: Matt Petersen, President and CEO, Global Green USA

Matt Petersen, Global Green USA President, CEO and board member, joined Global Green USA in 1994. He serves on the Council of Green Cross International, and is Chair of the GCI Energy and Resource Efficiency program. Petersen drives and guides Global Green USA’s new programs, including work on water and energy, green power, climate change, and nuclear weapons. In the aftermath of the Gulf Coast hurricanes, Petersen put forth a vision and mobilized resources to create the Global Green "Healthy Homes and Smart Neighborhoods" initiative which resulted in: the New Orleans Sustainable Design Competition with Jury Chair Brad Pitt; the NOLA Green Schools Initiative funded by the Bush Clinton Katrina Fund; and work with Habitat for Humanity throughout the Gulf Coast to create more energy efficient housing. Petersen is an advisor to the Leonardo DiCaprio Foundation, a Member of the Pacific Council on International Policy and serves on the Environmental Media Association (EMA) Advisory Board, as well as the Automotive X Prize Advisory Board. Previously, Petersen served as Executive Director of Americans for a Safe Future, a Term Member of the Council on Foreign Relations and was a political campaign manager for candidates at the local, state, and federal level. Petersen is also active in his community as a member of the Santa Monica Task Force on the Environment. He and his wife Leila Conners Petersen live with their son Aidan in Santa Monica, California.
Exercise: Comparison of Energy Star and Eco-Flower; comparison of fair trade, shade grown and organic coffee.

Group assignment: Each group prepares a 5 page PowerPoint presentation:
- Groups odd numbers: What are the differences between the energy star label and the European Eco-flower. Describe the different ecological criteria for personal computers and refrigerators. Are there differences in effectiveness between these labels?
- Groups even numbers: What are the differences between shade grown, fair trade and organic coffee? Describe the criteria used by these different eco-labels. Are there differences in effectiveness between these labels?

Individual assignment: assume you work for a company that is considering applying for an eco-label. Pick any company and product you wish, and write a detailed proposal (1 page maximum) to your superior outlining how you will assess the costs and benefits of acquiring the eco-label in question. Be precise: explain how you will quantify the value of the eco-label to your firm, don’t just say “it will be good for our image and market share”.

Readings:

Discussion: How are products chosen and how are ecological criteria defined and adopted in Europe?
What is the procedure for a company to get the eco-label? What are the fees? http://ec.europa.eu/environment/ecolabel/how_to/howtoapply_en.htm

9. Environment, Development and International Business

Beth works to incorporate Environmental Defense's corporate partnership innovations into new companies and industries. With a focus on California’s business community, she collaborates with companies to leverage new and proven best practices that provide distinct business benefits and produce significant environmental results. In particular, she specializes in marketing sustainability initiatives to employees, customers, and other key constituents. Beth has a Masters in Public Administration from Harvard University. She began her career working for local government and business associations in northern California and later went on to develop national and international conservation initiatives.

Rainforest Game:

The Rainforest Game is a hands-on learning exercise designed to provide you with the opportunity to experience collaboration across both internal and external boundaries. Build your awareness of the importance of cooperation, challenges inherent in inter-team communications, and the significance of creating and sustaining effective partnerships. Learn how to work effectively across functions, geography and distance, break down communication barriers, creatively solve complex problems, and to examine assumptions about how people and functions work together.

Material to be distributed in session 8.

10. Final project presentation

In this session, you will present the results of your group projects to the class.
Magali Delmas

Magali Delmas is an Associate Professor of Management at the Donald Bren School of Environmental Science and Management at the University of California Santa Barbara and a Visiting Professor at the UCLA Institute of the Environment.

Previous to embarking on an academic career, Magali Delmas worked at the Corporate Strategy of Framatome, a nuclear engineering company. She subsequently worked at the European Commission at the Directorate General for Industry where she was the economic advisor of the Director General. She was also a consultant in Public Policy Evaluation and Strategic Management at CM International, Paris.

Magali Delmas' research is on the interaction between regulation and firms' competitive strategies. She is currently analyzing how alternative forms of environmental regulations, such as voluntary agreements and self-regulation, can impact firms' competitive advantage. Magali Delmas has published in leading policy and management journals.