

NAUFRP Education Chair Annual Report

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October 2, 2018

1. Am exploring the possibility of NAUFRP becoming a “Professional Partner” of IFSA along with IUFRO, the European Forest Institute (EFI), Commonwealth Forestry Association (CFA), International Partnership for Forestry Education (IPFE), Food and Agriculture Organization (FAO), Center for International Research (CIFOR), Silva Network, and International Tropical Timber Organization (ITTO). Met with the leadership of the North American Region of IFSA in early 2018 to solicit their assistance; no progress since then. (3-D)
2. Developed a survey to be administered to students attending the 2014 IUFRO World Congress and SAF Annual Convention regarding their perspectives on enrolling in undergraduate forestry programs in the U.S. and elsewhere. Overall response rate was 53% (n=526). This was a follow-up to our U.S. surveys conducted in 2004, 2007, and 2010. The data from both venues have been analyzed and that from the SAF National Convention was recently published in the *Journal of Natural Sciences Education*. The findings from the IUFRO survey were presented at the ISSRM in Houghton, MI, on June 25, 2016, the IUFRO Regional Congress for Asia and Oceania on October 26, 2016, and the 5th Asia-Pacific Forestry Education Conference in Beijing, China, on March 27, 2018. They were also presented at the SAF National Convention in Madison, WI, on November 5, 2016, and will be submitted for publication in *Society and Natural Resources*. We also administered the survey to all NAUFRP institutions encompassing all areas of natural resources (and including graduate students) as a way of broadening the scope of the survey and reducing the bias in the sample population. The resulting data, from over three-thousand respondents, have been analyzed and we are now in the manuscript preparation phase for submission to the *Journal of Forestry*. Preliminary results were presented at the SAF National Convention in Albuquerque in November, 2018, with an emphasis on diversity. (1-D-1-a)
3. Conducted an analyses of NAUFRP-member institutions to determine if there is any relationship between the proportion of women and minorities in the natural resources student body and on university faculties, and the content of their respective web sites. The results of the study were presented at the SAF National Convention on November 4, 2016, in a special session on diversity and inclusion, and were recently submitted for publication in the *Journal of Forestry*. Conducted a similar analysis of NR professional societies, with the results also recently submitted for publication in the *Journal of Forestry*. (1-B, 1-D)
4. The development of an Educational Clearinghouse on the NAUFRP website is now possible with the fundamental changes having been made to the NAUFRP web site recently. Two documents ready for posting include a list of references on NR student enrollments and diversity, and a summary of “Best Practices for Improving Communication Skills in Natural Resource Majors.” (3-C)
5. Visited the new USDA FAEIS administrators at Virginia Tech to cooperate on data management related to NAUFRP natural resource academic programs at NAUFRP institutions, and in particular on student enrollments and faculty demographics. Arranged for these administrators to present at the NAUFRP Executive Committee Meeting and General Assembly in Madison, WI, on November 1 and 2, 2016, respectively. They also participated in the NAUFRP Executive Committee meeting in March 2018 via conference call. Since then, FAEIS has been gathering data from our member institutions for the years 2013-2016 (with mixed success), confirming the lead contacts for each university, and recording the degree programs for each institution for cross-walking with our joint CIP code classification into Natural Resource and Conservation “academic areas.” With participation rates remaining relatively low compared

to 2012, we are in the process of making another push to increase them. As of this meeting, 42 institutions have submitted complete undergraduate enrollment data for 2005-2016 (with another 8 nearly complete) and 52 institutions for 2016 only. The latter value for 2012 was 67 institutions. Since 2012 undergraduate enrollments have increased slightly, as have the percent women and minorities. Graduate enrollment numbers have been compiled for the first time over these same time periods, and show a moderate decrease since 2012, while the percentages of women and minorities have increased slightly. This update on enrollments was presented at the Biennial Conference on University Education in Natural Resources on March 9, 2018, in Nacogdoches, TX. and will be posted on the NAUFRP website. (1-B-3)

6. Served on the Advisory Committee for the Global Outlook on Forestry Education (GOFE) Project, jointly sponsored by IUFRO and IFSA. We developed a survey tool to be administered to recent graduates utilizing a Behavior Event Interview (BEI) process to obtain a deeper understanding of the competencies of these graduates in relation to curricula and in the workplace in forestry and natural resources. The survey was administered to 231 practicing professionals from nine countries on five major continents. NAUFRP participating institutions included Michigan Tech (n=16) and the University of Georgia (n=1). The final report was produced on 9-15-2017 and the results summarized in the technical session on Forestry Education at the IUFRO 125th Anniversary Congress in Freiburg, Germany on 9-20-2017. A manuscript on the findings was recently submitted for publication in the *Journal of Forestry*. Funding is being sought to conduct a more comprehensive study. (2-A-3, 3-D, 4-A)
7. In September 2017, attended a meeting at the IUFRO 125th Anniversary Congress of the Asia-Pacific Coalition of Universities offering Forestry degree programs, and was the only representative from the U.S. Have put the International chair for NAUFRP in contact with this group. Chaired a session and gave two presentations at the 5th Asia-Pacific Forestry Education Conference in Beijing, China, on March 27-28, 2018. (3-D)
8. Contributed a chapter on Education to a special report of the U.S. Forest Service on *Drivers of Change in U.S. Forests and the Forest Sector*. Relied heavily on the *Science, Education and Outreach Roadmap for Natural Resources* (APLU 2014) and the 2015 special issue of the *Journal of Forestry* (Vol. 113, No. 6) on forest science education. Preparation of the report by the lead authors is nearing completion. A summary of the education chapter was presented at the 5th Asia-Pacific Forestry Education Conference and the Biennial Conference on University Education in Natural Resources, both held in March 2018. (2-A)
9. Over the past six months have been working with the Forest Products Society on collaborating with SAF and SFI regarding raising the public visibility of renewable resources to the general public and increasing student enrollment in academic programs in forest biomaterials. Special sessions will be held at the upcoming annual conventions of SAF and SFI on this topic and I will be facilitating them on behalf of NAUFRP. (3-D)
10. Worked with Lloyd Irland (Irland Group Consulting) and Adam Daigneault (University of Maine) to develop a survey of students regarding natural resource ethics. (4)
11. Summarized level of effort for all goals and objectives in the *NAUFRP Undergraduate Education Enhancement Strategy Report* (Layton et al. 2011), 2013-2018.

*Numbers and letters in parentheses refer to specific sections in the *NAUFRP Undergraduate Education Enhancement Strategy Report* (Layton et al. 2011), where the first order is a goal, the second order an objective within a goal, the third order a task within an objective, and the fourth order a task within a task.

