

Growth in Environmental Studies and Science Programs

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Since the late 1980's the necessity and urgency of implementing strategies to achieve a sustainable future have been broadly acknowledged in the United Nations declarations at Rio (1992) and Johannesburg (2007). The momentum in the global political realm is driving the development of new education programs centered on the concepts of sustainability and the realignment of many current programs toward sustainability as a core principle. Environmental Studies and Science programs are at the forefront of this transition and are experiencing rapid growth both in the numbers of degree programs as well as in enrollment.

The Council of Environmental Deans and Directors, a group of academic programs leaders operating under the University Affiliate program of the National Council for Science and the Environment, sponsored the first comprehensive survey of broadly interdisciplinary environmental programs in the U.S. Conducted in the spring of 2008, the survey included all programs (administrative units) offering baccalaureate and graduate level degree programs named environmental science(s) or environmental studies, and some degree programs with other names such as sustainability, water resources, environmental policy and management, natural resources, and environmental dynamics. The survey population excluded programs that offer only associate degrees or minors/certificates and programs that offer professional and related degrees in specific environmental fields such as conservation biology, environmental engineering or sustainable agriculture.

A census count of programs conducted prior to the survey identified 840 degree-granting programs at 652 institutions that offer 1183 interdisciplinary environmental degrees. Degree programs named environmental science(s) are most common, comprising 46% of all broadly interdisciplinary environmental programs. Another 25% are named environmental studies. The remaining 29% of program names and focus areas vary widely with environmental policy and planning, environmental management and risk analysis, and natural resources management most common. Figure 1 shows the distribution of universities and colleges hosting these programs. The number of institutions per state ranges from 1 (Wyoming and Mississippi) to 59 (New York).

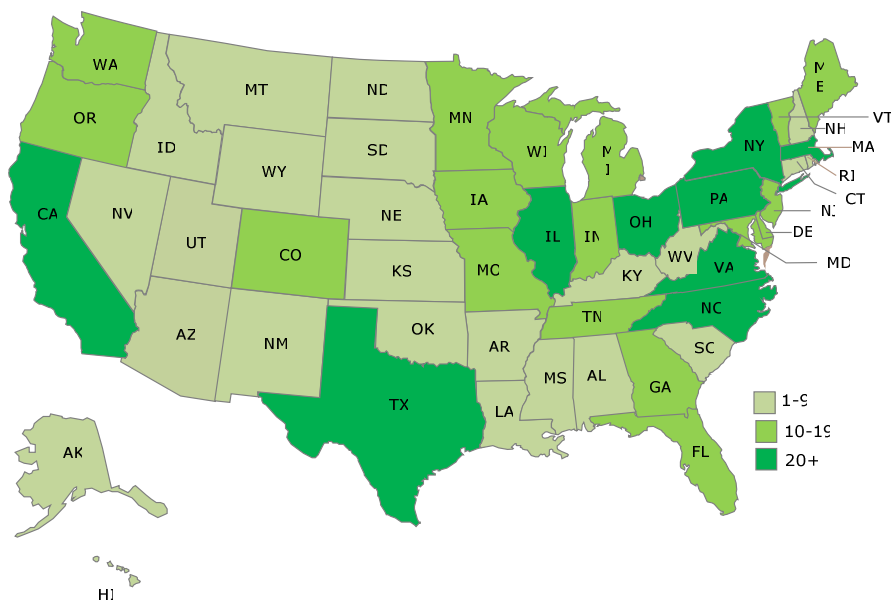


Figure 1. Universities and Colleges offering Interdisciplinary Environmental Degree Programs

The census count indicates 40% of all institutions designated as doctoral, masters and baccalaureate universities and colleges under the Carnegie Classification system offer 4-year and/or graduate interdisciplinary environmental degrees. The percent of institutions offering interdisciplinary environmental degrees ranges from 18% of the

Baccalaureate – Diverse Fields to 91% of the Doctoral/Research Universities – Very High Research Activity. Figure 2 illustrates the percentage of institutions within each class that offer at least one interdisciplinary degree.

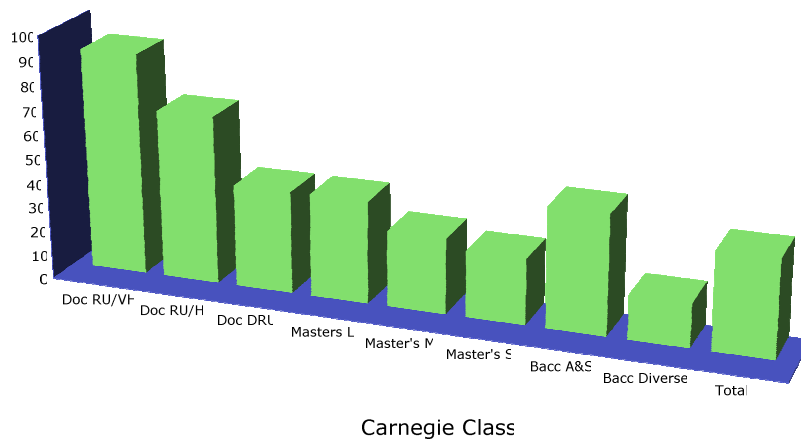


Figure 2. Percent of Institutions by Basic Carnegie Class offering Interdisciplinary Environmental Degree Programs

A total of 260 program administrators participated in the survey for a response rate of 31%. The sample was sufficient to meet statistical validity assumptions for measuring program attributes and for measuring low to moderate correlations between attributes.

The representativeness of the sample was investigated by comparing proportions in the sample data against program data collected for the entire target population. Four parameters were tested: institution basic Carnegie class, institution census division, institution control (public or private not-for-profit), and program degree types (name/level). The sample was found to be representative for all four parameters.

The CEDD survey shows that the last two decades have seen extraordinary growth in the creation of new educational programs; two-thirds of the programs included in the survey were established after 1990 and about a quarter since 2001. These findings are in contrast to the National Wildlife Federation’s Campus Environment 2008 Report, which reported a decrease in environmental and sustainability studies majors.¹ The 2008 NWF survey of university and college administrators reported 38% of the institutions surveyed offered an undergraduate major in undergraduate environmental or sustainability studies and 28% offered an interdisciplinary degree program in environmental or sustainability studies compared to 44% offering majors in 2001 (4-year degree programs). The discrepancy may be explained by differences in the two NWF surveys. The 2001 survey included a single question: “Does your campus offer an undergraduate major in environmental or sustainability studies?”² The 2008 survey included that question and an additional question: “Does your campus offer an interdisciplinary degree program in environmental or sustainability studies?” The sum of the positive responses for the two questions on environmental degree programs is 66%, which may indicate an increase of 22% over 2001, similar to the CEDD survey findings.

Interestingly, employer demand/employment opportunities are cited less frequently than other factors leading to program establishment. This is especially true for undergraduate programs, where only private donor/endowment is cited less frequently. Both undergraduate and graduate programs report that faculty initiatives and student demand are leading factors for establishing new programs. Response to local/regional environmental concerns is

¹ National Wildlife Federation. 2008. Campus Environment 2008: A National Report Card on Sustainability in Higher Education, <http://www.nwf.org/campusEcology/docs/CampusReportFinal.pdf>.

² National Wildlife Federation. 2001. State of the Campus Environment: A National Report Card on Environmental Performance and Sustainability in Higher Education, <http://www.nwf.org/campusEcology/docs/pdfs/stateofcampusreport/topline.pdf>

frequently given as a reason for the creation of graduate programs, while the development of undergraduate programs is more likely a response to national/global environmental concerns or administrative initiatives.

The majority of programs report enrollment growth; 58% report a growth trend in enrollment from 2003-08 and another 29% reported steady enrollment for that period (Figure 2). Only a few programs, 13%, report a decline in enrollment. Anecdotal evidence suggests that this trend is accelerating; several programs that reported steady enrollment in the survey say they experienced large jumps in enrollment during the fall 2008 semester. In a *New York Times* Green Inc. blog post, "Environmental Studies Enrollment Soars," dated February 28, 2009, Kate Galbraith also notes several programs with surging enrollments.

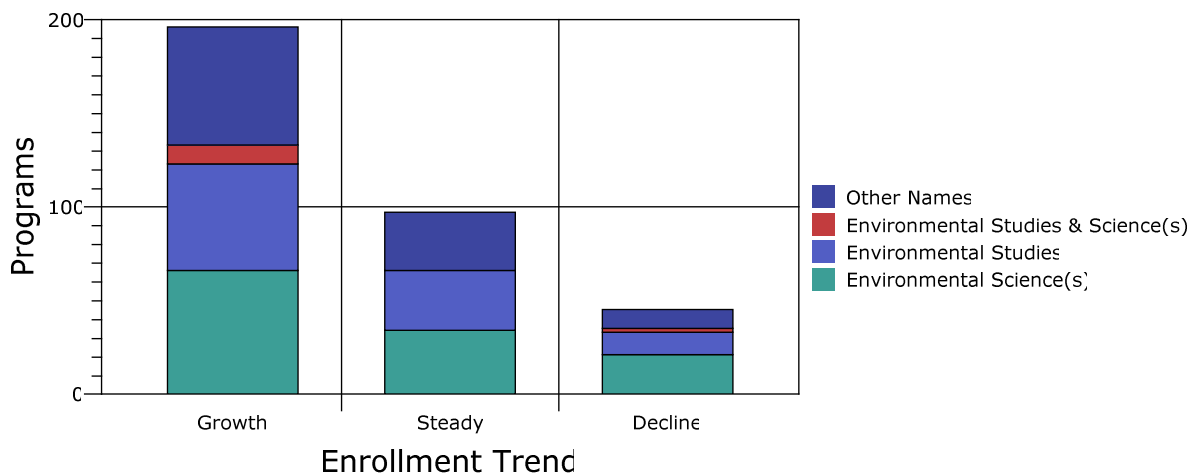


Figure 3. Enrollment Trend by Degree Name

The survey indicates that although there are more undergraduate environmental science programs, they tend to have fewer students than environmental studies or environmental programs with other names. Undergraduate environmental science programs have an average enrollment of 26 students versus 54 for environmental studies programs and 56 for other programs. This results in a significantly greater number of environmental studies graduates each year, a trend confirmed by data from the U.S. Department of Education Integrated Postsecondary Data System (IPEDS). Graduate programs report average enrollments of 25-35 students with environmental studies programs tending toward slightly higher number of students than other programs. However, there are only a few environmental studies graduate programs, so most master’s and doctoral level graduates hold degrees in environmental science or other areas.

Extrapolating data from the survey and the census count indicates there were an average of approximately 33,000 undergraduate students and 9,000 graduate students enrolled in broadly interdisciplinary environmental programs each year during the period 2003-08. On average, approximately 10,000 students graduated with baccalaureate degrees, 3,000 with master’s degrees, and 500 with doctorate degrees each year.

Demand is high for the graduates of environmental science and studies and related programs, and student interest in these programs is growing. The U.S. Department of Labor projects a 25% increase in the number of environmental scientists and specialists positions by 2016 and the online job site search engine SimplyHired.com indicates a large number of current postings (>125K) for environmental positions. Recent articles in the *New York Times* report an emerging trend toward more students choosing careers in public service, government, teaching, and the sciences.³ In addition, the Princeton Review 2009 survey indicates students are expressing more interest in environmental issues; 66% said they would include an institution’s commitment to environmental issues

³ Lohr, Steve. 2009. Crème de la Career. *New York Times*, April 12, Week in Review Section and Rimer, Sarah. 2009. Community Organizing Never Looked so Good. *New York Times*, April 12, Sunday Styles Section.

(including academic offerings) in their assessment of which college to attend.⁴ Together, all of these indicators plus an increased focus on environmental issues in the media and within the Obama administration portend continued rapid growth in environmental studies and science and related interdisciplinary environmental programs.

⁴ Princeton Review. 2009. College Hopes & Worries Survey - 2009, <http://www.princetonreview.com/college-hopes-worries-2009.aspx>.