Stewarding the Earth:  
Commentary on Resource and Environmental Geographies in the West

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Introduction

In many ways, the West is inextricably bound with resource and environmental studies. Obviously, part of the explanation comes from the explicit governmental contract given to western land-grant universities to research and teach resource studies, while other components of this strong connection result from the historical struggles over appropriate use of the vast public lands that characterize all western states. John Muir’s resistance to Hetch-Hetchy reservoir and his formation of the Sierra Club come readily to mind, as do the more recent controversies over grazing rights on BLM land or timber harvesting on national forests.

Since geography is often defined as the only academic discipline that foregrounds the interaction between humans and the environment, it is reasonable to expect that our discipline would play a central role in resource and environmental studies. Further, one might expect this interest to be particularly manifest in geography departments in the western states. But is that the case?

This paper attempts to evaluate geography’s involvement in resource and environmental studies in the eight western states (including Alaska and Hawai‘i) of the APCG region. Given that 30 years have passed since Earth Day 1970, with its frenzy of environmental activities, new courses, and departments that many wrote off as a passing fad, today we might expect to see a more settled, even mature academic landscape of resource and environmental studies. The underlying current driving this article, then, is to probe into the magnitude and structure of the different ways geography departments in the West are involved with resource and environmental studies. Beyond taking tally of this activity, my goal is also
to offer suggestions as to how geography can be a more active and efficacious contributor to this important interdisciplinary field.

This article has the following shape. I begin with a few personal words about my involvement in both geography and environmental studies, which is necessary to situate what I write, as well as for my interpretation. Second, I comment briefly on the state of resource studies before Earth Day 1970; this is followed by a discussion on what transpired immediately following that historical watershed. From this overview, I move to the present by examining comparisons in size between geography and environmental studies. After that is commentary on how geography departments in the APCG region are involved in the teaching of resource and environmental studies. I conclude with a reminder to geographers of how we might contribute more effectively to resource and environmental studies, given that many of the paradigmatic perspectives we take for granted in our discipline are now valued and central to the teaching and study of environmental issues.

I came to geography in the late 1960s to do environmental studies. While I have been outspoken at times over geography’s lack of activity and engagement with environmental issues, I quickly add that I have never regretted my decision. Like many, I found in geography a potential for breadth and synthesis that was restricted and even suspect in the other earth and natural sciences I studied as an undergraduate. Over the past 30 years, I have resided and taught in both separate and combined departments of geography and of environmental studies, and, as a consequence, have also spent time and energy attempting to bridge the gap between the two. Most recently, I have been the chair of an independent department of environmental studies that was created shortly after Earth Day 1970. My view, however, is wider than my own local experiences since I have served on numerous external review committees that have evaluated both geography and environmental studies departments. From these 30 years of accumulated experiences, I conclude that geography as a discipline could and should be more involved with resource and environmental studies. I will return to that point later.
A Historical Note: Resource and Environmental Studies
Before and After Earth Day, 1970

To understand the widespread changes in resource and environmental curricula that followed Earth Day 1970, we must first take a brief look at what was offered earlier, during the 1960s. Within geography departments, resource issues were commonly treated as a subset or outgrowth of economic geography, thus were couched within an economic paradigm. Apparently many geography departments in the APCG region had these kinds of resource courses as regular offerings. Beyond geography, natural resource departments (such as forestry, fisheries, or range management) were often closely tied to industry through funding, research topics, and viewpoints. Critical and contrary commentary on resource/environmental matters was less common than we demand today, which is perhaps understandable given the historical momentum and agenda of land-grant universities. Often these pragmatic concerns about public natural resource issues reinforced (or even defined) the historical distinction between a state’s “university” and its “college.” The study of forestry and fisheries resources, for example, was initially confined to the Oregon State College at Corvallis, while the academic “sciences” were the purview of the University of Oregon at Eugene.

A distinctly different approach to the then-prevailing approach to resource geography was taken by Dan Luten, a research chemist from Shell Oil who took early retirement to become a lecturer in the Geography Department at UC Berkeley in 1961 and remained there until 1974. After several years of teaching the basic natural resources course, he added new issues-oriented courses to the curriculum on population, water and energy resources, endangered species, and open space—courses that presaged the explosion of interest in environmental topics accompanying Earth Day 1970. His courses, always well enrolled and highly regarded, combined rigorous analysis grounded in data with critical thinking. Little question that he produced a first generation of students, both undergraduate and graduate, within and outside of geography, who were often central figures as curriculum change agents in the post-Earth Day 1970 milieu. As Vale (1986, ix) writes, “During the 1960s and 1970s, no natural resource geographer on the West Coast influenced people more than
Daniel B. Luten. His work revealed an unusual blending of technological expertise and humanistic competence."

Building upon the groundswell of public concern with environmental issues that was articulated in Earth Day 1970 activities, several universities and colleges acted quickly to legitimize this interest with what became the first generation of environmental studies departments. Notable examples on the West Coast were new departments at San Jose State, Sonoma State, UC Santa Barbara, UC Santa Cruz, and Western Washington University. While the biographies differ highly between these different colleges and universities, with a few notable exceptions, geographers were not the prime movers behind this new environmental curriculum. Instead, instigation and inspiration came from a variety of other sources; from biologists, physicists, chemists…even historians and anthropologists.

Why was geography largely absent from this curricular sea-change when the content under discussion was so close to the core of our discipline? Answers and explanations are complex and probably differ widely from place to place. However, if we are not to repeat our mistakes, some explanation is necessary. Readers of Thomas Kuhn might remind us that paradigmatic change most often comes from the margin, not from the core. Perhaps geography was too close to the topic to see the significance. While this is indeed a lofty defense, a secular interpretation is needed. Less politely stated (and here I fall back on an anecdotal record that will not be cited), some geography departments saw no need for environmental studies departments or courses because, they argued, geography was already teaching courses about resource and the environment. Given the subsequent course of events, this seems to have been a weak argument.

Another problematic vector was that many geographers felt uncomfortable with the widespread environmental activism in the early 1970s and considered it unfitting for their academic cloister. We are scientists, they argued, producing objective knowledge about the environment. Let others take to the streets to advocate recycling or tree hugging or whatever. Perhaps this reaction to activism and political expression built upon the earlier turmoil within geography resulting from the urban crisis of the late 1960s. As our cities burned
from ethnic unrest, geographers debated personal and professional strategies for political action; these debates often consumed national and regional meetings. Perhaps battle fatigue (or simply overload) kept many geographers from engaging with the latest in an enervating series of crises during the late 1960s.

Regardless of the explanation, unfortunately, in many cases a new battleground of sorts emerged upon which an often antagonistic relationship was played out between geography and this new generation of environmental studies departments. But that was 30 years ago.

A Brief Overview of Resource/Environmental Studies Today

Environmental and resource studies have grown steadily since Earth Day 1970, with new departments and new degrees being created still today. Although there is no directory of these fields similar to the AAG directory of geography departments, my inquiries on the Internet lead me to believe that there are roughly the same number of environmental studies programs as geography departments in the eight western states of the APCG. Further, the number of faculty in these departments is also similar. As is the case with geography, most environmental studies departments have about 10 faculty members. While some are smaller with closer to 5, only a few have 15 or more. As would be expected in interdisciplinary programs, these faculty come from a variety of fields in both the natural and social sciences. Ecological and conservation biology are particularly well represented, followed by faculty with degrees in physics, chemistry, geology, engineering, urban and regional planning, law, geography, and political science. In addition to tenure-track faculty, environmental studies departments commonly employ adjunct or temporary faculty from the professional world to teach applied courses in topics such as environmental impact assessment, environmental planning, and environmental law.

While environmental and resource degree programs share similarities with the number and size composition of geography departments in the West, when it comes to student enrollments, the comparison ends. Instead, environmental programs seem to enroll twice as many students as does geography. Granted, the data on
President’s Plenary Session: Geography’s Contribution

resource and environmental enrollments is less firm than that for geography; however, my own experience—coupled with reliable information from other professionals involved with the field—leads me to this conclusion. To illustrate, at a national level the largest introductory geography course enrollments are in two courses—physical and world regional. Each enrolls about 115,000 students annually. In contrast, introductory environmental studies courses enroll about 250,000 each year. The number of students who major in resource and environmental studies is also higher than for geography; in fact this number is almost double that of geography. From the AAG directory, one concludes that the typical APCG geography department counts between 70 and 100 majors. A few have more than 150 majors, but only one large university department (University of Washington) has more than 200 majors. By comparison, environmental studies programs—often those with a faculty of fewer than 10—often have 200 or more majors. Numbers such as 300 and 400 majors are not uncommon for some (usually larger) environmental studies departments.

While in no way do I belittle or dismiss the vitality of geography programs across the country that are also growing in enrollments, number of majors, and faculty size, I think it reasonable to conclude this brief overview with a word or two that attempt to explain the apparent success of these new interdisciplinary resource and environmental programs. Several converging vectors offer us insight. First, there is a large number of interesting and reasonably well-paid jobs in the environmental professions. Given the broad spectrum of environmental careers, it follows that there are more job opportunities for students graduating with a resource or environmental studies degree than for the relatively small number of BA or BS geographers. While geography students are often typecast into GIS or cartography positions, in contrast, environmental studies students can draw upon a larger number of career pathways in jobs such as environmental impact assessment, ecological restoration, energy or water resources, integrated waste management, environmental health and safety, and environmental planning. Of course, many of these jobs have come about only in the past decade with the maturation and refinement of federal, state, and regional
environmental regulation. Further, the number of jobs for environmental studies majors differs from state to state, depending on the strength of local and regional environmental regulation. But as a result of this strong job market for environmental professionals, most environmental studies programs now place a high emphasis on specific skills linked to these careers. As a result, most resource and environmental studies curricula are very different today than they were in the 1970s. No longer does the stereotype of the flaky, tree-hugging environmental studies major fit. Instead, he or she usually chooses the major because it prepares him or her for an interesting and rewarding career where job opportunities abound.

Collaboration and Connections: Interaction of Geography Departments with Resource and Environmental Studies

The most recent AAG Directory contains information on 33 geography programs in the eight APCG states. Additionally, an Internet search provided information on four more departments not listed in the AAG Directory. These two sources, then, offer some information about the curriculum of 37 departments and programs, which then constitutes the population for the following examination.

Of these departments, 68 percent make explicit reference to either “resources” or “environment” in their departmental description, which to me shows a laudably strong involvement with resource and environmental geographies. That said, I also found it somewhat frustrating that slightly more than half of these departments actually provided detailed information on specific resource or environmental courses or degree tracks. Given the large number of students who might be interested in environmental geography, I urge departments with such programs to provide more details about environmental options on their Web sites.

Before going further, a word or two is necessary about the 12 departments that did not list resource or environmental geography in their descriptions. Are these departments that have been shut out of environmental offerings at their colleges by separate environmental studies departments? Is there mutual exclusivity? Yes and no. Less than half (five) of these departments are on campuses where
there is an independent environmental studies department. One conclusion is that there is far more collaboration and coexistence than exclusivity.

The most common means of working resource and environmental studies into geography curriculum is to provide an environmental concentration, track, or certificate within the geography degree. This is done in 13 geography departments in the APCG region. San Diego State, for example, offers a track in Resource and Environmental Geography; San Francisco State a specialization in Environmental Planning; Humboldt State a pathway; CSU Fullerton a concentration in Environmental Analysis; CSU Long Beach a certificate in Environmental Studies (as do both the Hilo and Manoa campuses of the University of Hawaii). Additionally, three other geography departments (Alaska, CSU Hayward and CSU San Bernardino) offer a separate interdisciplinary degree in environmental studies.

Conclusions: Improving the Interaction Between Geography and Resource and Environmental Studies

Although there is currently considerable involvement and interaction between geography and resource/environmental studies in the APCG region, I believe there is still room for improvement. In that spirit, and because I firmly believe that geography should be more involved in resource/environmental studies, let me offer a few words as to what we in geography can do to improve this interaction. I begin with a reminder of those perspectives common to geographic research and teaching that are also valued in interdisciplinary environmental problem-solving, research, and curriculum.

- **Science and Society.** Given our eclectic and interdisciplinary training, most geographers are reasonably knowledgeable about both sides of the resource/environmental equation, be it science or social process. Clearly this is central to teaching about resource and environmental issues. Even though our academic colleagues in, say, biology or geology are increasingly willing to talk about the human side of this equation, their sophistication with such matters often leaves much to be desired.
• **Human Impacts and Human Dimensions of Environmental Change.** While this theme has long been central to geography, only relatively recently have other environmental disciplines integrated these precepts into their conceptual and analytic frameworks. Need more be said?

• **Temporal Depth in Environmental Change.** Once again, a common theme in geography—that of studying environmental change over longer periods of time in order to tease out process and causality—is now coveted in environmental and resource studies. The fact that the National Science Foundation had to fund a special Long Term Ecological Research (LTER) initiative tells us how neglected this viewpoint has been in biological science.

• **Scalar Flexibility: Local to Global.** Geographers have long been skillful at changing scale as our research or pedagogic analysis demands. We move adeptly between the micro and the macro, from the local to the global. This scalar flexibility is critical in environmental problem-solving as we see, for example, the involvement of global institutions (such as a transnational corporation) deeply entwined with local environmental issues (such as timber harvesting). Additionally, as we see increased interest in the landscape scale of analysis by environmental scientists of all ilk, we are reminded of the vitality of that familiar geographic approach.

These perspectives can be easily made more explicit in a broad range of geography courses, both thematic and regional. Introductory physical geography, with its emphasis on process and synthesis of environmental systems, is an obvious complement (if not an outright necessity) to resource and environmental studies. At the advanced level, biogeography is particularly relevant, given that this course often examines the human modification of plant communities (through fire, for example) at the landscape or ecosystem scale of analysis. This perspective is highly valued in environmental restoration and habitat management planning. Beyond physical geography, thematic courses on population geography or world food issues are also important “bridges” to resource and environmental studies. Focusing regional courses on specific environments such as
coastal, mountain, arid or public lands adds much to the curriculum by combining physical geography with human settlement and land-use issues.

In his 1987 AAG presidential address, “The Human Environment: The Road Not Taken, the Road Still Beckoning,” Robert Kates urged geographers to pay more attention to environmental issues. Gilbert White repeated this theme in an Earth Day 1990 plenary address that coincided with the AAG Toronto meetings. Where are we in the year 2000, some 30 years after the first Earth Day? Based upon my survey of geography departments in the eight APCG states, I conclude that while there is laudable involvement in the ways geography departments interact with resource and environmental studies, there is still considerable room for improvement. While in some colleges and universities geography departments are central players in this exciting and vital interdisciplinary endeavor, in most western institutions of higher education we are not. Further, the trajectory is not good as resource and environmental studies move increasingly toward a more science-based professional curriculum resulting in a BS degree. Here, other disciplines (namely biology and geology) have the momentum. I hope that geographers throughout the West might see the wisdom of addressing this challenge with an agenda of collaboration and cooperation that keeps (or even brings) geography to the resource and environmental table for the early 21\textsuperscript{st} century.

Endnotes

1Since I did not do a systematic nor structured assessment of college catalogs from the 1960s but instead drew upon anecdotal information from several individuals who were involved in such matters at that historical juncture, this segment of my essay may be subject to challenge. But I encourage those with additional information to contribute.

2Luten, it should be noted, was president of the APCG in 1971–72.

3Paul Ehrlich, author of the 1968 bestseller, The Population Bomb, is reported to have drawn a crowd of over 10,000 to his Earth Day talk at Iowa State University.
Much of my information about environmental studies enrollments comes from reliable sources in the publishing industry, namely authors, editors, and sales managers. Given the competitive nature of that industry, I think it best that these sources remain nameless.

Until recently, our modest-sized Department of Environmental Studies at San José State, with a faculty of eight, counted more than 400 majors. Since our neighboring departments at Sonoma State and UC Santa Cruz capped their majors at 200, and because the university was ambivalent about our high student-faculty ratio, this number now is close to 200.

Having recently looked at (or tried to examine) all 37 geography department Web sites, I am struck by how widely they differ in content and value. More to the point, I urge departments to pay a bit more attention to their Web sites, because we know that when students start shopping for undergraduate programs, the Internet is their first stop. Departments that do not have current Web sites or that do not depict their offerings in full are doing themselves a disservice.

As an illustration, I suggest readers review the demography section of the AP Environmental Science course that was written primarily by biologists and geologists.

References Cited