

Alumni of UF's Tropical Conservation and Development Program: A Profile

Marianne Schmink¹, Carly Voight², Pedro Constantino³ and Raissa Guerra⁴

DECEMBER 2009



TROPICAL CONSERVATION
& DEVELOPMENT PROGRAM

¹ TCD Director and Professor of Latin American Studies and Anthropology, UF

² TCD alumnus with a Master's degree in Latin American Studies, now GIS & Conservation Data Coordinator for The Nature Conservancy at the Disney Wilderness Preserve, Kissimmee, FL.

³ Master's student, School of Natural Resources and the Environment, UF

⁴ Ph.D. candidate, School of Natural Resources and the Environment, UF

Background and Introduction⁵

The Tropical Conservation and Development (TCD) Program was established at the University of Florida (UF) in the 1980s to train students for careers in conservation and development. TCD's mission is to bridge theory and practice to advance biodiversity conservation, sustainable resource use, and human well-being in the tropics.

The roots of the TCD program go back over thirty years of evolving interdisciplinary initiatives at the University of Florida. Gradually becoming more formalized, the program has maintained its focus on experimenting with new courses and learning approaches.

- During the 1970s and 1980s, several very active precursor programs that focused on the Amazon and tropical conservation fed into the current TCD Program. These early efforts set a tone for the program that resonates until today – involvement by faculty and grad students across the UF campus; support for student research; development of team-taught core courses (e.g. Amazon seminar); and strong interactions with a network of researchers and practitioners around the world, publishing an Amazon Research Newsletter and a Roster of Amazon Researchers
- In the late 1980s, major new grants provided fellowships for students from Latin America and the Caribbean through an integrated TCD program including students in both the social and biological sciences. Substantial field-based research and training programs were established in Latin America (Acre, Brazil; Loreto, Peru; Southern Cone) and the program developed unique skills courses (e.g. Conflict Management) and other learning activities such as the weekly Tropilunch student-run seminar and student-run workshops, while consolidating a strong network with partners overseas.
- In 1999-2000, the TCD program entered a new formal phase with an endowment fund (\$2 million from the Ford Foundation, matched by \$2 million from the State of Florida), faculty appointed to TCD, and an established interdisciplinary curriculum. The endowment and the addition of core faculty allowed TCD to consistently fund and support student research and graduate training, as well as innovative activities that complement traditional academic training, such as returning research results, practitioner experiences, student-led workshops, annual retreats and orientations. Significantly, the endowment also served to leverage additional complementary funding to support new research and training initiatives on- and off-campus, allowing the program to expand its activities into Africa.

⁵ The authors are grateful for helpful comments and suggestions from Emilio Bruna, Claudia Romero, and Flávia Leite.

Over this long history, more than 400 students have participated in some way in the TCD and other closely related programs (Amazon Research and Training Program (ARTP), Program of Studies in Tropical Conservation (PSTC), Working Forests in the Tropics (WFT), Amazon Conservation Leadership Initiative (ACLI)).

TCD Alumni Survey: Overview of Results

As part the process of developing a strategic vision for TCD, in 2008 TCD reached out to as many former students as could be contacted, in order to gain feedback from alumni on the program, obtain information on alumni's current positions, and learn how alumni might be actively involved in the TCD program. A web-based survey of TCD alumni from May 21, 2008 to July 31, 2008 led to 174 responses (69% of the 252 alumni for whom we had valid email addresses). The alumni survey complemented an earlier survey (2004-2005) of TCD current students, in which respondents expressed strongly positive assessments of the program. The sample includes eleven current students, who completed one graduate degree with TCD and are now pursuing a second degree at UF or elsewhere. The results of the alumni survey, which are reported here, are being used in program reporting and advertising, curriculum improvement, and alumni networking and involvement.

The results of the alumni survey provided a wealth of information about alumni (their ages, gender, and national origins; participation in TCD programs and UF departments; self-definition as biophysical or social scientists, or a mix of the two; current work), as well as their opinions on the program's past training and future priorities. In order to explore the different experiences of TCD alumni, the study compared results among alumni from different countries, different UF departments, participation in different programs, and self-definition along the interdisciplinary continuum. The analysis also compared responses among three cohorts of alumni according to the period when they completed their degrees: 1980-1989; 1990-1999; and 2000-2008.

The results provide a profile of TCD alumni: there were roughly equal numbers of women and men, average ages in the 40s, who initially studied primarily in six departments at University of Florida (Anthropology, Latin American Studies, Wildlife Ecology and Conservation, School of Forest Resources and Conservation, School of Natural Resources and the Environment, and Geography) but in an increasing diversity of departments over time. The study also revealed some differences in these experiences for alumni from different national origins. Students from the U.S. were more likely to be in Anthropology, while those from Latin America were more commonly in Wildlife Ecology and Conservation, and Latin American Studies. Program financial support favored fellowships for Latin Americans, and research and other funding for U.S. students. Following their graduation, U.S. alumni were far more likely to work in

universities and government positions, while Latin Americans worked primarily in universities and non-governmental organizations (NGOs).

The interdisciplinary profile of TCD alumni evolved over time. Most alumni characterized their graduate training as a mixture of social and biological sciences, but their responses evolved from an emphasis on biophysical training in the first period, to more mixed in the second period, and even more emphasis on social science training since 2000. Students in the ARTP program were more likely to be social scientists, whereas those who participated in the TCD and PSTC were the most mixed; alumni who participated in the WFT program were the least mixed, with roughly equal numbers of alumni identifying themselves as primarily biological or social scientists, and ACLI participants were the least likely to identify themselves as social scientists. In their current work positions, most alumni reported themselves as doing a mix of both kinds of science, with more reporting primarily social science work than biophysical.

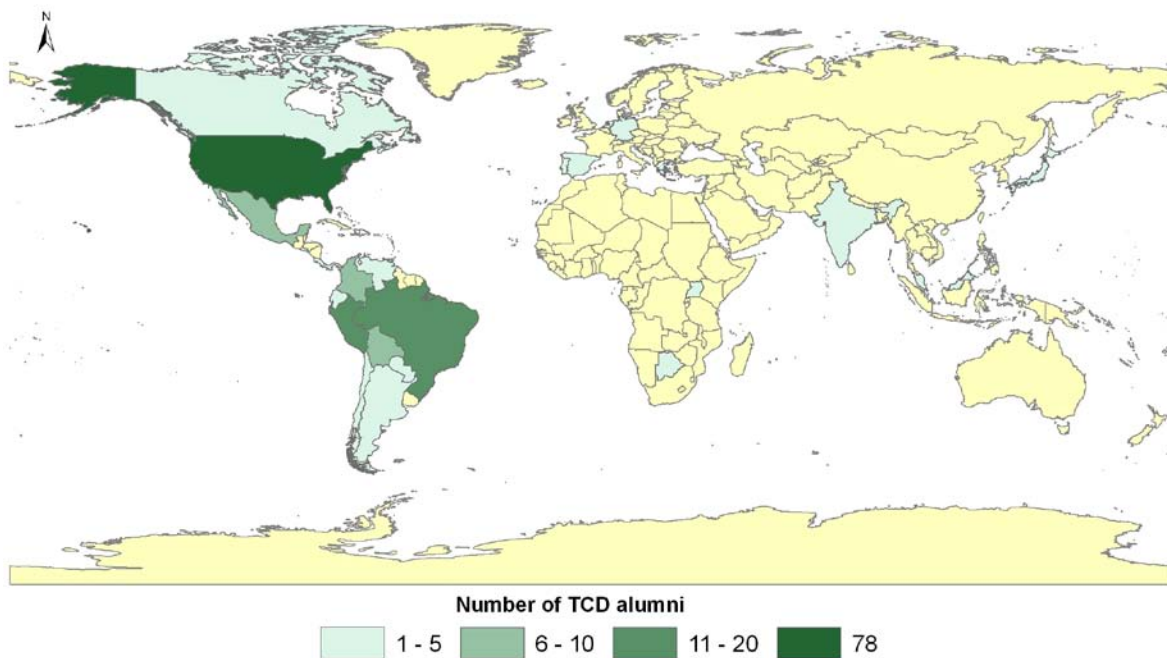
The survey findings support current directions of TCD program activities that build on strengths in skills training, and in ways to bridge across disciplines, between theory and practice, and across ethnic and cultural boundaries. Some current activities and directions include:

- The program is diversifying recruitment strategies to attract students from different countries where faculty and programmatic strengths exist, with a special emphasis on developing a TCD program in Africa. In 2009 TCD had five active new funded projects in collaboration with universities in southern Africa, as well as funded collaborative programs with five other universities in Brazil, Peru, and Mexico. Specific funding efforts were underway to recruit students from universities in the southern cone countries of South America
- The program continues to stress interdisciplinarity as well as thematic and geographic diversity, and to address emerging key issues such as climate change, environmental services, water, and energy.
- TCD continues to experiment with new ways to incorporate training in the non-academic skills that have proven valuable in alumni's post-graduation work, especially for those working outside the U.S. A new for-credit Practicum course, instituted in 2009 provides more structure for students to practice these skills as part of their academic coursework.
- TCD will host an international conference on "Bridging Conservation and Development in Latin America and Africa: Changing Contexts, Changing Strategies," January 28-30, 2010
- In August of 2010, TCD will begin a new Master's program in Sustainable Development Practice (MDP), funded by the MacArthur Foundation as part of a global MDP network of universities

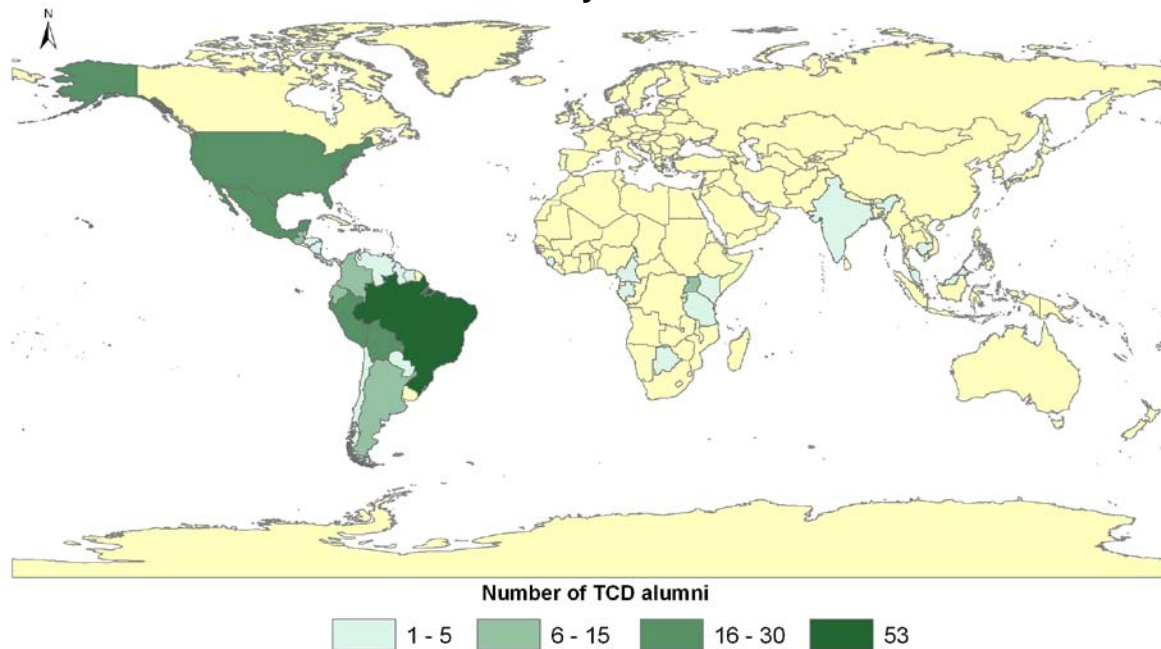
Background Information on TCD Alumni (See tables and graphs in Appendices for more details of methods and results)

The 166 TCD alumni who reported their nationality came from 27 different countries, but over 75% came from five countries: the largest proportion (46.4%) were originally from the U.S., followed by Brazil (10.7%), Peru (7.7%), Mexico (5.4%), Bolivia (3.6%), and Colombia (3.6%). The maps below show the distribution of alumni by country of origin, as well as the country where they carried out their research. The top five countries where research was carried out are similar to the top five countries of origin, however in a different order (see map below and table in Appendix B). Although partially a result of TCD alumni origin, the representation of countries where TCD alumni conducted their research also may be due to the TCD curriculum and the countries where various TCD professors conduct their research.

Nationality of TCD Alumni



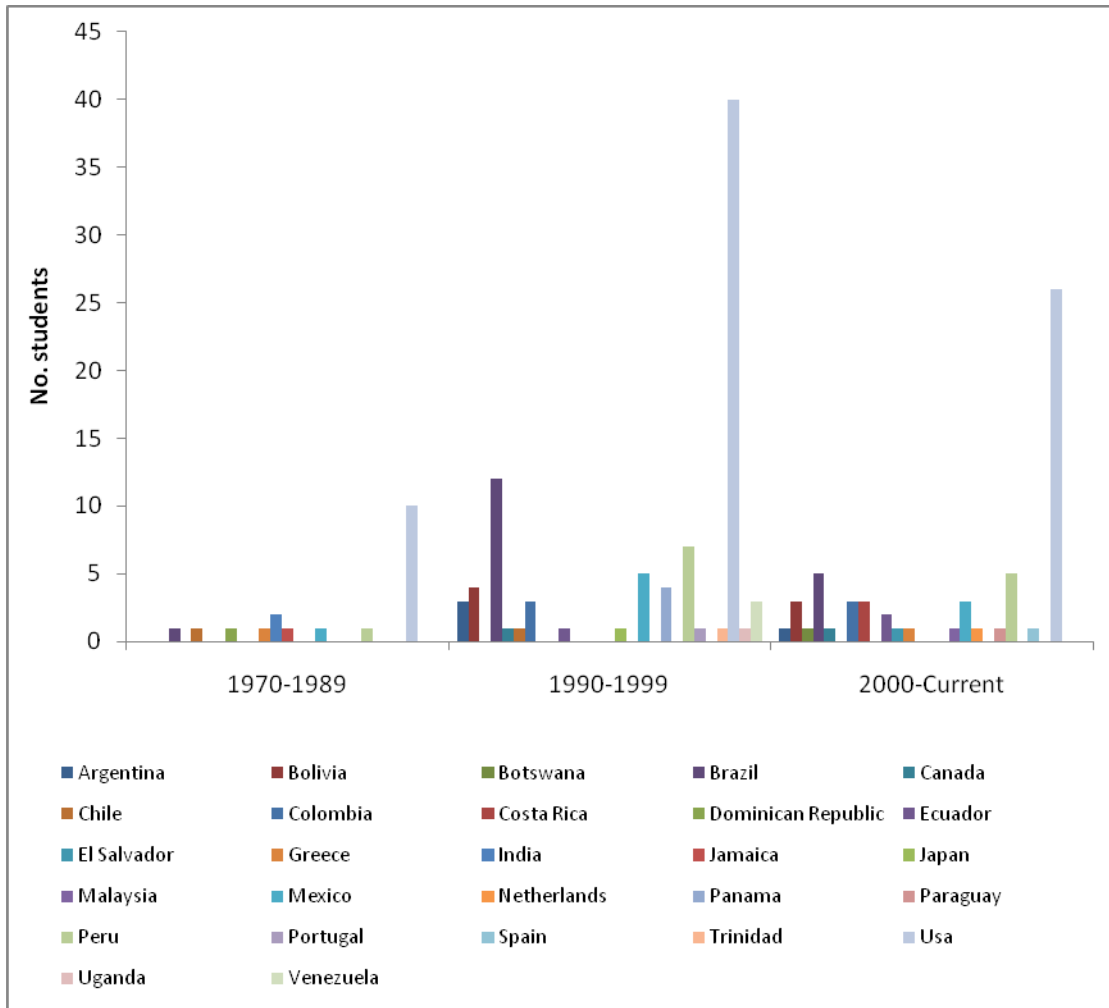
Research Country of TCD Alumni



The majority (58.7%) of TCD alumni have remained in the USA after graduating. Other alumni are currently working in Brazil (8.7%), Mexico and Bolivia (4.7% each), and Peru (2.9%), as well as 23 other countries (Appendix D): 24% live in South America, 8% in Mexico or Central America, 2% in the Caribbean and others in Africa, Australia, and Europe (Appendix D).

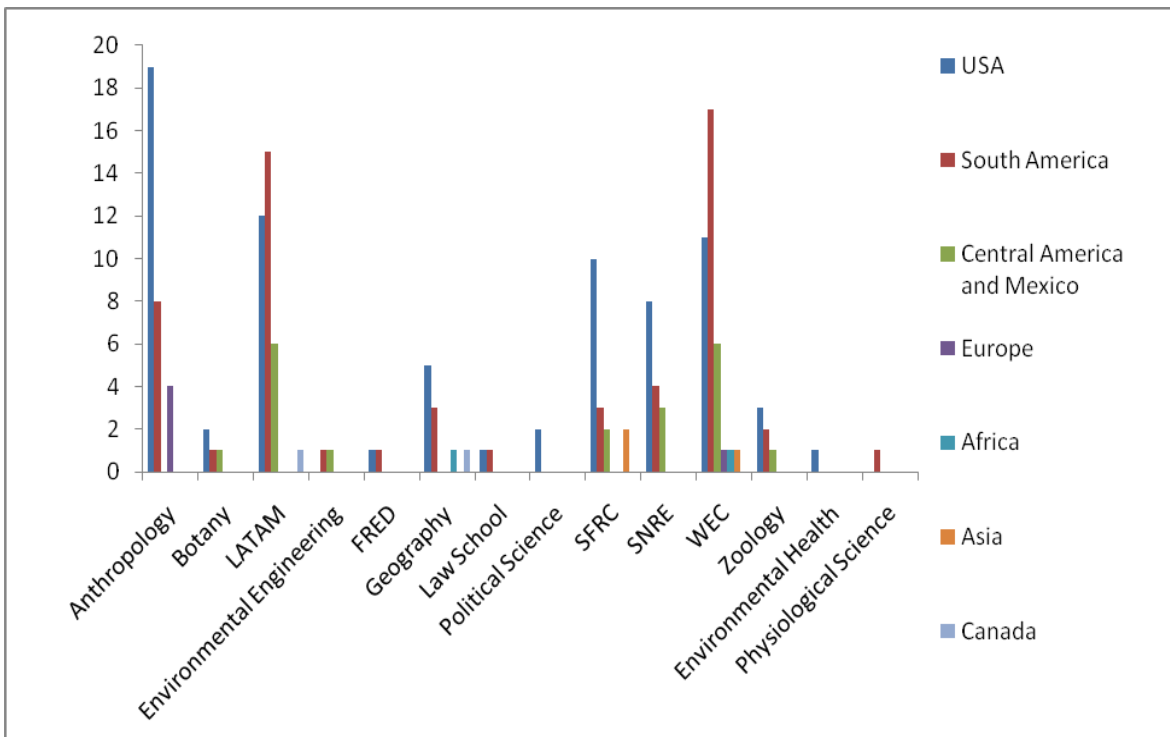
The country origins of TCD students shifted somewhat during the program's different phases. During the first period (1970-1989), the majority came from the U.S. (10 students) and India (2), and one each came from 7 other countries. In the second period (1990-1999), the majority of the students were again from the U.S. (40) and secondly from Brazil (12), but the countries of origin became more diversified (nine countries in total). Other countries with five or more alumni during the second period included Mexico (5), Peru (7), Bolivia, Panama (4 each), Argentina, Colombia, and Venezuela (3 each). During the third period (2000-2006) the majority of students (26) continued to come from the U.S., along with Brazil (5), Bolivia, Mexico, Colombia and Costa Rica (3 alumni each). The 63 TCD alumni who had completed a Ph.D. degree came from 15 different countries, with a predominance of the U.S. (35), followed by Brazil (6), Peru (5) and Mexico (3).

Country of Origin of TCD Alumni by Period of Study



TCD students from different countries have been enrolled in different departments. U.S. students were more likely to be found in the Anthropology program, followed by Latin American Studies (LATAM), Wildlife Ecology and Conservation (WEC), the School of Forest Resources and Conservation (SFRC) and the School of Natural Resources and the Environment (SNRE). South American students were more often enrolled in the WEC and LATAM departments. Students from Mexico and Central America were more likely to be part of LATAM, WEC, SNRE and SFRC. Overall the Anthropology, SFRC and SNRE departments had many more TCD students from the U.S., while LATAM and WEC received more TCD students from South America and the U.S.

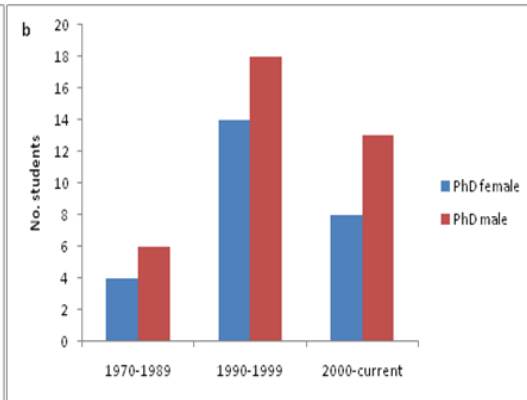
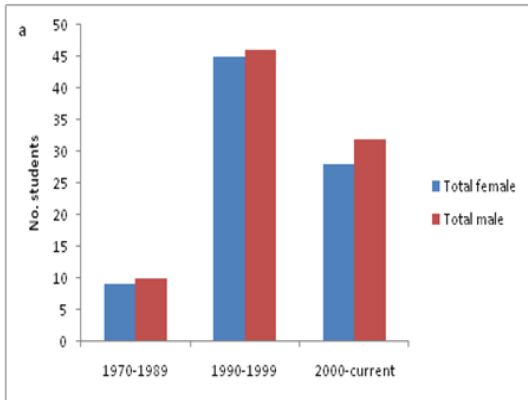
Region of Origin of TCD Alumni by UF Department



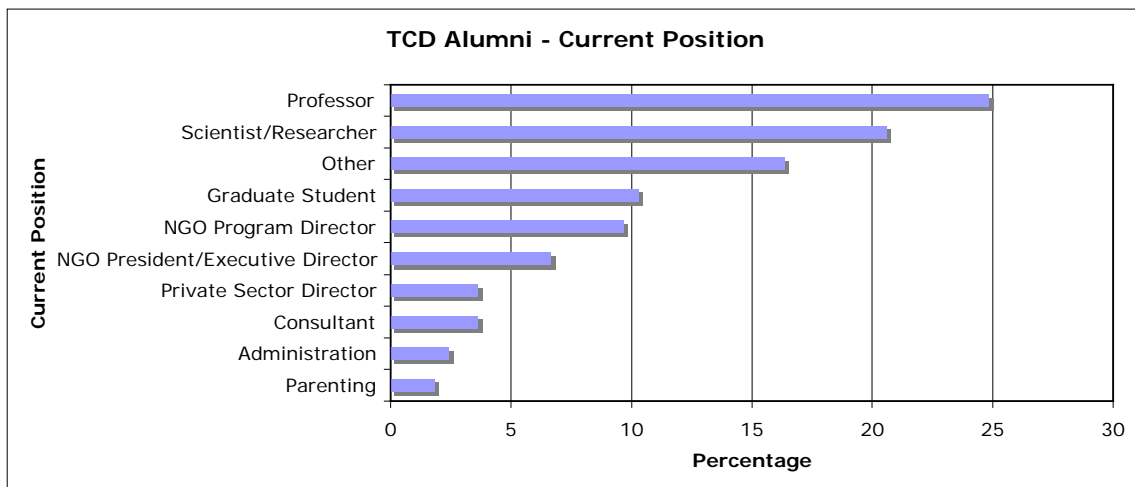
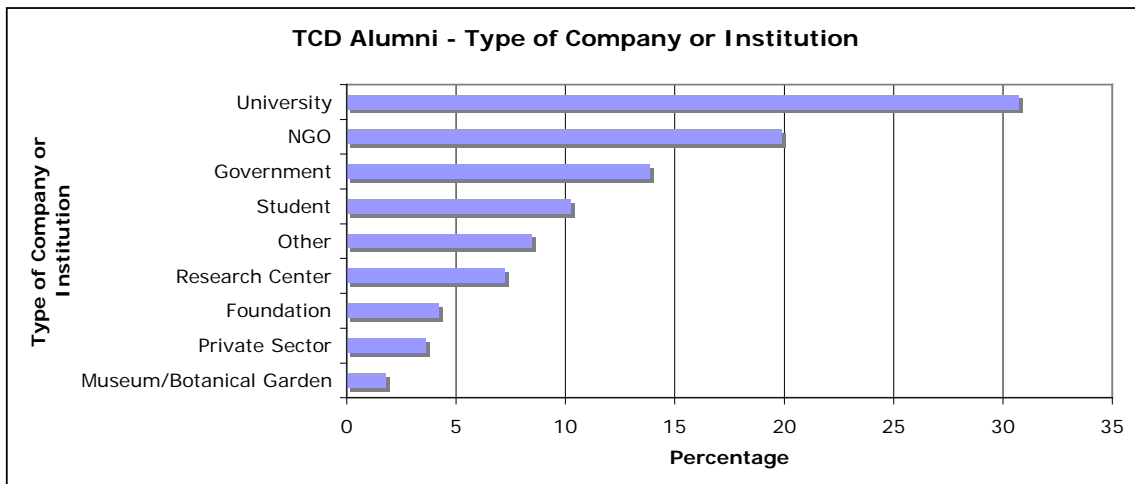
The average age of respondents was 44 years old, and nearly half were in their 40s but their ages ranged from 20s to 60s. The balance between male and female students in TCD has been relatively even over the three periods of the program. Of a total of 170 alumni who responded to this particular question, 82 (47.6%) were female, a proportion that remained relatively constant. However, alumni who earned a Ph.D. were more likely to be men, averaging 58.7% of the total 63 TCD doctorates, and ranging from 56-62% over the three periods of the program.

a) Gender of Total Alumni by Period of Study

b) Gender of Ph.D Alumni by Period of Study

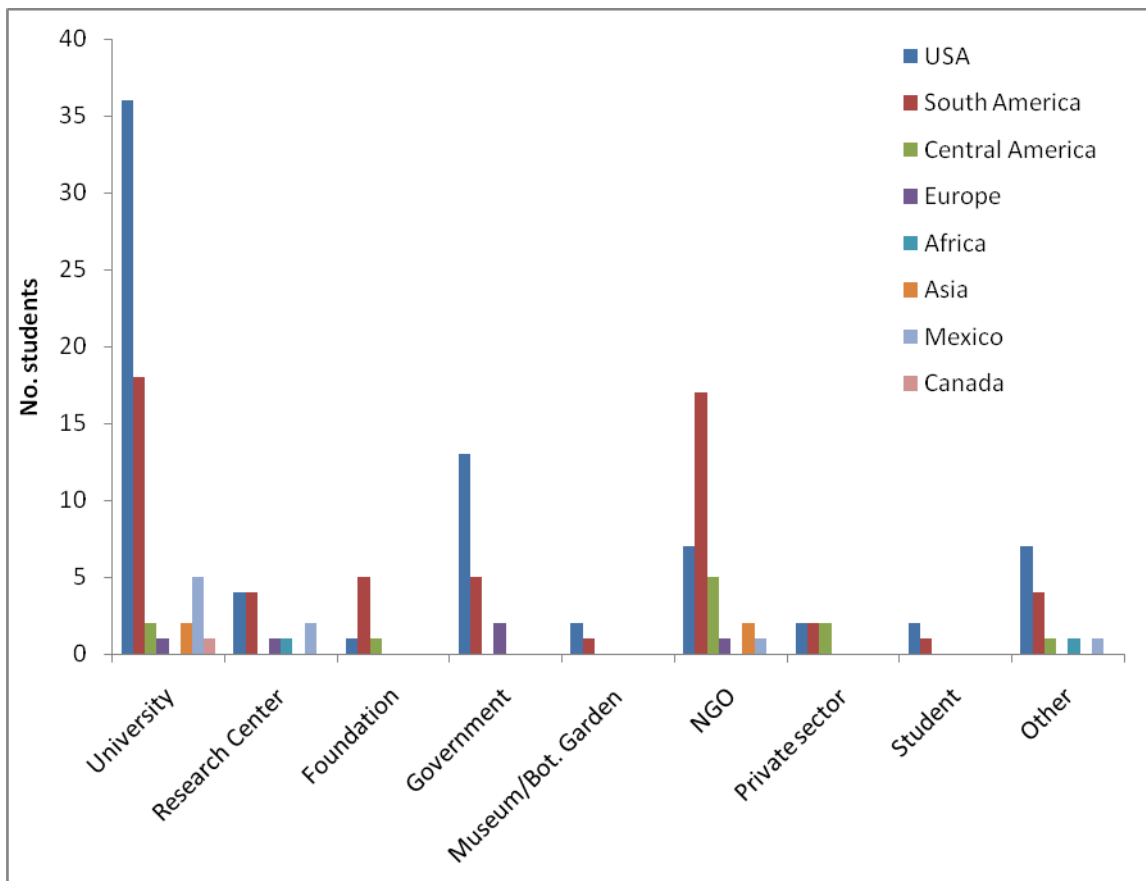


The survey results indicated that a majority of TCD alumni were working in non-academic positions. The type of company or institution that TCD alumni worked for included universities (31%), NGOs (20%), and the government (14%), along with other kinds of organizations such as research centers, foundations, museums, and the private sector. All together, approximately half of TCD alumni worked in non-research organizations. The largest proportion of TCD alumni worked as professors (25%) and scientists/researchers (21%), but others were currently graduate students (10%), NGO Program Directors (10%) or NGO Presidents/Executive Directors (7%), among other positions. The average number of years of conservation and development experience by TCD's alumni was 11.4 years, and nearly three-quarters had over five years experience.



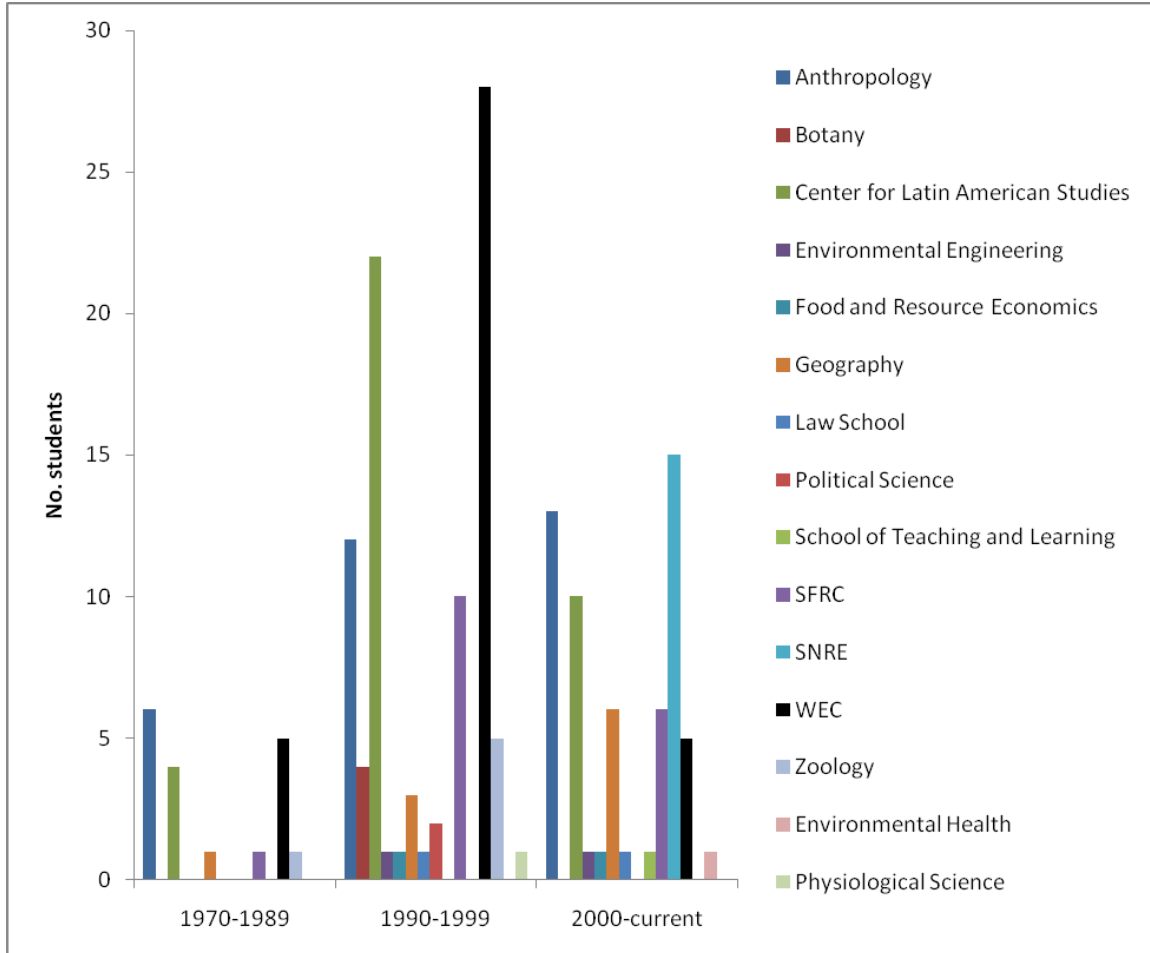
Analysis of alumni by country of origins revealed some differences in their current positions. U.S. TCD alumni were far more likely to be working in universities and also more likely to work in the government, with NGO employment in third place. These alumni also worked in other research institutions such as research centers, museums and botanical gardens. Very few U.S. alumni worked for foundations. The largest numbers of South American alumni currently worked in universities and NGOs, and they also worked in other research institutions. Interestingly, few South American alumni worked for government. In Central America, the largest number of alumni worked for NGOs and none of them worked for government. In Central America, the largest number of alumni worked for NGOs and none of them worked for government.

Region of Origin of TCD Alumni, by Type of Occupation



A large majority (77%) of TCD alumni earned a Masters as their first degree at UF with the TCD program. The year of graduation and advisor's name of a TCD alumnus' first degree are presented in Appendix B. Their range of departments corresponds to TCD's interdisciplinary nature; the top five departments were Latin American Studies, Wildlife Ecology and Conservation, Anthropology, the School of Forest Resources and Conservation, and the School of Natural Resources and the Environment. The distribution of 167 alumni by the department where they earned their last graduate degree at UF, including both Master's and Ph.D. students, is shown below.

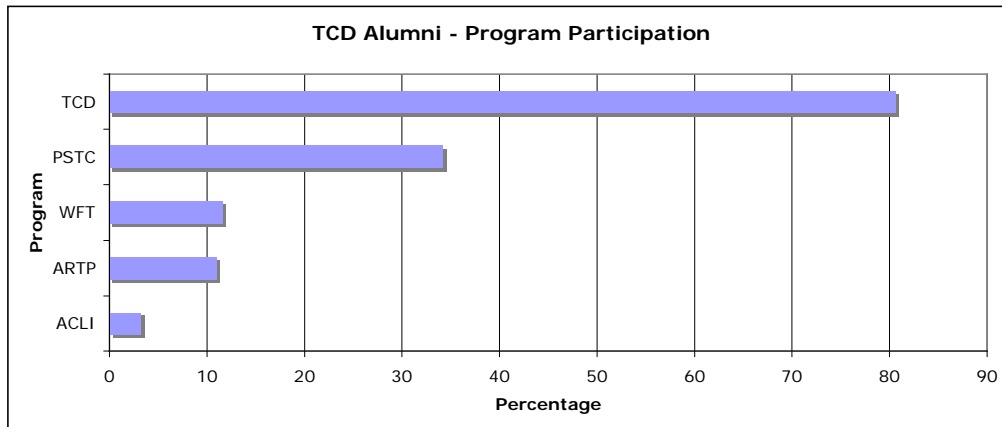
UF Department by Period of Study



During TCD's 1st period, 1970-1989, 18 respondents completed their degrees, primarily in Anthropology, WEC and LATAM (8-10 students each). During the 2nd period (1990-1999) the program expanded greatly and 90 respondents completed their degrees, still with emphasis in the same departments (WEC, LATAM and Anthropology) with over 20 students each. During the 3rd period, since 2000, 60 respondents completed their degrees. The newly-created SNRE took the place of WEC as a major department, still along with Anthropology and LATAM (10-15 students each). WEC, Geography and SFRC each had 5 or more TCD students graduate since 2000.

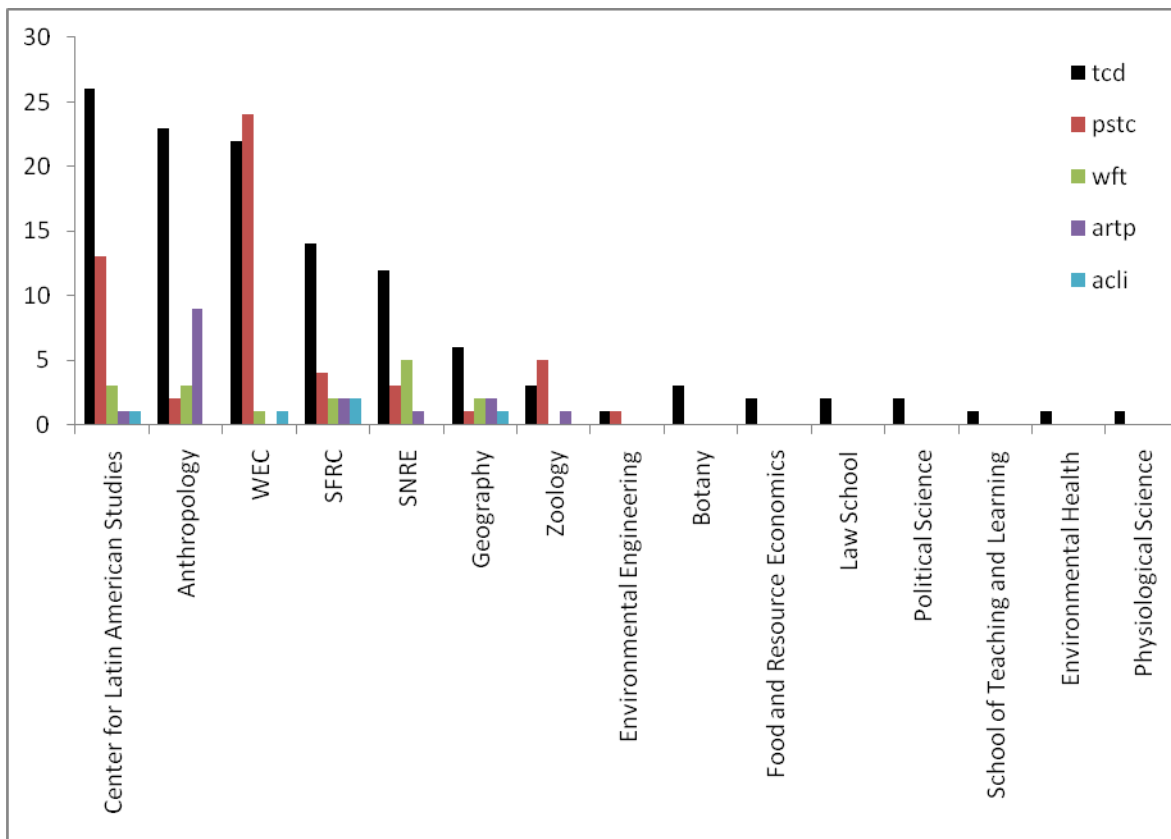
Reflections on the TCD and Associated Programs

The second portion of the survey asked alumni to answer questions about the TCD and associated programs -- Amazon Research and Training Program (ARTP), Program of Studies in Tropical Conservation (PSTC), Working Forests in the Tropics (WFT), or Amazon Conservation Leadership Initiative (ACLI) (see figure below, and Table 11, Appendix E). Alumni were asked to indicate all programs in which they were involved when they were students. The results reflect the longevity of the various programs: over 80% of the alumni surveyed had participated in some way in the TCD program, one-third in the PSTC, slightly more than 10% each in WFT and ARTP, and less than 10% in ACLI, which began only in 2004-2005. Participation in these programs took various forms. Over 70% took classes, 90% participated in interdisciplinary seminars, and over 20% completed a TCD certificate (available only after 2000).



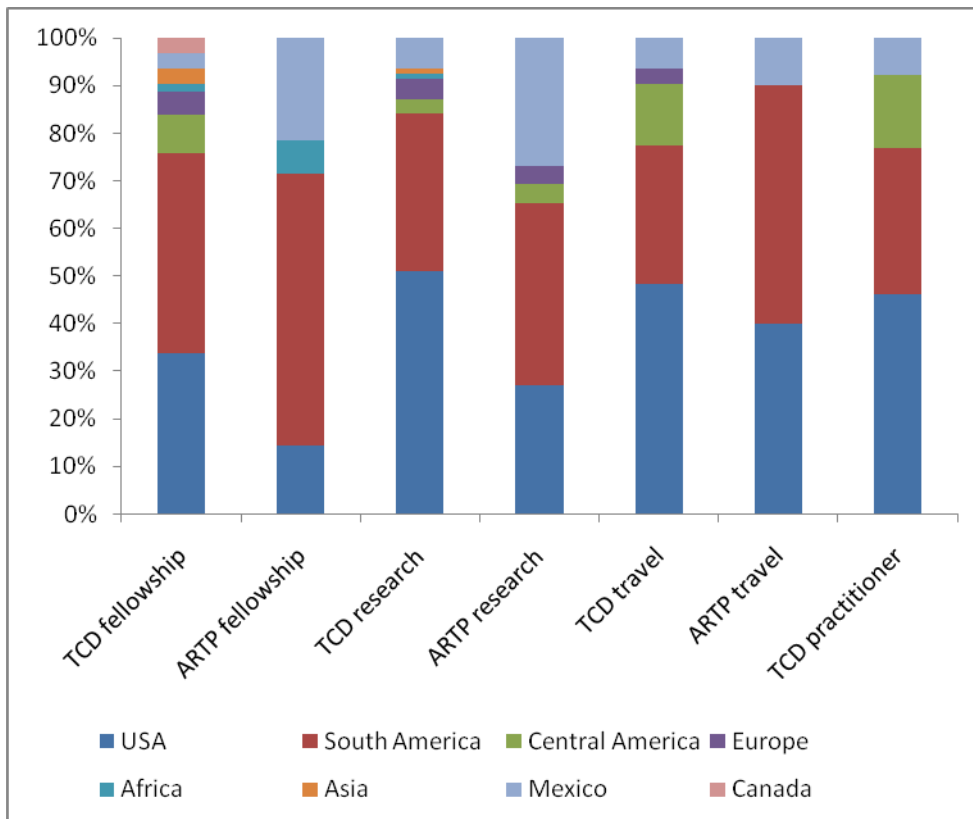
Participation specifically in TCD and in associated programs varied somewhat by the department in which alumni studied. TCD participation was strongest by alumni from the key departments of Latin American Studies, Anthropology, WEC, SFRC, and SNRE, but alumni from 10 other departments also reported participating. Participation in the PSTC program was strongest in WEC, Latin American Studies, and Zoology, but alumni from Zoology, SNRE, SFRC, Anthropology, Geography and Environmental Engineering also participated in PSTC. Alumni from six departments (Latin American Studies, Anthropology, WEC, SFRC, SNRE and Geography) reported participating in the WFT program; participation in the ARTP was concentrated in the Anthropology department, along with Latin American Studies, SFRC, SNRE, Geography and Zoology. The more recent ACLI program had participation by alumni in SFRC, Latin American Studies, WEC, and Geography. These patterns reflect shifting programmatic and faculty interests over time.

Specific Program Participation, by UF Department



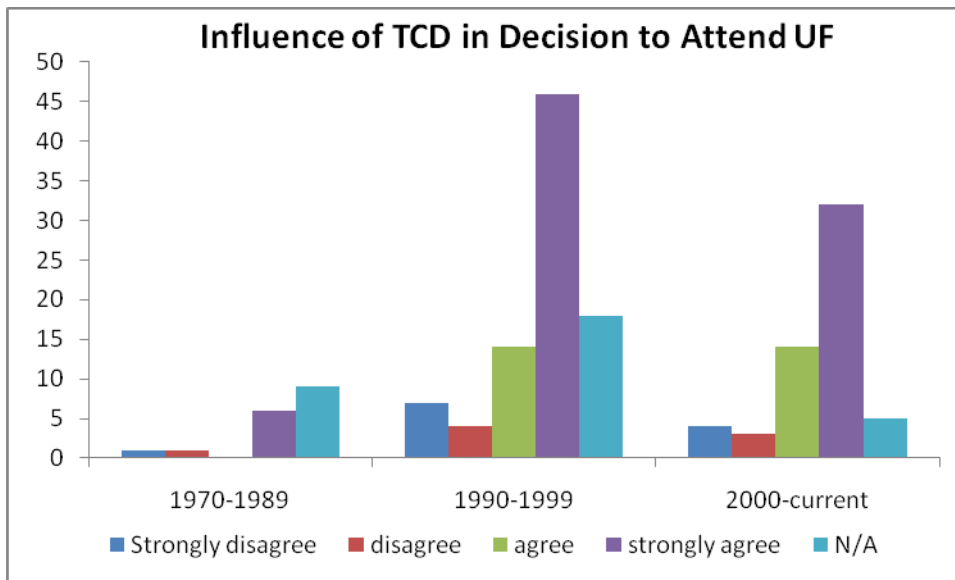
Data on the nationality of alumni by type of research support reflect the focus of the program on students from Latin America, in part due to the initial funding restrictions dictated by the donor for TCD endowment spending. Data showing the distribution of recipients of various forms of financial support by region of origin show that TCD supported relatively more South American alumni with academic-year fellowships for their graduate studies, but was also able to support people from other continents. On the other hand, research, travel and practitioner support were given most frequently to U.S. and South American alumni, while few were awarded to Asian students.⁶

Program Funding by Region of Origin of TCD Alumni

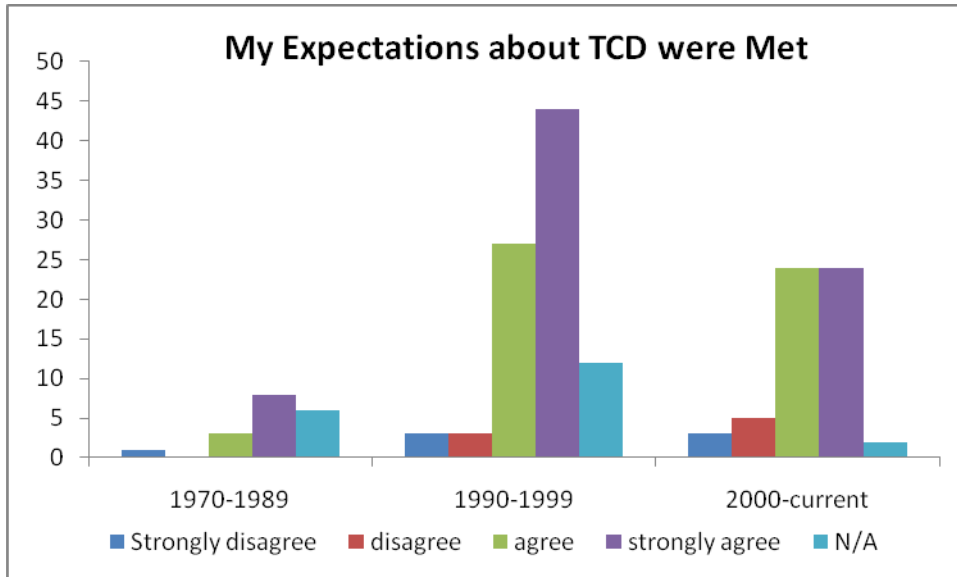


⁶ ACLI, WFT and PSTC were not included in this chart because of the small numbers of alumni who reported receiving financial support from these programs.

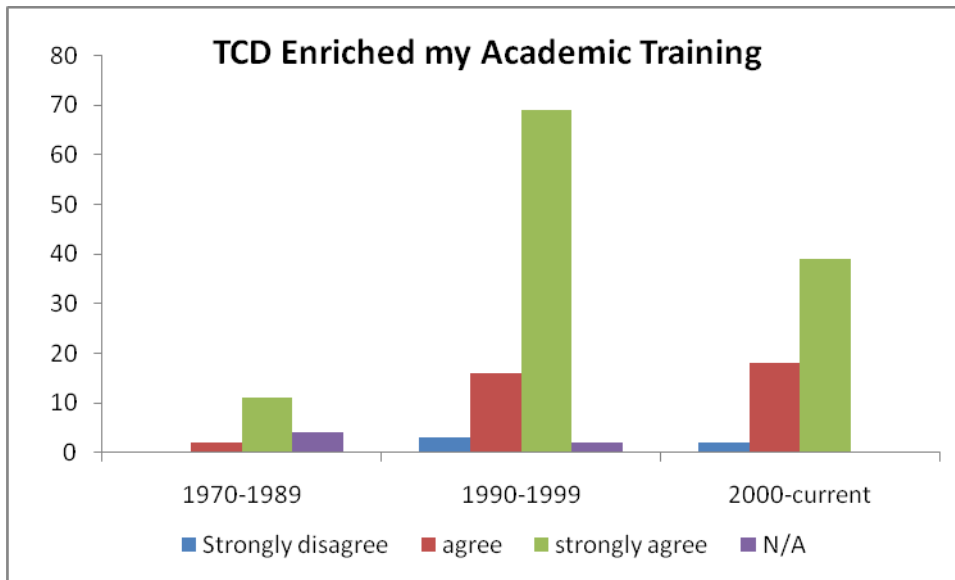
The survey asked alumni whether the TCD and affiliated programs influenced their decision to attend UF for graduate school. Of the total of 164 alumni who responded to this question, over half (51%) strongly agreed with this statement and 17% agreed, while 12% disagreed or strongly disagreed, and 20% said that the question did not apply to their case. The importance of TCD as a recruitment mechanism increased over time: during the first period when the program was just beginning most students declared that TCD had nothing to do with their decision to study at UF, while in later periods the largest number of responses was “strongly agree.”



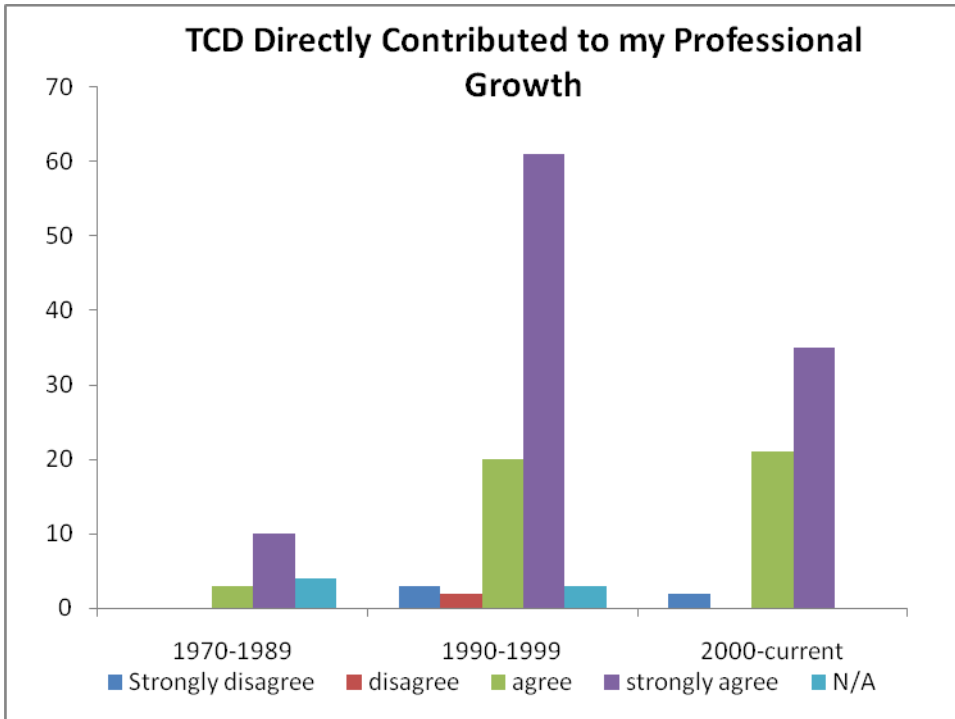
Alumni also were asked whether their expectations of the TCD program were met. Of the 165 total alumni who responded to this question, 46% said they strongly agreed with this statement, 32.7% said they agreed, 9% disagreed or strongly disagreed, and 12% found the statement irrelevant. The highest level of agreement with this statement came from alumni who completed their degrees during the 1990s.



Alumni were similarly very positive about the extent to which TCD had enriched their academic training (Table 12, Appendix E), especially during the program's second period, 1990-1999. Of the 166 alumni who responded to this question, 71.7% strongly agreed; the proportion of alumni who agreed that the TCD program had enriched their academic training was over 76% during the program's first and second periods.

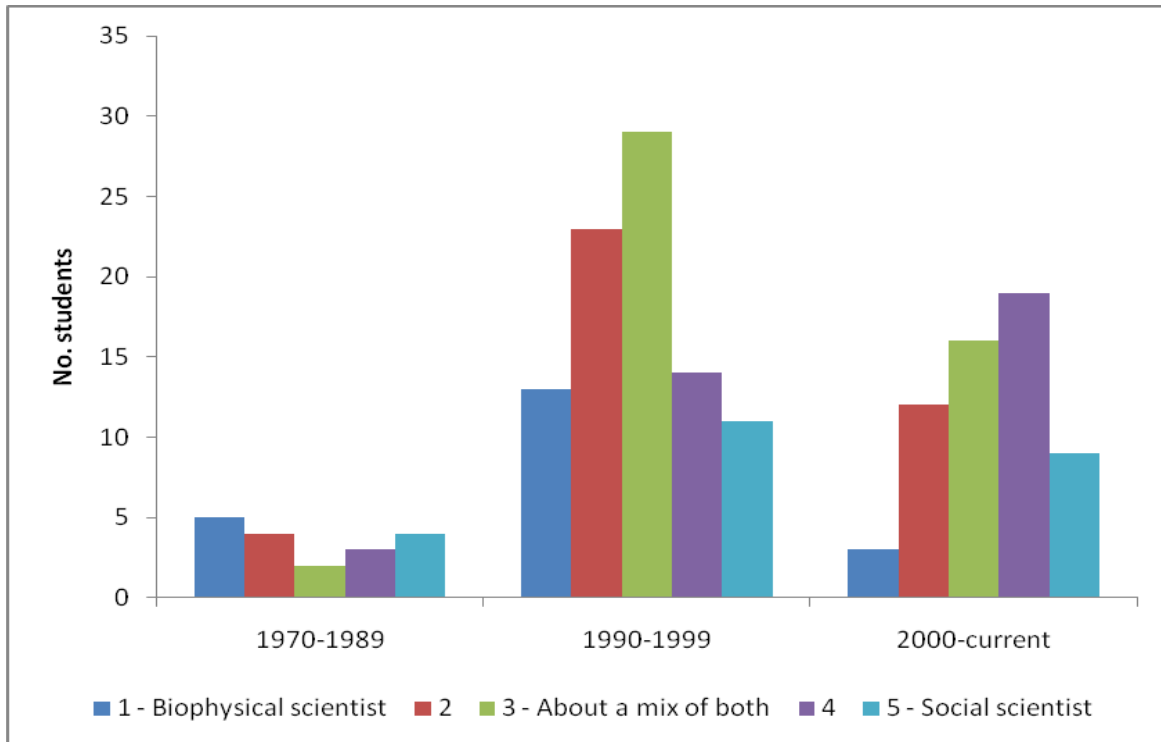


A follow-up question asked alumni if TCD had directly contributed to their professional growth. Again, there was strong agreement: 64.6% of the total 164 alumni who responded to this question. Only 5 people strongly disagreed.



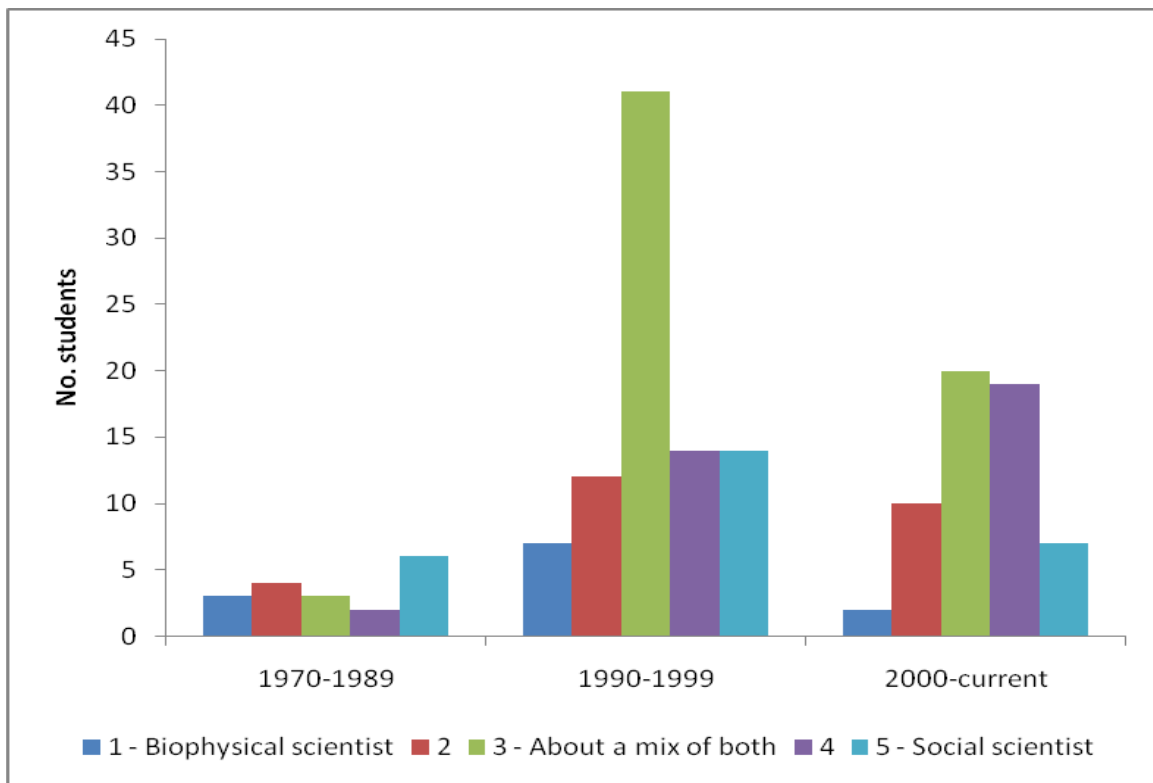
Because of TCD's emphasis on graduate training at the interface of biophysical and social sciences, several questions analyzed alumni responses regarding the interdisciplinarity of their graduate training and their current work, along a continuum from biophysical to social sciences. Alumni were asked to describe whether they considered themselves to be primarily biophysical or social scientists or a mix of both, using a 5-point scale of "biophysical sciences" at one extreme, "social sciences" at the other extreme, and "about a mix of both" in the middle. The majority of TCD alumni described both their academic training and current careers as a mix of both biological and social science. Answers to this question showed a shift over time in the focus of students, from the first and second periods when a larger proportion considered themselves to be biophysical scientists, to a dominance of "mixed" students in the second period, and to a greater relative proportion of students who considered themselves to be primarily social scientists, in the third period.

How Alumni Described their Graduate Training

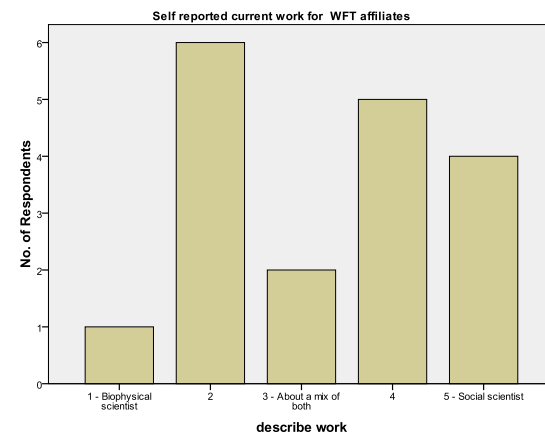
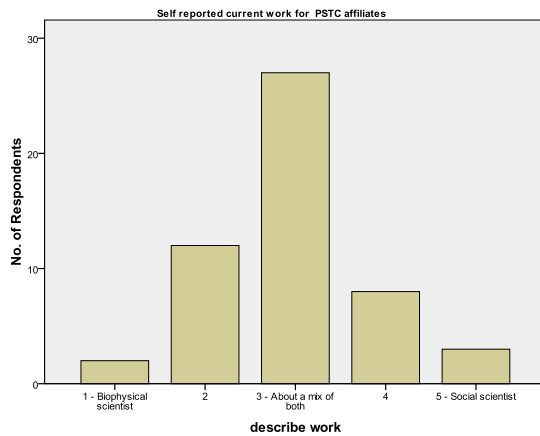
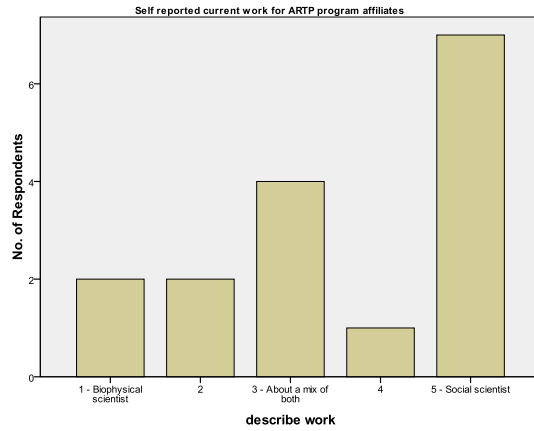
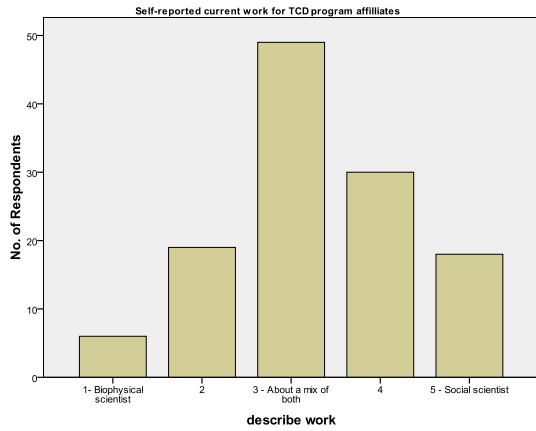


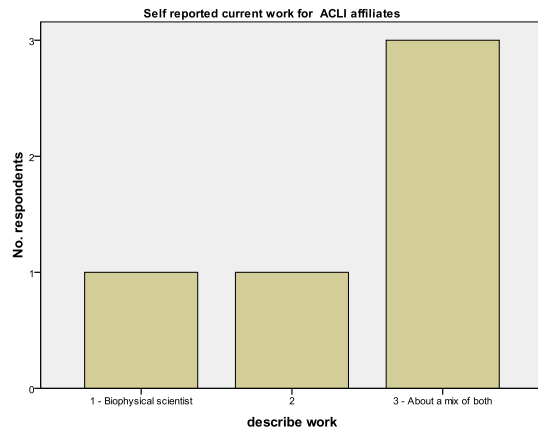
When asked the same question regarding their work experience after graduation, alumni of the three different periods were more likely to describe it as social science than biophysical science, although the largest number described their work as “mixed.”

How Alumni Described their Current Work



Alumni who participated in different programs associated with TCD characterized their current jobs somewhat differently along the biophysical-social science gradient. Alumni from all the programs reported working in positions that required knowledge from a mix of different disciplines; TCD and PSTC participants were the most “mixed,” and WFT students more likely to fall on one or the other side of the biophysical-social sciences continuum. ARTP participants were more likely to describe themselves as social scientists; only ACLI affiliates restricted their jobs to the biophysical and mixed side of the gradient.

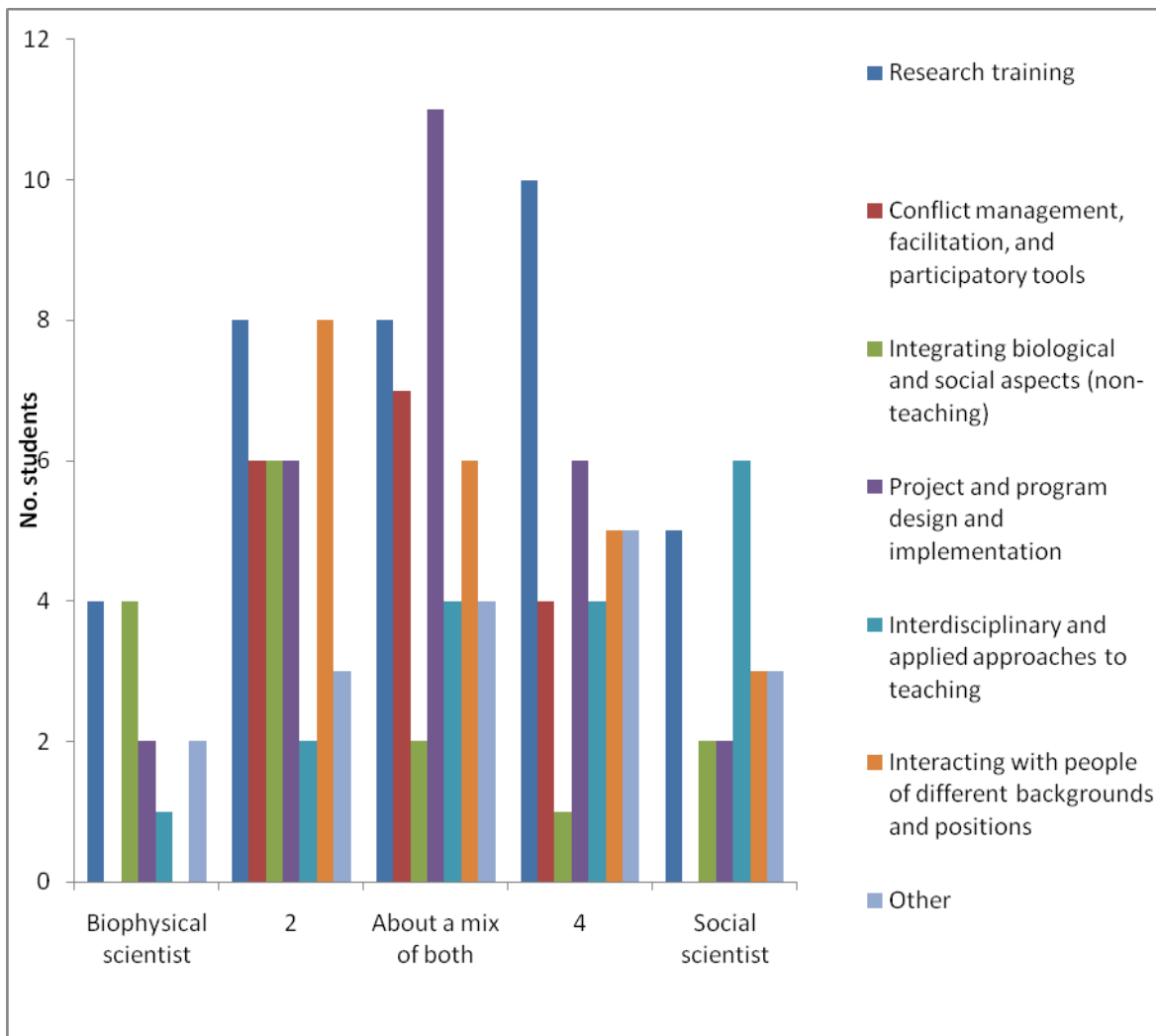




An open-ended question asked alumni to name three ways that they had used their graduate training from TCD during their post-UF career. The responses varied somewhat depending on how the alumni characterized their graduate training along the biophysical-social sciences continuum. Students who considered themselves to have had a mixed (biophysical and social sciences) graduate training were much more likely to report having used their skills in project and program designs and implementation, and also mentioned their research training more often than did students who considered their training to be either social or biophysical. People trained in the social sciences were more likely to mention themes of interdisciplinary and applied approaches as being valuable. On the other hand, alumni trained primarily in biophysical sciences were more likely to mention the value of interacting with people of different backgrounds and positions, and the integration of biological and social aspects, in addition to facilitation, participatory and conflict management skills.

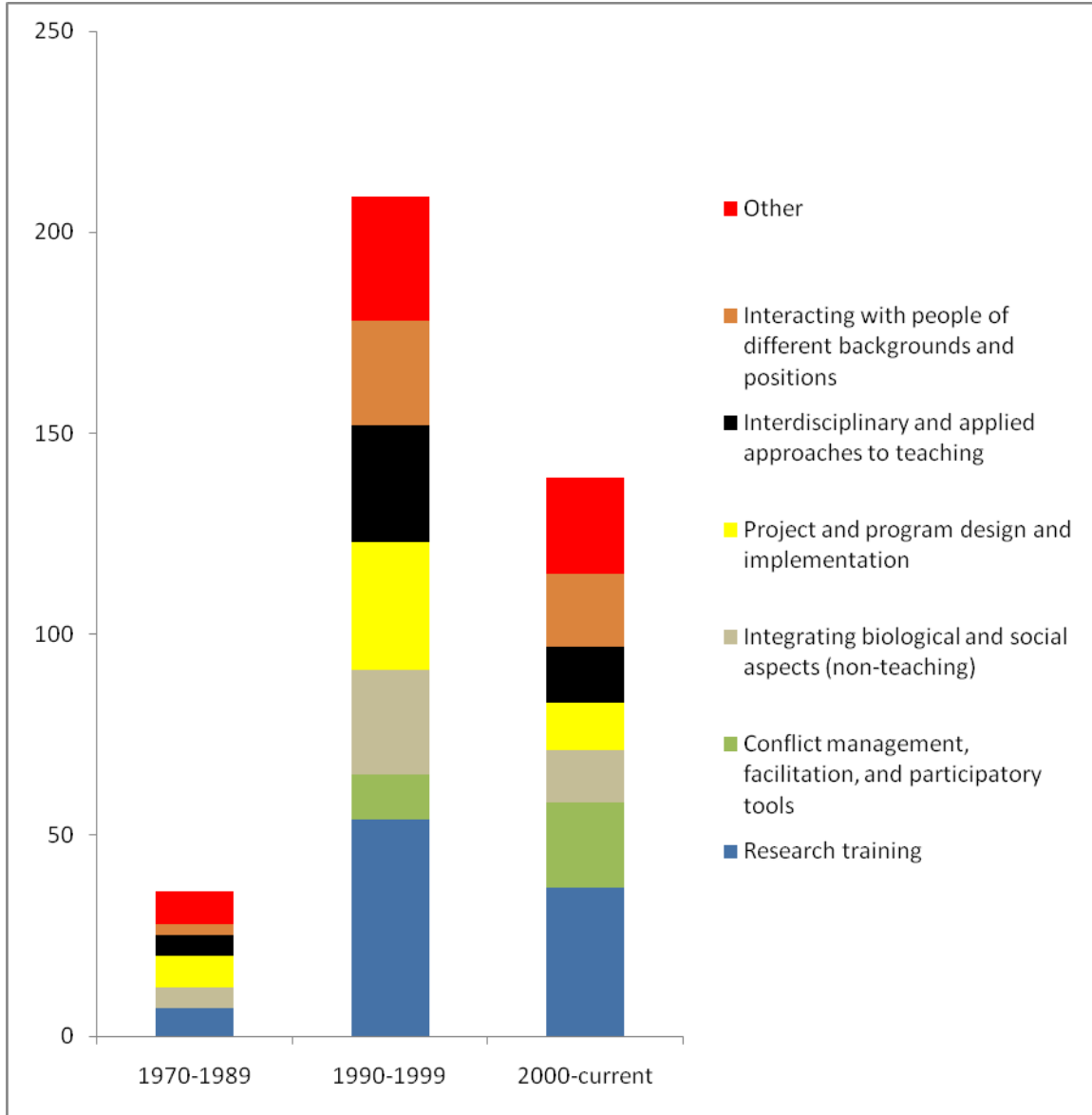
Alumni who considered their graduate training to have been a mix of both social and biophysical sciences, reported using more of their graduate training to design and implement projects and programs, carry out research, manage conflicts and facilitate interactions, and they also valued the fact that they interacted with people of different backgrounds and positions. Alumni who considered their graduate studies to be primarily social science reported using the acquired skills in interdisciplinary activities and research, whereas those from biophysical sciences mentioned their training helped in integrating biological and social aspects, and in conducting research.

How Alumni Used their Graduate Training, by Interdisciplinary Background



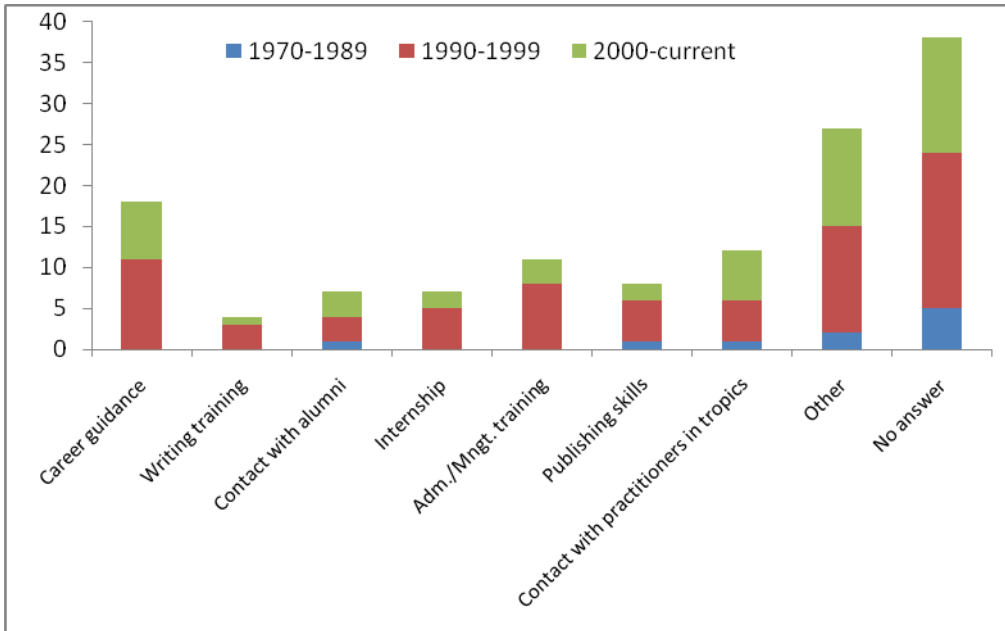
Answers to this question given by alumni who graduated during different periods of the TCD program shifted somewhat. In all periods, unsurprisingly, “research training” was the most common answer to the question about how they had used their TCD training. Answers related to “program and project design and implementation” were also frequent, although somewhat less important in the most recent period. Other ways alumni had used their TCD training were related to skills in integrated and interdisciplinary approaches, as well as skills in relating to diverse people and viewpoints. Beginning in the 1990s, TCD began to implement regular and varied training in conflict management, facilitation and participatory tools; this training is reflected in the rise of their importance to TCD alumni who finished their studies in the latter two periods.

How Alumni Used Training after UF, by Period of Study



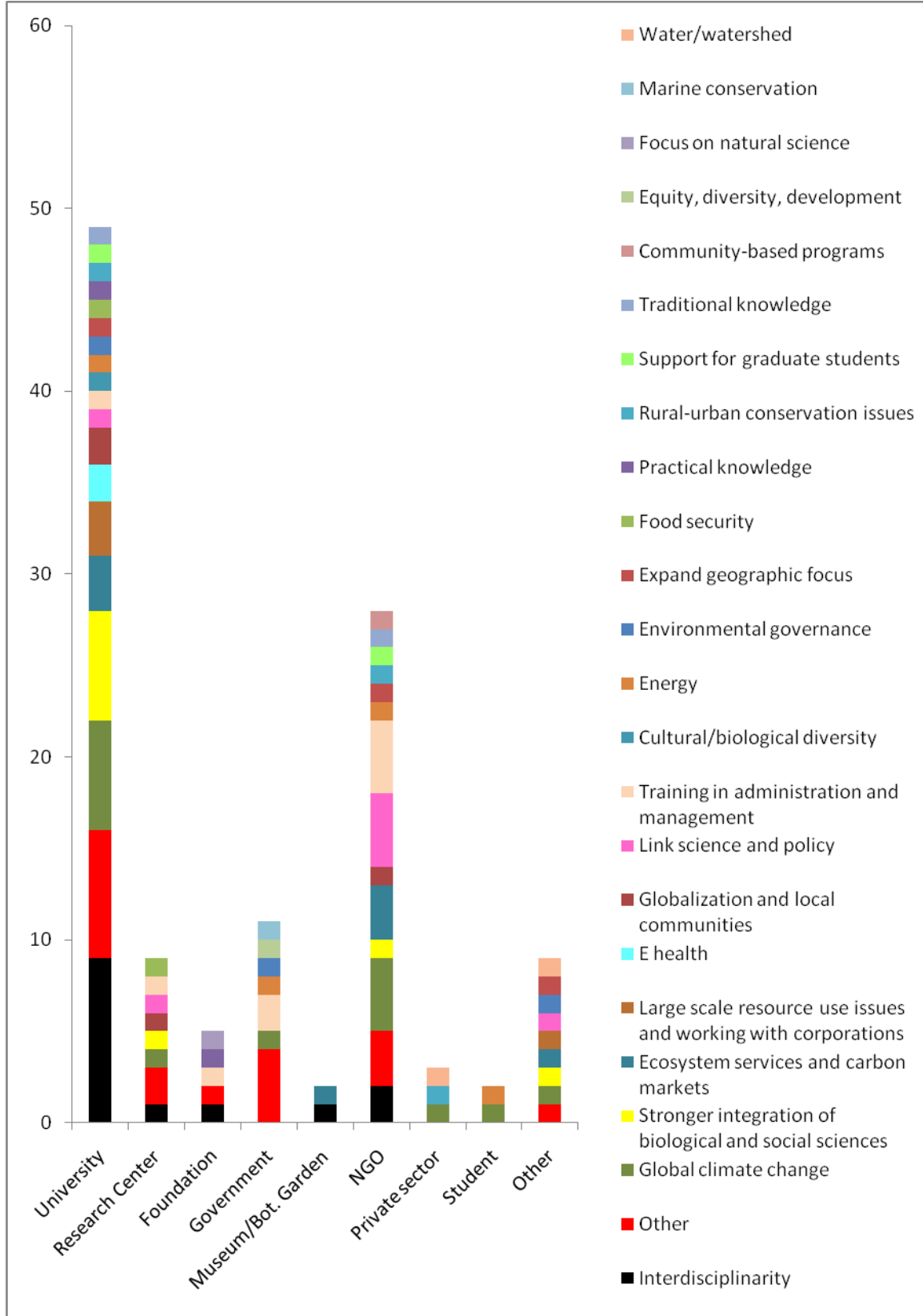
Another question asked “What could the TCD program have done to better prepare you for your post-UF life?” Among the highly varied responses, the most common referred to improvements in career guidance, administrative and management training, contact with practitioners in the tropics, and publishing skills.

Better Preparation Needed, by Period of Study



Finally, alumni were asked an open-ended question about what current issues TCD should address. Their varied responses, which were coded into 24 categories, revealed some differences by the current workplace of alumni. Interdisciplinary approaches and global climate change were the current issues that TCD alumni working in universities most believed the TCD program should address, along with ecosystem services, large-scale resource use issues, and stronger integration of biological and social sciences, among other responses. Alumni working for NGOs also pointed to global climate change, along with ecosystem services, training in administration and management, and the link between science and policy. TCD alumni working in government mentioned training in administration and management, and energy issues, as those currently most relevant to the TCD program.

Current Issues TCD Should Address, by Current Position of Alumni



TCD Alumni Involvement

Detailed responses to questions asked regarding TCD alumni involvement are presented in the appendices. In general, alumni were very interested in becoming more involved with the current program and students. Over 80% were willing to give a talk at UF, and to have information about them posted on an alumni page (under development) on the TCD webpage. Over half expressed interest in supporting TCD students as interns or researchers in their organization, and in participating in a TCD blog, and at least 40% indicated their willingness to serve on a TCD alumni advisory board, contribute to an alumni fund to support TCD students, or host a TCD reception or symposium at a future conference.

Conclusions

The TCD alumni survey reported here provided information about TCD alumni and their perspectives about TCD that potentially are of interest to the TCD community of faculty, staff, students, alumni and partners. The results of the survey are summarized in this report to facilitate access to this information. Further studies also are underway to learn more about TCD alumni and students, their accomplishments and social networks, and other impacts of the TCD program's graduate training and collaborative research experience.