

ESM 257 - Coastal and Ocean Policy and Management

Fall 2016

Room: Bren Hall 1424

Monday and Wednesday, 8:30 – 9:45 am

Instructor: Sean Hastings

Email: seanhastings69@gmail.com

Telephone: 805-705-1790

Office Hours: By appointment

Course Description: This course provides an overview of approaches and governance tools used in marine and coastal policy and management. This course will examine relevant international, federal, and state marine and coastal policy programs and issues and students will learn directly from professionals in government, academia, non-government organizations and stakeholders.

Grade:

- Discussion questions, participation in class, short homework/in class assignments – 20% of total grade
- **Assignment 1:** Policy Brief (3 pages) – 25% of total grade
- **Assignment 2:** Sanctuary Advisory Council Forum Exercise – 30% of total grade
- **Assignment 3:** Decision Making Memo (1 page) – 25% of total grade

Attendance: Students are expected to attend all lectures and complete all required readings in advance of the lecture. Students who are unable to attend a lecture due to another compulsory activity or illness should email the instructor **prior** to the class to let him know about the upcoming absence.

Discussion (20%): Students will be expected to complete required readings prior to the lecture and engage in discussion with the instructor, other students and guest lecturers. Students will be assigned to lead at least one in class discussion with the lecturers. Students are expected to attend the field trips and complete all in class or take home short assignments.

Assignments: All assignments shall be submitted via GauchoSpace prior to the lecture on the due date. Assignments should be typed and in a minimum of 11 point font with regular margins (1.25 inches right and left and 1 inch top and bottom). Pages should be numbered and a header should be used to identify the assignment number, brief title, and the student's name and date. Guidelines for numbers of pages assume single-spaced text with two lines between paragraphs.

Class Field Trips:

Santa Barbara Board of Harbor Commissioners Meeting, City Hall, Santa Barbara, CA

- October 20, 2016; OR
- November 17, 2016

Channel Islands National Marine Sanctuary Advisory Council

Friday, November 18, 2016, Ventura, CA – Location TBD

Transportation and lunch will be provided.

ASSIGNMENT 1: Policy Brief (25%)

Due date: Monday, Oct. 24, 2016 prior to the start of class.

Instructions: Select a topic of interest related to coastal and ocean policy and management and a relevant audience (either a policymaker or manager or policy or management body) who would be engaged in making decisions on the topic. The purpose of a policy brief is to make a recommendation to solve a problem that a policymaker or manager has (even if s/he does not know that s/he has it). The recipient will be preoccupied with other responsibilities so the brief should grab his/her attention quickly. The brief should convince the reader that the author (most likely a staff member) has REVIEWED all evidence (but the author does NOT need to PRESENT all evidence). The goal of a brief is to prepare the recipient to make a decision right away based on the information in the memo. Please limit the brief to 3 pages, single-spaced with regular margins and a minimum of 11 point font.

There is no single best way to write a brief, but there are some key pieces of information that should be included and some useful techniques for conveying information quickly and effectively. Use signposts (bullets, bold and italic font, outlines, underlines and spacing) to catch the readers' attention and emphasize key points.

Briefs should cite credible sources from the literature to assist the policy-maker with their decision.

Briefs should be written in a neutral tone, use language that is simple and concise, and must avoid value-laden jargon.

The brief should include the following information in the format below:

To: Policymaker or manager of your choice

From: Student's name

Date:

Re: Subject of brief

Conclusion, bottom line, or recommended action: One to two sentences summarizing the issue and clearly stating the recommendation or desired outcome.

Background: about the major issue, question, or controversy addressed in the brief. Why should this issue be a priority to the policymaker?

Legal and regulatory analysis of policy options: What are the underlying statutes or regulations that give the policy maker the authority to act on the issue and what types of action can be taken? What areas are absolute, what areas leave room for interpretation, where are the loopholes?

Scientific analysis of policy options: What scientific evidence exists to help the policy maker come to an informed decision? What data did you use to develop your recommendation? What are the key data gaps or areas of scientific uncertainty?

Identify stakeholders: Who are the stakeholders that will be interested in the issue, question, or controversy and how they are likely to respond to the policy or management options. Offer some counterarguments for detractors who will criticize the recommended policy or management option.

Identify the best policy or management option(s) and explain why it is the best. Explain the “Pros” and “Cons” of the options to help define why your recommendation is the best option. What are the tradeoffs between science and policy, what are the possible unintended consequences? What are the possible scientific, political, and/or social ramifications of the recommended option(s) and how do they compare to those of the options that were not recommended?

Potential Topics – Students may choose any coast/ocean topic

- Offshore wind and wave energy generating projects
- Ocean acidification
- Ocean fertilization
- Offshore aquaculture
- Artificial reefs
- California Lobster Fishery Management Plan
- Ship strikes on endangered whales
- Other coast / ocean topics welcome

ASSIGNMENT 2: Policy Forum (30%)

Due dates: Part 1 - Monday, Nov. 14, 2016; Part 2 – Nov. 18, 2016; Part 3 - Wednesday, Nov. 23, 2016 prior to the start of class.

One of my main goals for the course is to engage students in real world policymaking forums like the Channel Islands Sanctuary Advisory Council (SAC).

Students will support and participate in the SAC’s November 20, 2016 meeting as proxies for Council members and discuss and debate a policy issue (e.g. tbd), and provide advice to the Superintendent.

There are three parts to the assignment:

1. Interview a Council Member and their alternate prior to the Nov. meeting to gain insight on that Council Member's interests and input on the issue. Prepare talking points for use in the meeting. (30% of assignment)
2. At the Nov. Council meeting students will serve as proxies for Council Members and alternates at the SAC meeting. They will receive a staff update on the issue, discuss and debate the issue, receive public input and craft policy advice for the superintendent. (40% of assignment)
3. Post meeting, write a 1-3 page meeting summary for your representative and their constituency (1-3pgs) (30% of assignment).

Guidance for each part of Assignment 2:

- 1) **A Council Member and their alternate (or a Staff member) will be assigned to each**

student. Interview questions and Council contact information and examples of talking points to be provided. Interviews with Council Members and their alternates can be conducted in-person, over the phone, via Skype and/or email. In-person is preferable, if possible.

Students unable to attend and participate in the Sanctuary Advisory Council meeting will interview a Council Member prior to the meeting and prepare and submit a 2-page written comment letter to the SAC advocating the Council Member's perspective.

Interview Notes and Talking Points (or written comment letter) due date: Nov. 14, 2016.

General guidelines for writing effective public comment letters:

- Comments should be addressed to the Chair of the Council.
- Comment letters should use standard business letter format and include a subject/reference line that clearly indicates the topic the letter is addressing.
- Include information upfront about what makes you a credible source to comment on this issue (e.g., you have personal knowledge of the habitat or species, or the scientific community has determined that the action you describe would be effective, etc.)
- If several policy or management options are being considered, identify the option you believe will best address the problem and describe why. Alternately, you may identify an option that the body has not considered and describe why you think it is the best policy or management option
- Use signposts (bullets and numbers, bold and italic font, and underline) to organize the comments and highlight key points.
- Use footnotes to cite referenced material
- Submit comments on time. Each body is different, but briefing binders are generally distributed to body members at least one week prior to the meeting. Your comments have a greater chance of having an impact if they are in the briefing binders and are able to be reviewed by the body members prior to their meetings. Written letters distributed at meetings are difficult for body members to read and absorb.

Grading:

Organization and structure; Clarity of writing; Explanation of subject; Argument for desired outcome (i.e., why should the SAC follow your recommendation).

- 2) Serving as proxy – guidance to be provided.** Some students may serve as a proxy for Council Members, and some as Council Staff. During the meeting, each student serving as a Council Member will craft policy advice, usually in the form of a verbal motion, which is then discussed/debated and finalized with a vote. Students serving as Council Staff will record the discussion and motion. Each student should take meeting notes as reference for the written meeting summary part of the assignment.

For students unable to attend the meeting they will present their Council Member's viewpoint to the class.

- 3) Students serving as Council Staff can produce a neutral meeting summary/outcomes. Students serving as proxies for a particular Council Member can append the staff summary, but they should prepare their meeting summary as**

if they were reporting back to whomever they are representing. The summary of the meeting shall include the following information:

- Location, date of meeting, and names of Council Members present
- List of supporting documents related to the agenda item (.5 pts)
- Key points and recommendations made by staff during the presentation/discussion of the agenda item
- List of Council Members and/or members of the public who made relevant or pertinent comments about this agenda item, their affiliation, and their key talking points
- Key points, comments or direction to staff given by the Council during discussion
- Any required action / next steps by whom your representing – NGO, agency, user group, other

Meeting Summary Due date: Wednesday, Nov. 23, 2016.

ASSIGNMENT 3: Decision Making Memo (25%)

Due date: Tuesday, Dec. 6, 2016

Instructions: Select a topic of interest related to coastal and ocean policy and management and a relevant audience (either a policymaker or manager or policy or management body) who would be engaged in making decisions on the topic. This can be the same topic as your policy brief, or you may choose a new topic. The purpose of a decision-making memo is to make a recommendation to solve a problem that a policymaker or manager has. The recipient will be preoccupied with other responsibilities so the memo should grab his/her attention quickly. The memo should convince the reader that the author (most likely a staff member) has REVIEWED all evidence (but the author does NOT need to PRESENT all evidence). The goal of a memo is to prepare the recipient to make a decision right away based on the information in the memo. Please limit the memo to 1 page, single-spaced with regular margins and a minimum of 11-point font.

Memos should be written in a neutral tone, use language that is simple and concise, and must avoid value-laden jargon. Key points should be presented clearly and succinctly.

The memo should include the following information in the format below:

(To be dated when signed)

MEMORADUM FOR: Policymaker or manager of your choice

FROM: Student's name

SUBJECT:

1. **ACTION:**

In one to three sentences, state who, where and what.

2. **ANALYSIS:**

Condense the legal, regulatory, stakeholder, and scientific considerations you described in your policy briefs down to less than ten sentences (two paragraphs at most).

3. **RECOMMENDATIONS:**

In two sentences, identify the best policy or management option(s) and its relevance.

Approved _____ Disapproved _____ Let's Discuss _____

Notes:

Public Meetings and Policy Forums

California Fish and Game Commission

- October 19 & 20, 2016 Eureka, CA
- November 17, 2016 Marine Resources Committee, Los Alamitos, CA
- December 7 & 8, 2016 San Diego, CA

Live-broadcast and archived on the following website: <http://www.cal-span.org/>

Ports of LA and Long Beach Harbor Safety Committee

October 5, 2016 Long Beach, CA

December 7, 2016 San Pedro, CA

California Coastal Commission

- October 5-7, 2016, Ukiah, CA
- November 2-4, 2016 Half Moon Bay, CA
- December 7-9, 2016 Ventura, CA

Live-broadcast and archived on the following website: <http://www.cal-span.org/>.

Class Field Trips:

Santa Barbara Harbor Commission Meeting, City Hall, Santa Barbara, CA

- October 20, 2016; OR
- November 19, 2016

Channel Islands National Marine Sanctuary Advisory Council

November 18, 2016, Ventura, CA Location, TBD

Transportation and lunch will be provided.

California Ocean Protection Council

October 17, 2016 Sacramento, CA

Live-broadcast and archived on the following website: <http://www.cal-span.org/> .

Pacific Fishery Management Council

November 16-21, 2016 Garden Grove, California

California Coastal Conservancy

September 29, 2016

December 1, 2016

Live-broadcast and archived on the following website: <http://www.cal-span.org/>.

OneNOAA Science Seminars:

The most complete and integrated summary of NOAA science and climate seminars across the nation. Visit the OneNOAA Science Seminar Calendar at <http://www.nodc.noaa.gov/seminars/>

For general questions about the seminars, please contact Tracy.Gill@noaa.gov or Hernan.Garcia@noaa.gov

ESM 257 Course Syllabus – Fall 2016

All seminars are posted in Eastern Time and subject to changes without notice; so please check the OneNOAA seminar web page for the latest seminar updates. Unless otherwise indicated, seminars are open to the public.

To join the weekly e-mail list for OneNOAA science seminars (anyone can join):

- Send an email to OneNOAAscienceseminars-request@list.woc.noaa.gov with `subscribe' in the subject or body (don't include the quotes) or
- Visit <https://list.woc.noaa.gov/cgi-bin/mailman/listinfo/onenoaascienceseminars> and fill in your name and email address.

LECTURES AND READINGS

Lecture 1: Monday, Sept. 26, 2016

Topic: Course Introduction to Coast and Ocean Policy and Management

Required Reading

1. Lackey, R.T. 2006. Axioms of Ecological Policy. *Fisheries* 31(6): 286-290.
2. Pew Oceans Commission. 2003. America's Living Oceans: Charting a course for sea change.
3. U.S. Commission on Ocean Policy. 2004. An Ocean Blueprint for the 21st Century.
4. Executive Order 13547 of July 19, 2010.
<http://www.gpo.gov/fdsys/pkg/FR-2010-07-22/pdf/2010-18169.pdf>
5. U.S. Ocean Policy Report Card 2012
http://www.jointoceancommission.org/resource-center/2-Report-Cards/2012-06-06_2012_JOCI_report_card.pdf

Lecture 2: Wednesday, Sept. 28, 2016

Topic: Managing Big Ships and Big Whales in a Small Sanctuary

Required Reading

1. Abramson, L., Polefka, S., Hastings, S., Bor, K. 2009. Reducing the Threat of Ship Strikes on Large Cetaceans in the Santa Barbara Channel Region and Channel Islands National Marine Sanctuary. Prepared and adopted by the Channel Islands National Marine Sanctuary Advisory Council. 73 pgs. Online at:
http://sanctuaries.noaa.gov/science/conservation/pdfs/ship_strikes.pdf (Read the executive summary pages 1-17).
2. Joint Working Group on Vessel Strikes and Acoustic Impacts. 2012. Vessel Strikes and Acoustic Impacts. Joint Working Group of Gulf of the Farallones and Cordell Bank National Marine Sanctuaries Advisory Councils, San Francisco, CA. Online at:
http://sanctuaries.noaa.gov/protect/shipstrike/pdfs/strikes_acoustic.pdf (Read Executive Summary, pages 5-6).
3. Redfern, et al. 2016. Assessing the Risk of Ships Striking Large Whales in Marine Spatial Planning. *Conservation Biology* 27(2):292-302.
4. NOAA response to petition -
<http://channelislands.noaa.gov/focus/pdf/petitionresponsenoaa2012.pdf>
5. USCG PARS studies for SF and SB Channel
<http://channelislands.noaa.gov/focus/pdf/11-01-2011.pdf>

Lecture 3: Monday, October 3, 2016

Topic: Native American Tribal Perspective

Guest Lecturer: Roberta Cordero, Chumash Maritime Association

Required Reading:

CA Coastal Conservancy [Tribal Policy](#)

White Paper, Tribal Marine Protected Areas – includes an overview of Chumash coastal maritime culture past and present

<http://ocpc.msi.ucsb.edu/pdfs/TribalMPAs04.pdf>

National MPA Center's July 2013 special issue newsletter focus on tribal and indigenous peoples and marine protected areas. http://marineprotectedareas.noaa.gov/pdf/helpful-resources/connections/connections_jul13.pdf

Tribal Cultural Landscape Guidance Document from BOEM: <http://www.boem.gov/2015-047/>.

CHRWG/MPA-FAC white paper: "Recommendations for Integrated Management Using a Cultural Landscape Approach in the National MPA System"

http://www.mpa.gov/pdf/helpful-resources/mpafac_rec_cultural_landscape_12_11.pdf

Lecture 4: Wednesday, October 5, 2016 - FIELD TRIP

California Islands Symposium – Ventura Beach Marriott, Ventura, CA

Topic: A New Geography of Hope: Sliding Baselines, Climate Change, and the Necessity of Protected Places by

Lecturer: Dr. Kathleen Moore

Lecture 5: Monday, October 10, 2016 –

Topic: Ocean Stewardship by the National Marine Sanctuaries

Guest lecturer: Chris Mobley, Superintendent, Channel Islands National Marine Sanctuary

Required Reading:

1. Area Based Management of Marine Resources: A Comparative Analysis of the National Marine Sanctuaries Act and Other Federal and State Legal Authorities. June, 2016.
2. National Marine Sanctuaries Act, Title 16, Chapter 32, Sections 1431 et seq. United States Code as amended by Public Law 106-513, November 2000.
3. Channel Islands National Marine Sanctuary Final Management Plan: A Summary Guide, January 2009. 8 pages.
4. Sanctuary Enhancement Act Summary, 2008.
5. Letter from David M. Kennedy, Assistant Administrator for Ocean Services and Coastal Zone Management to Linda Krop, Environmental Defense Center. March 30, 2012.

Additional Resources:

6. Sanctuary Enhancement Act Full Text (2008)
7. Sanctuary Reauthorization Act Gaines Testimony (2007)
8. Channel Islands National Marine Sanctuary Final Management Plan Vol. 1

<http://channelislands.noaa.gov/manplan/fmpdocs.html>

Lecture 6: Wednesday, October 12, 2016

Topic: Ocean Stewardship by the National Park Service

Guest lecturer: Russell Galipeau, Superintendent

Required Readings:

Channel Islands National Park General Management Plan
The National Park Service Organic Act (16 U.S.C. 1, 2, 3, and 4)

Lecture 7: Monday, October 17, 2016

Topic: Overview of Coastal Zone Management

Required Reading:

1. Coastal Zone Management Act of 1972.
2. Skim California Coastal Plan
3. Santa Barbara County Coastal Land Use Plan, 2009

Lecture 8: Wednesday, October 19, 2016

Topic: Local Coastal Program – City of Carpinteria case study

Guest lecturer: Jackie Campbell, City of Carpinteria, Community Development Director (retired)

Required Readings:

[City of Carpinteria - General Plan / Local Coastal Land Use Plan & Environmental Impact Report 2003](#)

[City of Carpinteria - Council Agenda Staff Report, June 22, 2015, Local Coastal Plan Amendments](#)

Lecture 9: Monday, October 24, 2016

Topic: Managing California's State Waters

Guest Lecturer: Dr. Craig Shuman, Marine Region Manager, CA Dept. of Fish and Wildlife

Required Reading:

1. Hardy, Michael C., Suzanne Ludicello, John DeWitt, John J. Kirilin, and Ralph Larson. 2010. Lessons Learned from California's Marine Life Management Act Task One Report: Implementation of the MLMA. May 18, 2010.
 - i. Part 1: Context for MLMA (Pages 1-16)
 - ii. Part 2: How MLMA changed fishery management (Pages 17-29)
2. Weber, M.L., and B. Heneman. 2000. Guide to California's Marine Life Management Act. The California Marine Life Management Project and Commonwealth Knowledge Press, Bolinas, CA. p. xiv – xxv, and 1 – 32.
3. Final Statement of Reasons for Regulatory Action: Add Sections 29.17 and 127 Title 14, California Code of Regulations, Re: Kellet's Whelk (skim this)

Additional Resources:

4. The Marine Life Management Act of 1998, California State Assembly Bill 1241. 1998. Keely - Marine Resources. (Summary information available here: <http://www.dfg.ca.gov/marine/mlma/#summary>)
5. California Government Code Sections 11340 – 11342.4, Chapter 3.5. Administrative Regulations and Rulemaking, Article 1.
6. Harty, Michael C., Suzanne Ludicello, John DeWitt, John J. Kirilin, and Ralph Larson. 2010. Lessons Learned from California's Marine Life Management Act Final Report:

Evaluation, Lessons Learned, and Recommendations.

Lecture 10: Wednesday, October 26, 2016

Topic – History of Fishing Santa Barbara Channel / Invasive Species in Santa Barbara Harbor

Guest Lecturer: Mick Kronman, Santa Barbara Harbor Master

Required Reading:

1. Kronman, M. 2013. Excerpt: *From Hooks to Harpoons - The Story of Santa Barbara Channel Fisheries*. Santa Barbara Maritime Museum.

Lecture 11: Monday, October 31, 2016

Topic: Invasive Algae

Guest Lecturer: Lindsay Marks

Required Reading:

TBD

Lecture 12: Wednesday, November 2, 2016

Topic: The Role of Advisory Boards in Policy Making

Guest Lecturer: Michael Murray, Deputy Superintendent / Advisory Counsel Coordinator, Channel Islands National Marine Sanctuary

Required Reading:

1. SAC website - <http://channelislands.noaa.gov/sac/welcome.html>
 - a. Pay particular attention to the member and alternate biographies - these are the same representatives that you will serve as proxies for at the Nov. SAC meeting.
 - b. Read the Charter and Decision Making and Operational Protocols; check out a work plan, and under Notes and Actions a Key Outcomes document.

Lecture 13: Monday November 7, 2016

Topic: The Emerging Role of Unmanned Technologies in Ocean Management

Guest lecturer: Matt Pickett, Commander NOAA Corps (retired)

Required Readings:

[Collaborative Center for Unmanned Technologies](#)

Lecture 14: Wednesday, November 9, 2016

Topic: Marine Spatial Planning: Integrating SeaSketch and Marxan

Guest Lecturer: Grace Goldberg

Required Reading:

1. Merrifield, M.S., McClintock, W., Burt, Chad, F., Evan, Serpa, P., Steinback, C., Gleason, M. 2013. MarineMap: A web-based platform for collaborative marine protected area planning. *Ocean & Coastal Management* 74:67-76.

<http://marinemap.org/~will/Transfer/Literature/MLPA%20Initiative/MarineMap%20and%20the%20MLPAI.pdf>

Additional Resources:

2. Learn about SeaSketch: <http://www.seasketch.org/>
3. SeaSketch Demo: Whale Strikes in the Santa Barbara Channel:
http://marinemap.org/~will/Transfer/presentations/Esri_UC_Plenary/120903_Esri_UC-english-captions.mp4

Lecture 14: Monday, November 14, 2016

Topic: Policy Making through Permitting - Channel Islands National Marine Sanctuary Research Permit on White Shark Tagging

Required Reading:

Channel Islands National Marine Sanctuary Regulations

Lecture 15: Wednesday, November 16, 2016

Preparation for Sanctuary Advisory Council Meeting

Reference Materials: Bring your Council member interview notes and talking points.

Friday, November 18, 2016 - *FIELD TRIP* – Channel Islands National Marine Sanctuary Advisory Council meeting, Ventura, CA. Transportation and lunch will be provided.

Lecture 16: Monday, November 21, 2016

Topic: The Role of the Philanthropic Community

Guest Lecturer: Mike Weber, Resources Legacy Fund

Required Reading:

[West Coast Ocean Strategy](#) by the David and Lucile Packard Foundation

Two articles from the Ocean And Coastal Journal

Wednesday, November 23, 2016

NO CLASS – HAPPY THANKSGIVING

Lecture 17: Monday, November 28, 2016

Topic: Coastal and Ocean Stewardship by the Department of Defense

Guest Lecturer: John Ugoretz, Biologist, U.S. Navy

Required Reading:

1. Tierra Data. 2010. Integrated Natural Resources Management Plan Naval Base Ventura County, San Nicolas Island, California. Public Draft September 2010.

- a. Skim Section 3.5: Current Condition of Natural Resources, Coastal and Marine Communities, Pages 3-21 through 3-27
- b. Skim Section 3.7. Marine Flora and Fauna, Pages 3-35 through 3-42
- c. Skim Section 3.8. Special Status Species, Pages 3-43 through 3-49
- d. Read Section 4.3.3: Natural Resource Management Objectives and Strategies, Coastal and Marine Habitats and Communities, Pages 4-25 through 4-34.
- e. Read Section 4.4. Fish and Wildlife Management, Pages 4-47 through 4-53

Lecture 18: Wednesday, November 30, 2016 – LAST DAY OF CLASS

Topic: Protecting Blue Whales and Blue Skies

Guest Lecturer: Jessica Morten, CA Sea Grant Fellow

Required Reading:

1. Safe Passage Project - Shipping Working Group Proposal
2. Vessel Speed Reduction Trial - <http://www.sbcapcd.org/itg/shipemissions.htm>
3. Video – The Silver Bullet (13 min) <http://vimeo.com/48669451> * FOR EDUCATIONAL PURPOSES ONLY AND IS NOT FOR CIRCULATION

Additional Resources:

4. Letter from National Marine Fisheries Service and National Marine Sanctuaries to California Air Resources Board regarding use of cap and trade to incentivize ships to reduce speed. June 21, 2012.
5. Channel Islands National Marine Sanctuary website on ship strikes on large whales - <http://channelislands.noaa.gov/focus/alert.html>
6. National Marine Sanctuaries website on reducing ship strike risk to whales- <http://sanctuaries.noaa.gov/protect/shipstrike/>
7. Wiley DN, Thompson M, Pace III RM, Levenson J. 2011. Modeling speed restrictions to mitigate lethal collisions between ships and whales in the Stellwagen Bank National Marine Sanctuary, USA. *Biological Conservation* 144: 2377-2381.
8. Berman-Kowalewski M, Gulland, FMD, Wilkin S, Calambokidis J, Mate B, Cordaro J, Rotstein D, St. Leger J, Collins P, Fahy K, Dover S. 2010. Association between blue whale (*Balaenoptera musculus*) mortality and ship strikes along the California coast. *Aquatic Mammals* 36: 59-66.
9. <http://www.businessweek.com/articles/2016-09-05/risk-ahoy-maersk-daewoo-build-the-worlds-biggest-boat#p2>
10. McKenna MF, Katz SL, Condit C, Walbridge S. 2012. Response of commercial ships to a voluntary speed reduction measure: are voluntary strategies adequate for mitigating ship-strike risk? *Coastal Management* 40: 634-650.
11. Conn, P.B. and G.K. Silber. 2016. Vessel speed restrictions reduce risk of collision-related mortality for North Atlantic right whales. *Ecosphere* 4(4):43.