

ESM 608 SUSTAINABLE DEVELOPMENT: Theory & Policy

Spring 2013

Mondays from 8:30 - 11am

Instructors	Designation	Location	Email	Phone
Dr. Nawal Al Hosany	Director of Sustainability, Masdar	Block 4, first floor	nalhosany@masdar.ae	T +971 2 653 6044,
Prof. Toufic Mezher	Program Head, ESM	MI, First Floor	tmezher@masdar.ac.ae	T 02 810 9160
Asad Hussain	Teaching Assistant	MI, First Floor	ahussain@masdar.ac.ae	

INTRODUCTION

This course examines alternative conceptions and theoretical underpinnings of the notion of "sustainable development." It focuses on the sustainability problems of industrial countries (i.e., aging of populations, sustainable consumption, institutional adjustments, etc.); and of developing states and economies in transition (i.e., managing growth, sustainability of production patterns, pressures of population change, etc.). It also explores the sociology of knowledge around sustainability, the economic and technological dimensions and institutional imperatives along with implications for political constitution of economic performance.

COURSE OBJECTIVES (LEARNING OUTCOMES OF THE COURSE)

After taking this course, students will be able to:

1. Distinguish complex aspects of sustainable development (economic, environmental, social equity);
2. Identify systemic sustainability challenges in different sectors and at different institutional levels;
3. Analyze the interplay between the management of resources, organizational structure, social, political and economic systems, in addressing sustainability challenges.
4. Think critically and assess different public policy alternatives for responding to sustainability challenges;
5. Improve writing and argumentation based on critical evaluation of the readings and of personal ideas and assessments.

GRADE DISTRIBUTIONS

- Class attendance participation 15%
- Three Assignments 30%
- Research paper on topic of your choice with approval of instructor 35%
- Final Exam 20%

COURSE OUTLINE

	PART I CONTENT & CONTEXT		Lecturer
Week 1	Introduction -- Debates, Definitions & Dilemmas	21-Jan	Al Hosany
Week 2	Evolving Concepts: Growth vs. Sustainability	28-Jan	Al Hosany
Week 3	Sustainability as a "Knowledge Domain"	4-Feb	Mezher
Week 4	Cyberspace and Sustainability	11-Feb	Mezher
	PART II ACTORS, PROCESSES & INSTITUTIONS		
Week 5	Critical Drivers – Social Mechanisms & Cognitive Factors	18-Feb	Al Hosany
Week 6	Economic Activity – Production & Consumption	25-Feb	Al Hosany
Week 7	Technology, Firms & Markets – Corporate Perspectives	4-Mar	Al Hosany
Week 8	Climate Change & Sustainable Development	11-Mar	Al Hosany
Week 9	From Sustainability "Problem" to "Solution" Strategies	18-Mar	Mezher
	PART III STRATEGIC ISSUES		
Week 10	New International Institutional Contexts	25-Mar	Al Hosany
Week 11	International Trade and Intellectual Property Rights	16-Apr	Al Hosany
Week 12	Global Accord – Next Round	22-Apr	Al Hosany
Week 13/14	Group Project presentations	22-Apr/6-May	

SUMMARY OF COURSE DELIVERABLES

Grades will be determined by class participation, three individual assignments, and a 3-student group project.

	Related to	Posted on the Web	Due
Assignment 1	PART I CONTENT & CONTEXT	11-Feb	25-Feb
Assignment 2	PART II ACTORS, PROCESSES & INSTITUTIONS	11-Mar	25-Mar
Assignment 3	PART III STRATEGIC ISSUES	16-Apr	29-Apr

Final Project	Proposal Due	4-Feb
	Progress Report Due	18-Mar
	Final Report Due	12-May
	Project Presentations by groups	29-Apr/6-May

Class Attendance and Participation:

Most of your participation grade will be based on attending class on time and adding value during the case discussions. Of course, we understand that sometimes absences are necessary (e.g., sickness, etc.). Therefore, to give you a chance to make up the missed day's participation, we ask that you do the following: please write a 1 page memo related to the class that you have missed. These memos should be handed to your TA before class the week after your absence. Also, we please ask that you let us know (email the TA) before a class absence if possible.

Final Project:

Students are expected to do a group (three students each) project. The potential 5 projects are as follow:

Project 1 – Reflection and review the Millennium Development Goals (MDGs) (targeted for 2015) and their relevance to the UAE	
Objectives	<p>Take part of the process of reflection that has started to review options for the future sustainable development framework that will replace the existing MDGs.</p> <ul style="list-style-type: none"> • Identify the strengths and weaknesses of the current MDG target • Design a process of related target and indicator

	<p>development, and</p> <ul style="list-style-type: none"> • Reach agreement on a roadmap towards having functional indicators ready for use by 2015.
References	<ul style="list-style-type: none"> • The official United Nations site for the MDG indicators • The United Nations Secretary General’s High-Level Panel on Global Sustainability • Post-2015 discussion site on future development framework and goals, at the Rio+20 Dialogues site • Follow-up to the outcome of the Millennium Summit: paper A/66/126 "Accelerating progress towards the Millennium Development Goals: options for sustained and inclusive growth and issues for advancing the United Nations development agenda beyond 2015" • Beyond 2015: a global civil society campaign, pushing for a strong and legitimate successor framework to the Millennium Development Goals • CAFOD’s review of what should come after the Millennium Development Goals • Paper "Advancing the UN development agenda post-2015: some practical suggestions" by Jan Vandemoortele
Project 2 – Development of Country level Green Growth Strategy: case of the UAE	
Objectives	<ul style="list-style-type: none"> • Why Green Growth? • Define the main pillars of green growth • Identify the main environmental, Social and economic challenges facing the UAE • What in your opinion will be the main benefits to the UAE from implementing green growth strategy • Map the green initiatives that are currently being implemented in the UAE. • Design a framework for the UAE Green Growth Strategy
Project 3 – Corporate Sustainability: Challenge or an opportunity	
Objectives	<ul style="list-style-type: none"> • Define corporate sustainability • Map current corporate reporting frameworks

	<ul style="list-style-type: none"> Identify the 10 leading corporates in sustainability in three different sectors and their main the sustainability strategies Is Zero Impact Growth attainable?
Project 4 -The Role of the Financial Sector in the Sustainable Development of Nations	
Objectives	<ul style="list-style-type: none"> Understand the challenges facing the financial sector in the GCC. Examine the practices of banks, insurance companies, investors, etc. in the region and benchmark them against best in the world Explore the implications of the different strategies and practices on the sustainable development of the region. Prescribe changes in business strategies / business practices / governmental regulation in order to foster greater support of the financial industry in the development of the region.
Project 5 –Sustainable Path for GCC manufacturing sector	
Objectives	<ul style="list-style-type: none"> Examine the current practices of the manufacturing sector in GCC countries Examine the most pollutant industries such as chemical, aluminum and steel, energy and desalination, etc. in detail. Suggest regulations / changes in practice for these industries with a view to shift to a more sustainable path without hampering industry growth.

Class Presentation

Each group will present a summary of his company during class on the assigned dates. All groups must prepare a 15 minutes (maximum) presentation of the findings of their companies.

Reading Packets & the Web:

Teaching notes will be available on the course web site, while other assigned readings are available from the Library. Any addition reading materials will be uploaded to Moodle.

LIST OF COURSE BOOKS

Title	Author	Comment
Economics of the Environment. 5th ed.	Robert N. Stavins (Editor)	Required Text
Mapping Sustainability: Knowledge e-Networking and the Value Chain, 2007	Choucri, Nazli et. al. eds.	

Sustainability and the Social Sciences: A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation, 2000	Egon Becker (Editor), Thomas Jahn (Editor)	
Economics of the Environment. 6th ed. 2012	Robert N. Stavins	Some Readings are required
Environmental Politics: Britain, Europe and the global Environment, 2000	Robert Garner	
International Competitiveness and Environmental Policies, 1998	Terry Barker and Jonathan Kohler	
Environmental Management, New directions for the Twenty-First Century, 1997	Geoff A. Wilson and Raymond L. Bryant	
Practical Sustainability: From Grounded Theory to Emerging Strategies, 2011	Nasrin R. Khalili	
Cyberpolitics In International Relations, 2012	Nazli Choucri	
Global Accord: Environmental Challenges and International Responses, 1995	Choucri, Nazli.	
The Collapse of Complex Societies, 1990, Cambridge University Press	Tainter, Joseph A.	

REQUIRED READINGS FOR THE COURSE

(1) Introduction – Debates, Definitions, & Dilemmas

January 21, 2013

Essential Reading

Tainter, Joseph A. 1988. *The Collapse of Complex Societies*. Cambridge: Cambridge University Press, Chapter 1.

Solow, Robert M. "Sustainability: An Economist's Perspective," in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 28.

Recommended Reading (Not all may be available in Library)

Hardin, Garrett. "The Tragedy of the Commons," in Stavins, Robert N., ed. 2005. *Economics of the Environment*. 5th edition. New York: W. W. Norton & Company, Chapter 2.

Solow, Robert M. 1993. "The Economics of Resources or the Resources of Economics," in Richard T. Ely. Lecture. pp 1-14

Holdren, John P., Gretchen C. Daily, and Paul R. Ehrlich. 1995. "The Meaning of Sustainability: Biogeophysical Aspects," in Mohan Munasinghe and Walter Shearer, eds., *Defining and Measuring Sustainability: The Biogeophysical Foundations*, Washington, D.C.: The World Bank, pp. 3-17.

Goodland, Robert and George Ledec. 1987. "Neoclassical Economics and Principles of Sustainable Development." *Ecological Modeling* 38:19-46.

(2) Evolving Concepts -- Growth vs. Sustainability

January 28, 2013

Essential Reading

Tainter, Joseph A. 1988. *The Collapse of Complex Societies*. Cambridge: Cambridge University Press, Chapter 2.

Choucri, Nazli. 2007. "Mapping Sustainability: Logic and Framework." In Choucri, Nazli et al. eds. 2007. *Mapping Sustainability: Knowledge e-Networking and the Value Chain*. Cambridge: Springer Press, Chapter 1.

Choucri, Nazli. 1995. "Introduction: Theoretical, Empirical, and Policy Perspectives," in Nazli Choucri, ed. *Global Accord: Environmental Challenges and International Responses*. Cambridge, Mass.: MIT Press, pp. 1-40.

Recommended Reading (Not all may be available in Library)

Reboratti, Carlos E. "Territory, Scale and Sustainable Development," in Becker, Egon and Thomas Jahn, eds. 1999. *Sustainability and the Social Sciences: A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*. London: Zed Books. Chapter 11.

Pezzey, John C.V. and Michael A. Toman. 2002/2003 "Progress and problems in the economics of sustainability" in Tom Tietenberg and Henk Folmers, eds. *The International Yearbook of Environmental and Resource Economics*. Edward Elgar: Northampton, MA, USA . Chapter 4

Hardin, Garrett. 1991. "Paramount Positions in Ecological Economics," in Robert Costanza, ed., *Ecological Economics: The Science and Management of Sustainability*, New York: Columbia University Press, pp. 47-57.

Easterly, William. 2001. *The Elusive Quest for Growth*, Cambridge: The MIT Press. Chapter 8.

(3) Sustainability as a “Knowledge Domain”

February 4, 2013

Essential Reading

Choucri, Nazli. 2007. “Global Knowledge e-Networking: Identifying e-Barriers and Introducing GSSD,” in Choucri, Nazli et al. eds. 2007. *Mapping Sustainability: Knowledge e-Networking and the Value Chain*. Cambridge: Springer Press, Chapters 2, 9, and 10.

Tainter, Joseph A. 1988. *The Collapse of Complex Societies*. Cambridge: Cambridge University Press, Chapter 3.

Sachs, Ignacy. “Social Sustainability and Whole Development: Exploring the Dimensions of Sustainable Development,” in Becker, Egon and Thomas Jahn, eds. 1999. *Sustainability and the Social Sciences: A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*. London: Zed Books. Chapter 2.

Simpson, R. David. “Economic Analysis and Ecosystems: Some Concepts and Issues,” in Stavins, Robert N., ed. *Economics of the Environment*. New York: W. W. Norton & Company, Chapter 25.

Recommended Reading (Not all may be available in Library)

Allenby, Braden R. 1999 *Industrial Ecology: Policy Framework and Implementation*. New Jersey: Prentice-Hall, Chapters 3.

Christensen, Paul. 1991. “Driving Forces, Increasing Returns and Ecological Sustainability,” in Robert Costanza, ed., *Ecological Economics: The Science and Management of Sustainability*, New York: Columbia University Press, pp. 75-87.

Lofdahl, Corey L., 2002, *Environmental Impacts of Globalization and Trade*, Cambridge MA, MIT Press, Chapter 2.

Holling, C.S. 1995. “Sustainability: The Cross-Scale Dimension,” in Mohan Munasinghe and Walter Shearer, eds., *Defining and Measuring Sustainability: The Biogeophysical Foundations*, Washington, D.C.: The World Bank, pp. 65-75.

(4) Cyberspace & Sustainability

February 11,
2013

Essential Reading

Tainter, Joseph A. 1988. *The Collapse of Complex Societies*. Cambridge: Cambridge University Press, Chapter 4.

Nazli Choucri, 2012, "Cyberspace and Sustainability" in *Cyberpolitics In International Relations*, chapters 2, 5, 8, and 9.

Recommended Reading (Not all may be available in Library)

Choucri, Nazli. 1999. "The Political Logic of Sustainability," in Becker, Egon and Thomas Jahn, eds. *Sustainability and the Social Sciences: A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*. London: Zed Books. Chapter 8.

Drucker, Peter F. 1998 "From Capitalism to Knowledge Society" in Neef, Dale, ed. *The Knowledge Economy*. Butterworth-Heinemann, Chapter 2

Landes, David S. 1998. "Homo Faber, Homo Sapiens: Knowledge, Technology, Growth, and Development:" in Neef, Dale, ed. *The Knowledge Economy*. Butterworth-Heinemann, Chapter 5

Ospina, Angelina Valeria and Heeks, Richard. 2010. *Unveiling the Links between ICTs & Climate Change in Developing Countries: A Scoping Study*", Center for Development Informatics, IDRC, Canada, pp. 1-16.

Allenby, Braden R. 1999 *Industrial Ecology: Policy Framework and Implementation*. New Jersey: Prentice-Hall, Chapters 9.

(5) Critical Drivers, Social Mechanisms & Cognitive Factors

February 18, 2013

Essential Reading

Tester, Jefferson W. et. al. eds. 2005. *Sustainable Energy*. Cambridge MA.: The MIT Press. Chapters 1, 2, and 6. (available in the Library)

Recommended Reading (Not all may be available in Library)

UNDP *World Energy Assessment. 2004 Update*. pp. 11-75.

Engleman, Robert. et. al. "The Future is not What it used to be", in Dennis Pirages and Ken Cousins eds. *From Resource Scarcity to Ecological Security*. Cambridge: The MIT Press, pp. 21-38.

Easterly, William. 2001. *The Elusive Quest for Growth*, Cambridge: The MIT Press, Chapter 11 and 12.

Choucri, Nazli. 1991. "Population and the Global Environment." in Jefferson W. Tester, David O. Wood, and Nancy A. Ferrari, eds., *Energy and the Environment in the 21st Century*, Cambridge, Mass.: MIT Press, pp. 91-101

Runci, Paul L. and Chester L. Cooper.(2005) "Reflections on an Aging Global Population", in Dennis Pirages and Ken Cousins eds. *From Resource Scarcity to Ecological Security*. Cambridge: The MIT Press, pp. 39-58.

Barzel, Yoram. 1997 *Economic Analysis of Property Rights*. Second ed. Cambridge: Cambridge University Press, Ch. 1 and 5

(6) Economic Performance – Production & Consumption

February 25, 2013

Essential Reading

Rothenberg, Jerome R. 1993. "Economic Perspectives on Time Comparisons: An Evaluation of Time Discounting", in Nazli Choucri *Global Accord: Environmental Challenges and International Responses*. Cambridge, Mass.: MIT Press. pp. 307-332

Choucri, Nazli and Robert C. North. 1995. "Growth, Development, and Environmental Sustainability: Profile and Paradox," in Nazli Choucri, ed. *Global Accord: Environmental Challenges and International Responses*, Cambridge, Mass.: MIT Press, pp. 67-132.

Paehlke, Robert. "Towards Defining, Measuring and Achieving Sustainability: Tools and Strategies for Environmental Valuation," in Becker, Egon and Thomas Jahn, eds. 1999. *Sustainability and the Social Sciences: A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*. London: Zed Books. Chapter 13.

Coase, Ronald. "The Problem of Social Cost," in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 2.

Recommended Reading (Not all may be available in Library)

Gowdy, John. "Economic concepts of Sustainability: Relocating Economic Activity within Society and Environment," in Becker, Egon and Thomas Jahn, eds. 1999. *Sustainability and the Social Sciences: A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*. London: Zed Books. Chapter 9.

Ashford, Nicholas A. and Ralph P. Hall. 2011. *Technology, Globalization and Sustainable Development: Transforming the Industrial State*, New Haven: Yale University Press, Chapter 3.

Lofdahl, Corey L., 2002, *Environmental Impacts of Globalization and Trade*, Cambridge MA, MIT Press, Chapter 5

Allenby, Braden R. 1999. *Industrial Ecology: Policy Framework and Implementation*. New Jersey: Prentice-Hall,. Ch. 6.

(7) Technology Firms & Markets – Corporate Perspectives

March 4, 2013

Essential Reading

Arrow, Kenneth. J. et. al. "Is there a Role for Benefit-Cost Analysis in Environment, Health and Safety" in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 11.

Kelman, Steven. "Cost-Benefit Analysis: An Ethical Critique," in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 14.

Choucri, Nazli. 1995. "Multinational Corporations and the Global Environment," in Nazli Choucri, ed., *Global Accord: Environmental Challenges and International Responses*, Cambridge, Mass.: MIT Press, pp. 205-254.

Porter, Michael E. and Claas van der Linde. "Toward a New Conception of the Environment-Competitiveness Relationship," in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 5.

Perspective," in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 22.

Reinhardt, Forest L., Robert N. Stavins and Richard H.K. Vietor, "Corporate Social Responsibility through an Economic Lens" in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 22.

Recommended Reading (Not all may be available in Library)

Portney, Paul R., "The (Not So) New Corporate Social Responsibility: An Empirical

Ashford, Nicholas A. and Ralph P. Hall. 2011. *Technology, Globalization and Sustainable Development: Transforming the Industrial State*, New Haven: Yale University Press, Chapter 6.

Choucri, Nazli. 1994. "Corporate Strategies toward Sustainability," in Winfried Lang, ed., *Sustainable Development and International Law*, Boston: Graham & Trotman/ Martinus Nijhoff, pp. 189-201.

Bohn, Roger E. "Measuring and Managing Technological Knowledge" in Neef, Dale, ed. 1998 *The Knowledge Economy*. Butterworth-Heinemann. Chapter 10.

Allenby, Braden R. 1999. *Industrial Ecology: Policy Framework and Implementation*. New Jersey: Prentice-Hall. Ch. 16.

(8) Climate Change & Sustainable Development

March 11, 2013

Essential Reading

Choucri, Nazli. 2007. "Conclusion: Mapping Sustainability, Knowledge e-Networking, and the Value Chain, Synthesis, Insights, and Evidence," in Choucri, Nazli et. al. eds. 2007. *Mapping Sustainability: Knowledge e-Networking and the Value Chain*. Cambridge: Springer Press, Chapter 20.

Fullerton, Don and Robert N. Stavins. "How Economists See the Environment", in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 1.

Keohane, Nathaniel O., Richard L. Revesz, and Robert N. Stavins. 2005. "The Choice of Regulatory Instruments in Environmental Policy," in Stavins, Robert N., ed. 2005 *Economics of the Environment*. 5th ed. New York: W. W. Norton & Company, Chapter 29.

Tietenberg, Tom H. 2005. "Economic Instruments for Environmental Regulation," in Stavins, Robert N., ed 2005. *Economics of the Environment*. New York: W. W. Norton & Company, 5th ed. Chapter 15.

Palmer, Karen, Wallace E. Oates, and Paul R. Portney. "Tightening Environmental Standards: The Benefit-Cost or the No-Cost Paradigm?" in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company. Chapter 6.

Dasgupta, Susmita et. al. 2005. "Confronting the Environmental Kuznets Curve", in Stavins, Robert N., ed. 2005 *Economics of the Environment*. 5th ed. New York: W. W. Norton & Company, Chapter 20.

Recommended Reading (Not all may be available in Library)

Carraro, Carlo, "Climate change policy: models, controversies and strategies" in Tom Tietenberg and Henk Folmers, eds. *The International Yearbook of Environmental and Resource Economics 2002/2003*, Edward Elgar: Northampton, MA, USA 2003

(9) From Sustainability “Problems” to “Solution” Strategies

March 18, 2013

Essential Reading

Choucri, Nazli. 2007. “Global Knowledge e-Networking: Identifying e-Barriers and Introducing GSSD,” in Choucri, Nazli et al. eds. 2007. *Mapping Sustainability: Knowledge e-Networking and the Value Chain*. Cambridge: Springer Press, Chapters 1-5.

See *Global System for Sustainable Development* <http://gssd.mit.edu> for specific ‘matching’ of ‘problems’ and ‘solutions’ by sector, issue, unit, level, context.

Tainter, Joseph A. 1988. *The Collapse of Complex Societies*. Cambridge: Cambridge University Press, Chapters 5 and 6.

Rothenberg, Jerome R. 1993. “Economic Perspectives on Time Comparisons: Alternative Approaches to Time Comparisons”, in Nazli Choucri *Global Accord: Environmental Challenges and International Responses*. Cambridge, Mass.: MIT Press. pp. 355-398

Recommended Reading (Not all may be available in Library)

Pearce, David. 1993. “Sustainable Development and Developing Country Economies,” in R. Kerry Turner, ed., *Sustainable Environmental Economics and Management: Principles and Practice*, New York: Belhaven Press, pp. 71-105.

Allenby, Braden R. 1999. *Industrial Ecology: Policy Framework and Implementation*. New Jersey: Prentice-Hall,. Ch. 13.

Conca, Ken. 2005. “Global Water Prospects” in Dennis Pirages and Ken Cousins eds. *From Resource Scarcity to Ecological Security*. Cambridge: The MIT Press, pp. 59-87.

Cousins, Ken. 2005. “Twenty-Nine Days: Responding to a Finite World”, in Dennis Pirages and Ken Cousins eds. *From Resource Scarcity to Ecological Security*. Cambridge: The MIT Press, pp. 217-226.

Cohen, Marc C. 2005. “Food Policy: Underfed or Overfed?” in Dennis Pirages and Ken Cousins eds. *From Resource Scarcity to Ecological Security*. Cambridge: The MIT Press, pp. 83-104.

(10) New International Institutional Contexts

March 25, 2013

Essential Reading

Haas, Peter M. with Jan Sundgren. 1993. "Evolving International Environmental Law: Changing Practices of National Sovereignty," in Nazli Choucri, ed., *Global Accord: Environmental Challenges and International Responses*, Cambridge, Mass.: MIT Press, pp. 401-429.

Jacoby, Henry D. et. al. "Kyoto's Unfinished Business" in Stavins, Robert N., ed. 2005 *Economics of the Environment*. 5th ed. New York: W. W. Norton & Company, Chapter 24

Metrick, Andrew and Martin L. Weitzman, "Conflicts and Choices in Biodiversity Preservation," in Stavins, Robert N., ed. 2005 *Economics of the Environment*. 5th ed. New York: W. W. Norton & Company, Chapter 28

Recommended Reading (Not all may be available in Library)

Ostrom, Elinor, Larry Schroeder, and Susan Wynne. 1993. *Institutional Incentives and Sustainable Development*. Boulder: Westview Press. Chapters 1, 3, 5, and 6.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press. Chapter 6.

Levy, David and Peter J. Newell eds. *The Business of Environmental Governance*. Cambridge, Ma.: The MIT Press, Chapters 1 and 4.

Sands, Philippe. 1995. "International Law in the Field of Sustainable Development: Emerging Legal Principles," in Winfried Lang, ed., *Sustainable Development and International Law*, Boston: Graham & Trotman/Martinus Nijhoff, pp. 53-66.

(11) International Trade Intellectual Property Rights

April 15, 2013

Essential Reading

Frankel, Jeffrey A. "The Environment and Globalization" in Stavins, Robert N., ed. 2012. *Economics of the Environment*. 6th ed. New York: W. W. Norton & Company, Chapter 31.

Wickboldt, Anne-Katrin. 2007. "Growing Clean: Property Rights, Economic Growth, and the Environment," in Choucri, Nazli et al (eds). 2007. *Mapping Sustainability: Knowledge e-Networking and the Value Chain*. Cambridge: Springer Press, Chapter 14.

Recommended Reading (Not all may be available in Library)

Stevens, Candice. 1995. "Trade and Environment: The PPMs Debate," in Winfried Lang, ed., *Sustainable Development and International Law*, Boston: Graham & Trotman/Martinus Nijhoff, pp. 239-247.

Røpke, Inge. 1994. "Trade, Development and Sustainability -- a Critical Assessment of the "Free Trade Dogma." *Ecological Economics* 9:13-22.

Ashford, Nicholas A. and Ralph P. Hall. 2011. *Technology, Globalization and Sustainable Development: Transforming the Industrial State*, New Haven: Yale University Press, pp. 554-556.

Goldman, Patti A. 1994. "Resolving the Trade and Environment Debate: In Search of a Neutral Forum and Neutral Principles." *49 Washington & Lee Law Review* 1279.

Davis, Stan and Jim Botkin "The Coming of Knowledge-Based Business" in Neef, Dale, ed. 1998 *The Knowledge Economy*. Butterworth-Heineman, Chapter 11

See *United Nations Commission on Sustainable Development*, for information on problems and international responses. <http://www.un.org/esa/sustdev/csd.htm>

(12) Global Accord – Next Rounds

April 22,
2013

Essential Reading

Weiss, Edith Brown. 1995. "Intergenerational Equity: Toward an International Legal Framework," in Nazli Choucri, ed., *Global Accord: Environmental Challenges and International Responses*, Cambridge, Mass.: MIT Press, pp. 333-53.

Brewer, Garry, 1995. "Environmental Challenges and Managerial Responses", in Nazli Choucri, ed., *Global Accord: Environmental Challenges and International Responses*, Cambridge, Mass.: MIT Press, pp. 281-303.

Recommended Reading (Not all may be available in Library)

Allenby, Braden R. 1999. *Industrial Ecology: Policy Framework and Implementation*. New Jersey: Prentice-Hall,. Ch. 12.

Sand, Peter H. 1995. "Trusts for the Earth: New International Financial Mechanisms for Sustainable Development," in Winfried Lang, ed., *Sustainable Development and International Law*, Boston: Graham & Trotman/Martinus Nijhoff, pp. 167-184.

Dolsak, Nives and Elinor Ostrom. 2003. *The Commons in the New Millenium*. Cambridge, MA: The MIT Press. Chapter 1.

Ashford, Nicholas A. and Ralph P. Hall. 2011. *Technology, Globalization and Sustainable Development: Transforming the Industrial State*, New Haven: Yale University Press, Chapter 10 and page 629 from Chapter 12.