Graduate School?
What every Colby Environmental Studies student needs to know

Thinking about Graduate School in Environmental Studies?

Yale School of Forestry and Environmental Studies
Nicholas School of the Environment, Duke University
The Nelson Institute for Environmental Studies, University of Wisconsin
The Energy and Resources Group, University of California, Berkeley

Philip Nyhus Fall 2016
“When should I go to graduate school?”

Immediately after Colby?

- Academic appeal & intellectual interest
- Keep the academic momentum
- Better job opportunities
- Deeper knowledge, more skills
- Difficult job market
- Still no boss
One or more years after Colby?

- Gain non-academic experience such as consulting, advocacy, research....
- Apply what you have learned in college
- Define better career aspirations
- Requirement for some graduate programs (MBA)
- Earn money
- Take time off: Work, have fun as ski bum, *strandbummler*, bike across US
“It was the summer of 2002, and Aaron Megquier ’01 was pedaling his bike across America, along highways, on back roads, through city streets. About halfway through his solitary trek, Megquier headed out of Chicago and turned north on a hundred-mile detour to the University of Wisconsin-Madison, where he thought he might go to study for his master’s.

Coming out of Colby as an honors biology major, the Hampden, Maine, native knew there were professors at the university who were doing cutting-edge work in the field. He was less prepared for UW-Madison itself: 40,000 students, 20,000 faculty and staff, a sprawling campus set in the middle of a city of 250,000.

"I remember standing on a corner," Megquier said, "and thinking I could never handle it here. It felt like New York City, with a hundred, two hundred people waiting to cross the street."

Megquier took a deep breath and thought: This is definitely not Colby…"
Masters Programs

- Environmental Science and/or Policy: Specialized schools
  - Nicholas School of the Environment, Duke
  - Yale School of Forestry, Yale
  - Energy Resource Group (ERG), Berkeley
  - Bren School of Environmental Management, UCSB
  - M.A. in Climate and Society, Columbia

- Public Policy: Environmental concentration
  - Kennedy School, Harvard
  - School of International and Public Affairs (SIPA), Columbia
  - Fletcher School of Law and Diplomacy, Tufts

- Many universities have specialized programs
  - E.g., Sustainable Development & Conservation Biology Graduate Program, University of Maryland

- Business schools

- Law degrees
Professional Programs

- Law schools
- Business schools
- Medical schools

Example: Steve Sarno (Environmental Policy ’04)
- Attorney
- State and federal civil litigation, with an emphasis on water, property contamination and project development.
- He counsels clients on compliance issues under the Clean Water Act and administrative enforcement actions brought by the U.S. Environmental Protection Agency (EPA)
- Helps companies comply with product stewardship, product take-back, and recycling laws in California and other states.
The State of Fisheries in Maine 2004

Richard M. Crowley

Fisheries: The Issue in Context

Introduction

Fisheries are a global resource, exploited by many different nations with varying levels of effort, monitoring, controls, success in ensuring both biologic and economic sustainability. National agreements, as well as regional and localized management, are ways in which countries attempt to protect their fisheries for current and future harvesting. Despite their economic and environmental value fisheries, particularly in industrialized nations, are often poorly managed, monitored, and fished unsustainably. Many of the world’s fish stocks have been overfished, and others appear to be heading towards similar depletion. A study of 230 different marine fish populations found a median 83 percent reduction in breeding population size from known historic levels. Today’s large consumer species stocks are also much lower than historical levels. There have been surprising finds that typically, industrialized fisheries are in worse condition than non-industrialized fisheries. A 2003 study found that stock biomass is often reduced by 80 percent within the first 15 years of industrialized fishing, and the remaining biomass is typical around 10 percent of pre-industrialization levels. Examples which are often cited when demonstrating this trend are the cod groundfish collapses in the northern Atlantic and the Peruvian anchovy fisheries crash of the 1970’s.

Proper management should be effective at correcting declining fish stocks however fisheries failures still occur with alarming regularity. Fisheries are a complex issue, and although scientists and policy makers understand how single stocks function they may not understand the more complex dynamics of entire fisheries and how they respond to industrialized exploitation. To further exacerbate the complexity of fisheries management, scientific monitoring of fisheries often does not keep pace until after the stock reductions occur. Once management strategies are finally enacted industrialized fishing has often already replenished itself.
Rich Crowley ('05) (left) leads tour for senior Environmental Policy majors ('08) at the Penobscot East Resource Center Fall 2008 with MacArthur “Genius Award” winner Ted Ames (lower right)
Example:
Jeff Carroll & Courtney Larson

- Environmental Studies Majors (’08)
  - Environmental Policy concentration
  - Research Asst. of Prof. Nyhus
- Yale School of Forestry and Environmental Studies (MS-research) (Jeff)
- Colorado State (MS, Courtney; Ph.D., Jeff)
Masters Programs: Advantages

- Professional degree or research degree
- Wider range of professional opportunities, enter at a higher level than with a BA
  - Think tanks
  - Foundations
  - Non-profit organizations
  - International development organizations
  - Government
  - Business (“green economy”!)
- Develop network of personal contacts
- Some schools have applied, consultancy type project build in. Helpful for job searches
Ph.D. Programs

- Disciplinary
  - Political Science
  - Economics
  - Sociology
  - Anthropology
  - History
  - Biology (incl. Conservation Biology, Wildlife Biology, Botany, Zoology, Genetics, Molecular Biology, etc.)
  - Chemistry
  - Geology
  - Public Health
  - Others

- Inter-disciplinary
  - Examples: Nelson Institute for Environmental Studies, U. Wisconsin; Kennedy School of Government; Berkeley ERG; Yale School of Forestry; Nicholas School of the Environment; Michigan School of Natural Resources; Bren School of Environmental Management; Public Policy and Management, University of Washington
  - Opportunity to combine the study of science, policy, and any other combination (history, philosophy, engineering, etc. etc. )
Example: Brendan Carroll

- Environmental Studies Major (’05)
  - Environmental Policy concentration
  - Honors thesis
  - Fateful dinner discussion at Bob’s dining hall about graduate school
  - Visit to graduate school fair at Colby
  - Immediately after graduation enrolled in Ph.D. program, School of Public & Environmental Affairs, Indiana University (fully funded)
- Now Asst. Professor, Leiden University (expertise in comparative public policy, environmental politics and policy, EU governance, interest group advocacy/lobbying, implementation)
Example:
Cait Cleaver

- Environmental Studies Major ('06)
  - Environmental Policy concentration
  - NRCM Action Network Coordinator
- Columbia University Graduate School (MS)
- U-Maine Orono (Ph.D)
- Hurricane Island Institute (today)
Example: Blair Braverman

- Environmental Studies Major ('11)
- Environmental Policy concentration
- Writer
- University of Iowa (MA)
- Awarded prestigious Iowa Arts Fellowship
Ph.D. Programs: Advantages

- Follow your intellectual and research interests at a deeper level
- Mastery of theory and tools of analysis, become an expert, publish
- Opportunities for funding may be greater
- Become a professor!
- Enter other academic professions
- Helpful for some applied professions (e.g., research or leadership positions at think tanks, conservation organizations, businesses)
The Nelson Institute has three graduate degree programs:
- Conservation Biology and Sustainable Development (M.S.)
- Environment and Resources (M.S. and Ph.D.)
- Water Resources Management (M.S.)

Five graduate-level certificates, Ph.D. minors in all of our programs and certificates and additional opportunities for graduate students:
- Air Resources Management
- Culture, History, and Environment
- Energy Analysis and Policy
- Humans and the Global Environment (CHANGE)
- Transportation Management and Policy
- Ph.D. Minors

Inspired by the contributions of Gaylord Nelson, John Muir, and Aldo Leopold, the Nelson Institute focuses on understanding the relationships between people and the planet, and on seeking solutions to environmental problems at all scales.
One school, sometimes many different centers and programs

Centers and Programs

The Centers and Programs, each with a different concentration, are a key component of the FES learning experience. They allow hands-on clinical and research experience by sponsoring student internships and projects, coordinating faculty research in areas of common interest, and creating symposia, conferences, newsletters and outreach programs.

- Center for Business and the Environment at Yale
- Center for Coastal and Watershed Systems
- Center for Environmental Law and Policy
- Center for Green Chemistry & Engineering at Yale
- Center for Industrial Ecology
- Global Institute of Sustainable Forestry
- Hixon Carter for Urban Ecology
- Tropical Resources Institute
- Yale Project on Climate Change
Where did ES Faculty and staff go to graduate school?

- **Philip Nyhus**, Associate Professor of Environmental Studies
  - Ph.D. Land Resources, Nelson Institute for Environmental Studies, University of Wisconsin
  - M.S. Land Resources, Nelson Institute for Environmental Studies, University of Wisconsin
- **D. Whitney King**, Professor of Chemistry
  - Ph.D. Chemical Oceanography, University of Rhode Island
- **Travis Reynolds**, Assistant Professor of Environmental Studies
  - Ph.D., Public Policy and Management, University of Washington
  - M.S., Community Development and Applied Economics, University of Vermont
- **Loren E. McClenachan**, Assistant Professor of Environmental Studies
  - Ph.D., Scripps Institution of Oceanography
  - M.S., University of Oregon
- **Denise A. Bruesewitz**, Assistant Professor of Environmental Studies
  - Ph.D. in Biological Sciences, University of Notre Dame
- **Gail Carlson**, Visiting Assistant Professor and Research Scientist, Environmental Studies
  - Ph.D., Biochemistry, University of Wisconsin
- **Lia Morris**, Environmental Studies Coordinator
  - M.A., Environmental Policy, Tufts University
- **Abby Pearson**, Teaching Assistant, Environmental Studies
  - M.S. in Biology, University of Southern Maine
What have our students found helpful?

- **Courses**
  - General critical thinking, writing, communication, analysis, etc. skills
  - Specific experiences (e.g., GIS, field methods...)
- **Senior capstone experience**: Research, writing samples, in-depth experience, communication skills, etc.
- **Research**
  - With faculty (e.g., during year, summer)
  - Independent research
    - Independent study
    - Honors thesis
- **Internships**
- **Work experiences**
General To Do List

- Define interest (more or less)
  - Now or later?
  - Masters, Ph. D., or both?
- Professional program (you pay), research program (someone else pays, if you are lucky)
- Disciplinary, inter-disciplinary, or professional?
- Speak with Colby faculty about specific programs
- Do own research on programs
- Take the GREs (GMAT, LSAT, MCAT...)
- Write essay - early! Starting thinking about process—Early!
- Request recommendations - early! Remind faculty—we get a lot of requests
- Seek funding (e.g., NSF, Fulbright, NSEP...)
- Contact faculty in the programs of interest - not always necessary, but for Ph.D. strongly recommended (particularly for sciences), read their papers!
Questions?