# Politics of the Ocean

## AS 191.308

Instructor: Elizabeth Mendenhall

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Office hours: Wednesday 10-11am (or by appt.) Mergenthaler 331

Time: Tuesday and Thursday 3:00-4:15pm

Location: Hodson 315

COURSE DESCRIPTION:

The oceans cover 71 percent of the planet’s surface and generate 70 percent of the oxygen in the atmosphere. The sea has always been important to human life – as a source of inspiration, awe, and reliable food – but its significance for international politics has grown with the advent of globalization and industrialization. The ocean now accounts for 90 percent of global trade (through maritime shipping), contains the physical infrastructure of the Internet (through submarine telecommunications cables), hides the nuclear weapons that provide the foundation for deterrence (in naval submarines), and contains increasingly valuable food, mineral, and genetic resources. The ocean is truly ‘planetary’ in its physical unity and vast scale, and ‘global’ in the overlapping and international ways that humans use and exploit the ocean.

Yet the human political world is organized into states based on the control and administration of fixed territory. Simple extension of territorial sovereignty onto the ocean faces many obstacles. This is the central puzzle for the politics of the ocean: how to govern a fluid medium of global extent in the absence of a central world sovereign. This course considers the evolving role the ocean has played in international politics since technological progress, commercial and military interests, and scientific curiosity started driving people farther onto and into the ocean. Over time, repeated activities led to the emergence of ‘customary international law.’ In the twentieth century, the ocean became increasingly ‘crowded’ and the interests of ocean users began to rub against one another. The Law of the Sea Treaty, negotiated in the 1970s and 1980s, was supposed to be a comprehensive ‘Constitution for the Oceans’ that governed multiple users and multiple uses.

This course critically analyzes the Law of the Sea regime, which has failed to achieve many of its basic objectives. Topics include: territorial disputes, piracy and trafficking, submarine telecommunications cables, pollution and over-fishing, naval strategy, sea level rise, ocean acidification, and renewable sources of energy. The final week considers proposals for reforming the Law of the Sea Treaty, including extended mandates, new enforcement powers, and a complete overhaul of the existing regime.

# REQUIRED TEXTS:

Denise Russell, *Who Rules the Waves? Piracy, Overfishing, and Mining the Oceans*. Pluto Press, 2010

Philip E. Steinberg, *The Social Construction of the Ocean*. Cambridge University Press, 2001

Additional readings are available on Electronic Reserve through the MSE library.

# GRADING AND REQUIREMENTS:

Participation 20%

Quizzes 10%

Midterm 30%

Final paper 40%

*Prepared Participation*

The readings in this course offer a rich variety of source material and perspectives, including academic publications from the natural and social sciences, and popular media. Dealing with this diversity of material is challenging, but rewarding. Class discussion will help us do the work of processing the readings, by: drawing out the basic facts, identifying dominant and recurring ideas, naming vested interests and describing their influence, hypothesizing about problems and solutions, etc. **A prepared and engaged student will take notes during lectures, and have annotated readings to reference during class discussion.**

*Quizzes*

There will be 10 quizzes throughout the semester; 5 will be map quizzes of key locations, 5 will be key terms in oceanography and ocean governance. The format will vary, and include filling out maps, matching, and short answers. The topics of quizzes will be given to students in advance.

*Midterm*

The midterm examination will consist of five essay questions, of which you will pick three to answer. Essay questions will require critical thinking about the major topics of the first half of the course: maritime cartography, the history of ocean uses, the emergence of oceanography, and the successes and failures of UNCLOS.

*Final Paper*

The final paper (15-20 pages) will be on an ocean issue of your choice. Papers should address: the nature of the problem, its basic causes, the consequences of non-action (or current trajectory), the benefits of taking action, and your preferred solution. This is not a rigid framework, but a suggestion of structure. Topics should be approved at least two weeks before the deadline. Papers should draw on sources outside the course readings. I will read and comment on one rough draft per student, but submitting a draft is not required.

# Introduction: Conceptualizing the Ocean

## Week 1 – The Cartography of Earth’s Oceans

This week explores how humans have understood and defined the ocean through images, stories, maps, and other media throughout history. We will examine the conditions shaping historical conceptions of ocean space, and trace the emergence of a Euro-centric cartography defined by imperialism and capitalism. Class discussion will start with a basic question: what explains the division of the Earth’s single ocean into multiple oceans and seas? The importance of maps for shaping international politics of the ocean will also be analyzed.

**Total pages: 109**

Denis Cosgrove. “Ocean Globe” (pgs. 79-101), *Apollo’s Eye*: *A Cartographic Genealogy of the Earth in the Western Imagination*. Johns Hopkins University Press, 2001

John Mack. “Introduction” (pgs. 13-35), “Concepts of the Sea” (pgs. 72-75), *The Sea: A Cultural History.* Reaktion Books, 2013.

Philip E. Steinberg. “Introduction” (pgs. 1-7), “Territorial Political Economy and the Construction of Ocean Space” (pgs. 8-28), *The Social Construction of the Ocean*. Cambridge University Press, 2001

Martin W. Lewis “Dividing the Ocean Sea.” *The Geographical Review* 89.2 (April 1999): 188–214.

Daniel R. Headrick, “The Discovery of the Oceans” (pgs. 11-19 only), *Power Over Peoples: Technology, Environments, and Western Imperialism, 1400 to the Present*. Princeton University Press, 2010

## Week 2 – Oceanography and Marine Sciences

This week will introduce students to the accumulated knowledge of Earth systems science about the geophysical and ecological properties of the ocean, including ocean layering, ecological zones, and circulation patterns. The readings provide a background in the emergence and coalescence of the oceanographic sciences, and a review of prevailing scientific consensus about the material ocean in the twenty-first century. Discussion will focus on major ‘blind spots’ in the marine sciences, and the general crisis in ecological diversity currently afflicting the ocean.

**Total pages: 78**

Eric L. Mills, “Introduction” (pgs. 3-9), “Groping Through the Darkness: The Problem of Deep Ocean Circulation” (pgs. 44-56 only), *The Fluid Envelope of Our Planet: How the Study of Ocean Currents Became a Science* (2009)

Jacob Hamblin, “The International Geophysical Year (1957-58)” (pgs. 59-98), *Oceanographers and the Cold War: Disciples of Marine Science*. University of Washington Press, 2005

Elva Escobar and Julian Barbiere, “An Environment to Discover: Marine Biodiversity Assessments” (35-43), *Oceans: The New Frontier* (2011)

Alan B. Sielen, “The Devolution of the Seas,” *Foreign Affairs* (2013): 124-132

“The See-Through Sea.” *The Economist*, June 7, 2016

# Part I: Governing the Ocean

## Week 3 – Ocean Governance (I): The Emergence of CIL

This week explores the origins of the contemporary ocean management regime. International law of the sea first emerged when maritime practices became conventionalized and normalized, forming a loose body of ‘customary international law.’ The writings of Northern European jurists such as Hugo Grotius and John Selden were especially influential, and their impact on the evolution of the Law of the Sea will be a central theme of class discussion. The eventual dominant of European norms can be explained with reference to early modern circumnavigation, maritime trade, and prolonged naval dominance.

**Total pages: 122**

Lincoln Paine. “The Birth of Global Trade” (pgs. 406-440), *The Sea and Civilization: A Maritime History of the World*. Knopf, 2013

Thomas Fulton, “Introduction” (pgs. 1-22), *The Sovereignty of the Sea*. W. Blackwood,1911

Denise Russell, “Freedom of the Seas” (pgs. 6-28), *Who Rules the Waves? Piracy, Overfishing, and Mining the Oceans*. Pluto Press, 2010

Philip E. Steinberg, “Ocean-space and Merchant Capitalism” (pgs. 68-109), *The Social Construction of the Ocean*. Cambridge University Press, 2001

## Week 4 - Ocean Governance (II): the Law of the Sea Treaty

This week focuses on the emergence and key features of the Law of the Sea Treaty, which was designed to manage the full range of ocean use activities. After eleven years of pain-staking negotiations, the United Nations Third Convention on the Law of the Sea produced a treaty, which is credited as being one of the most comprehensive and universal bodies of international law ever ratified. Class discussion will focus on the jurisdictional innovations in the Treaty, especially the Exclusive Economic Zone, and the influence that existing customary international law had on the negotiations. The reasons for and implications of US non-ratification will also be discussed.

**Total pages: 116**

Sumit Majumdar, “Institutions for International Co-Operation: An Analysis of the United Nations Law of the Sea Conference and Convention.” *Economic and Political Weekly* 25, no. 48/49 (December 1, 1990): 2681–85.

Ann L. Hollick, “United States Policy and Lessons for the Future” (pgs. 350-390), *U.S. Foreign Policy and the Law of the Sea*. Princeton University Press, 1981.

Kazimierz Grzybowski, “[Peaceful Settlement of Disputes in Ocean Conflicts: Does UNCLOS III Point the Way?]: Comment.” *Law and Contemporary Problems* 46, no. 2 (Spring 1983): 205–8.

Ed Brown “The 1994 Agreement on the Implementation of Part XI of the UN Convention on the Law of the Sea: Breakthrough to Universality?” *Marine Policy* 19, no. 1 (January 1995): 5–20.

Scott G. Borgerson, “The National Interest and the Law of the Sea” (pgs. 17-47), Council on Foreign Relations (2009)

Stephen C. Nemeth et. al, “Ruling the Sea: Managing Maritime Conflicts through UNCLOS and Exclusive Economic Zones.” *International Interactions* (2014): 711-733

## Week 5 – Ocean Governance (III): The Problem of Enforcement

 This week, the ideals of the Law of the Sea Treaty will be contrasted with actual practices of enforcement and verification. In general, there are insufficient capabilities available or deployed to enforce most elements of the Treaty. In addition, the division of ocean-space into national jurisdictional zones entails ‘race to the bottom’ dynamics where shirking international obligations is both possible and incentivized for companies and individuals alike. Students will consider the basic ‘two tier enforcement’ problem, where states must hold each other accountable and also enforce international standards domestically. The problems associated with a ‘flag of convenience’ model of port state jurisdiction will also be discussed.

**Total pages: 102**

Tony Alderton and Nik Winchester, “Globalisation and de-regulation in the maritime industry,” *Marine Policy* 26, no. 1 (2002): 35-42

Don Liddick, “The Dimensions of a Transnational Crime Problem: The Case of IUU Fishing,” *Trends in Organized Crime* 17, no. 4 (2014): 290-312

 Ian Urbina, “Palau vs. the Poachers,” *The New York Times*, February 17, 2016

Ian Urbina, “A Renegade Trawler, Hunted for 10,000 Miles by Vigilantes,” *The New York Times*, July 28, 2015

Paul Hallwood and Thomas J. Miceli, “An examination of some problems with international law governing maritime piracy,” *Maritime Policy & Management* 40, no. 1 (2013): 429-454

Denise Russell. “Modern Piracy and Terrorism on the Sea” (pgs. 60-82), *Who Rules the Waves? Piracy, Overfishing, and Mining the Oceans*. Pluto Press, 2010

‘Room for Debate: Sailing Beyond the Rule of Law,’ *The* *New York Times*, July 23, 2015

 Paul Greenberg, “Fishermen Can Hook Polluters in Court”

Steve Cotton, “Flags That Provide a Veil of Secrecy”

Ning Yen, “The Seafood Industry Must Set the Standards”

 Adjoa Anyimadu, “Aggressive Local Court Action Can Curb Piracy”

 John Huggins, “Reporting, Accountability, and Prosecution”

 Mark Young, “Technology and Enforcement in Ports Can Be Effective”

# [MID-TERM EXAMINATION]

# Part II – Case Studies in Ocean Politics

## Week 7 – Maritime Territorial Disputes: the Arctic and the South China Sea

The Law of the Sea Treaty contains provisions for dividing up the ocean into jurisdictional zones, including areas owned and/or controlled by coastal states. Unfortunately, the guidance for territorial demarcation has failed to resolve several regional disputes over ocean territory. This week, a single session will focus on contemporary maritime territorial disputes in two regional seas. The Arctic Ocean contains disputes over continental shelf claims and international straits, while the South China Sea contains disputes over the status of over 250 mostly uninhabited islands. The strategic, economic, and human implications of control over these territories will be examined so that students can understand the interests that drive policy and practice in these regions.

 **Total pages: 55**

Paul Berkman. “Geopolitics of Arctic Sea-Ice Minima.” *The Brown Journal of World Affairs* XIX, no. I (Fall/Winter 2012): 145–54.

Michael Byers. “Introduction” (pgs. 1-10) and “Arctic Straits” (pgs. 128-142 only), *International Law and the Arctic.* Cambridge University Press (2013)

Xavier Furtado, “International Law and the Dispute over the Spratly Islands: Whither UNCLOS?” *Contemporary Southeast Asia* 21, no. 3 (December 1999): 386-404

Robert Kaplan. “The Humanist Dilemma” (pgs. 5-21), *Asia’s Cauldron: The South China Sea and the End of a Stable Pacific Order.* Random House, 2014

 Edward Wong and Jonathan Ansfield, “To Bolster Its Claims, China Plants Islands in Disputed Waters,” *The New York Times* (2014)

## Week 8 – Oceanic Shipping and Submarine Cables

This week’s sessions will encounter the ocean as a globalized space of networks and flows, and home to material infrastructures that literally tie together the global economy and facilitate global communications. The first session considers the role of transnational maritime shipping as a primary conduit of early globalization, and an essential feature of contemporary globalism. While maritime shipping primarily transmits goods, the undersea telecommunications networks explored in the second session are responsible for the circulation of information around the globe. The material architecture of these networks will be reviewed, and we will discuss their significance for both the global economy and the future of the Internet.

**Total pages: 95**

**Transnational Shipping:**

Antoine Fremont, “Maritime Shipping at the Crossroads of Economic and Environmental Challenges,” (139-148) *Oceans: The New Frontier*, 2011

Ian Urbina, “Stowaways and Crimes Aboard a Scofflaw Ship,” *The New York Times*, July 17, 2015

Linda Qiu, “China’s Growth Fuels Boom in World Shipping Traffic,” *National Geographic*, November 27, 2014

Peter Gwin, “The Ship-Breakers,” *National Geographic*, May 2014

**Submarine Telecommunications:**

Bernard S Finn and Daqing Yang. “Introduction” (pgs. 3-8) and “The Geopolitical Implications of Communication Under the Seas” (pgs. 257-278), *Communications under the Seas*. MIT Press, 2009

Nicole Starosielski. “Introduction” (pgs. 1-26) and “Cabled Depths” (pgs. 199-224), *The Undersea Network*. Duke University Press, 2015

## Week 9 – Naval Rivalries: The Cold War and After

This week students will approach the ocean from a military perspective. The interests (and funding) of the Department of Defense have had a significant impact on the content of international Law of the Sea and the history of oceanography. Class discussion will follow the Navy’s efforts to project power across and underneath the ocean, the role of military institutions in formulating the US position in international negotiations, and the mutually beneficial relationship developed between the Navy and oceanographers.

**Pages: 108**

Ann L. Hollick. “Defense Interests” (pgs. 183-190), *U.S. Foreign Policy and the Law of the Sea*. Princeton University Press, 1981.

Jacob Hamblin. “Introduction” and “Oceanography’s Greatest Patron” (pgs. 32-58), *Oceanographers and the Cold War: Disciples of Marine Science*. University of Washington Press, 2005

 Thomas S. Burns. “The Development of America’s Oceanic Strategy” (pgs. 3-12) and “The Intelligence Community at Sea: CIA Adventures in the Glomar Explorer” (pgs. 13-26) and “Sonar: Sensing the Sounds of the Sea” (pgs. 64-68) and “Submarines: The Evolution of the Ultimate Weapon” (pgs. 69-84), *The Secret War for the Ocean Depths: Soviet-American Rivalry for Mastery of the Seas*. Rawson Associates Publishers, 1978

Robert Kaplan, “The Indian Ocean World Order.” *Real Clear World*, April 10, 2014.

James Kraska, “Sovereignty at Sea.” *Survival* 51, no. 3 (2009): 13-18

Michael Byers. “Policing the High Seas: The Proliferation Security Initiative,” *The American Journal of International Law* 98, no. 3 (2014): 526-545

## Week 10 – Oceanic Fisheries

The week the course focuses on the over-exploitation of oceanic fisheries, and its ecological, economic, and strategic implications. The basic intellectual foundation of fisheries management – the concept of ‘Maximum Sustainable Yield’ – will be critically analyzed, as will the Regional Fisheries Management Organizations tasked with enforcing it. Class discussion will focus on the basic reasons over-fishing persists, the extent of the problem, and solutions currently being pursued.

**Total pages: 104**

Carmel Finley. “Introduction” (pgs. 1-10) and “The Pacific Fisheries Frontier” (pgs. 45-66) and “Fishing ‘Up’ to MSY” (pgs. 154-167), *All the Fish in the Sea*. University of Chicago Press, 2011

Denise Russell, “The Fishing Wars” (pgs. 84-104), *Who Rules the Waves? Piracy, Overfishing, and Mining the Oceans*. Pluto Press, 2010

Sarika Cullis-Suzuki and Daniel Pauly, “Failing the high seas: A global evaluation of regional fisheries management organizations,” *Marine Policy* 34, no. 5 (2010): 1036-1042

Christopher Pala, “Detective work uncovers under-reported overfishing,” *Nature* (April 2, 2013)

Boris Worm et. al, “Rebuilding Global Fisheries,” *Science* 325 (2009): 578-584

Elliott A. Norse et al., “Sustainability of Deep-Sea Fisheries,” *Marine Policy* 36, no. 2 (2012): 307-320

Jennifer L. Jacquet and Daniel Pauly, “The rise of seafood awareness campaigns in an era of collapsing fisheries,” *Marine Policy* 31, no. 3 (2007): 308-312

Rebecca Goldburg and Rosamond Naylor, “Future seascapes, fishing, and fish farming,” *Frontiers in Ecology and the Environment* 3, no. 1 (2005): 21-28

## Week 11 – Climate Change and the Ocean: Sea-level Rise and Ocean Acidification

Climate change has major implications for the physical and chemical properties of the ocean. Specifically, the warming of the planet and melting of glaciers is already causing sea levels to rise, and concentrations of carbon dioxide absorbed from the atmosphere are causing the acidification of ocean water. In addition to learning about the triggers and processes of sea-level rise and ocean acidification, students will discuss the human, ecological, and economic implications of these planetary-scale transformations.

**Total pages: 90**

**Sea-level Rise**

Orrin H. Pilkey and Rob Young. “Why the Sea Is Rising” (pgs. 25-40) and “The 800-Pound Gorillas” (pgs. 61-80) and “Sounding Retreat” (pgs. 159-183), *The Rising Sea.* Island Press,2009

Katherine J. Houghton, “Maritime boundaries in a rising sea,” *Nature Geoscience* 3, no. 12 (2010): 813-816

UN News Service, “Threatened by rising seas, small island nations appeal for more aid at UN,” (September 25, 2013)

**Ocean Acidification**

Elizabeth Kolbert, “The Darkening Sea,” *The New Yorker* (2006): 66-75

Global Ocean Commission, “Policy Options Paper #2: Climate change, ocean acidification, and geo-engineering,” (2013): 1-11

R.P. Kelly et. al, “Mitigating Local Causes of Ocean Acidification with Existing Laws,” *Science* (2011): 1036-1037

Veronica Gonzalez, “An Alternative Approach for Addressing CO2-Driven Ocean Acidification,” *Sustainable Development Law & Policy* 12, no. 2 (2012): 45

## Week 12 – The Future of Technological Exploitation

This week students will consider possible futures for ocean activities based on trends in emerging technologies. While each reading covers a different type of marine technology, all will be considered in light of the existing regime reviewed in previous classes. Class discussion will focus on the intersection between a decades-old regime and innovations in technologies, in order to encourage critical thinking about the role of Law of the Sea institutions in international politics.

**Total pages: 125**

Montserrat Abad Castelos, “Marine Renewable Energies: Opportunities, Law, and Management,” *Ocean Development & International Law* 45, no. 2 (2014): 221-237

Russell B. Wynn et. al, “Autonomous Underwater Vehicles (AUVs): Their past, present and future contributions to the advancement of marine geoscience,” *Marine Geology* 352 (2014): 451-468

Charles Schmidt, “Going Deep: Cautious Steps toward Seabed Mining,” *Environmental Health Perspectives* 123, no.9 (2015): 234-241

Aaron Strong, John Cullen, and Sallie Chisholm, “Ocean Fertilization: Science, Policy, and Commerce,” *Oceanography* 22, no. 3 (2009): 236-261

Philip E. Steinberg, Elizabeth Nyman, and Mauro J. Caraccioli, “Atlas Swam: Freedom, Capital, and Floating Sovereignties in the Seasteading Vision,” *Antipode* 44, no. 4 (2012): 1532-1550

Rhett Butler et. al, “The scientific and societal case for the integration of environmental sensors into new submarine telecommunication cables,” Science and Society Committee of the ITU/UNESCO- IOC/WMO Joint Task Force on Green Cables (2014): 1-29

Andrew Merrie et. al, “An ocean of surprises – Trends in human use, unexpected dynamics and governance challenges in areas beyond national jurisdiction,” *Global Environmental Change* 27 (2014): 19-31

## Week 13 – Reforming the Law of the Sea?

This final week, each reading argues in favor of a reform, re-articulation, or removal of some or the entire UNCLOS regime. We will consider the wisdom of the various proposals, focusing on their relationship to the prevailing scientific consensus, political feasibility, and implications for the global economy. In light of the ocean issues reviewed in previous weeks, students will consider trade-offs and prioritization between problems competing for political resources.

 **Total pages: 95**

Denise Russell. “Protection of the Oceans” (pgs. 150-164), *Who Rules the Waves? Piracy, Overfishing, and Mining the Oceans*. Pluto Press, 2010

Amitai Etzioni. “Final Frontier vs. Fruitful Frontier: The Case for Increasing Ocean Exploration.” *Issues in Science and Technology*, (2014): 65–74.

Oran R. Young, Gail Osherenko, Julia Ekstrom, Larry B. Crowder, John Ogden, James A. Wilson, John C. Day, et al. “Solving the Crisis in Ocean Governance: Place-Based Management of Marine Ecosystems.” *Environment* 49, no. 4 (May 2007): 20–32.

Edward T. Game et. al, “Pelagic protected areas: the missing dimension in ocean conservation,” *Trends in Ecology & Evolution* 24, no. 7 (2009): 360-369

Kristina M. Gjerde, “Challenges to Protecting the Marine Environment beyond National Jurisdiction,” *The International Journal of Marine and Coastal Law* 27, no. 4 (2012): 839-847

Kristina M. Gjerde et. al, “Ocean in peril: Reforming the management of global ocean living resources in areas beyond national jurisdiction,” *Marine Pollution Bulletin* 74, no. 2 (2013): 540-551

Erik Jaap Molenaar, “Port State Jurisdiction: Toward Comprehensive, Mandatory and Global Coverage,” *Ocean Development & International Law* 38, no. 1-2 (2007): 225-47

# Ocean Politics Simulation

The last class of the semester will be a negotiation game that attempts to answer the question: What is the best possible way to reform the current ocean governance regime in a way that accounts for key interests and values? Students will be assigned roles in advance.