

# EDUCATING AND INSPIRING THE NEXT GENERATION OF CONSERVATION LEADERS



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**The future of conservation policy and management is facing a crucial predicament: The need to train the next generation of conservation leaders and craft innovative conservation policy is more important than ever due to growing global challenges; but an increasingly urban population coupled with a lack of scientific literacy is resulting in a public that has limited knowledge to weigh complex natural resource issues. In addition, enrollments in many natural resource management fields have either remained constant over the past three decades or experienced declines. Consequently, maintaining and strengthening natural resources education has been identified by the Association of Public and Land-Grant Universities as one of six grand challenges for the future of natural resources.**

This begs the critical question: What steps can and must be taken to meet this grand challenge? To remain relevant, natural resource management programs must consider the skills and knowledge that will empower students to develop into effective leaders. While it is essential to continue rigorous scientific and technical training, programs also need more emphasis on interdisciplinary approaches to solve problems.

But even more important, future leaders must be able to effectively communicate problems, solutions, and policies in ways that the general public can easily comprehend and support. Otherwise, we relegate our natural resource policies to emotion and misperception. Furthermore, to successfully take on the global issues affecting our environment, the workforce must represent the global populace. Programs must do a better job of engaging women and minorities as recent U.S. Census Bureau data shows the field of agriculture and natural resources has the second lowest percentage of women in the workforce and it ranks at the bottom in percentage of minorities compared to 14 other major disciplines.

The year 2015 is expected to mark a major turning point in the employment outlook for natural resource and wildlife professionals. A 2004 survey of state fish and wildlife agencies reported that almost half of their employees and three-quarters of those in leadership positions plan to retire by 2015, resulting in the greatest employment demand in the field in the past 30 years, a situation referred to as “the graying of the green.” However, certain disciplines are seeing greater needs than others. Currently there is a surplus of students in environmental studies and conservation biology; but according to the U.S. Bureau of Labor Statistics, there are lagging numbers of students in areas such as

human dimensions of natural resources decision-making, quantitative modeling of natural resources, and natural resource managers.

A sufficient number of well-trained conservation leaders from diverse backgrounds is vital in order to successfully address the five remaining grand challenges identified by the Association of Public and Land-Grant Universities: sustainability; impact of climate change; agriculture; identifying new and alternative renewable energy resources; and restoring and protecting water quality. Given the urgency and complexity of these challenges, we need to accelerate the development of the next generation of leaders; but we must also act now. Both the state of Iowa and Iowa State University are making significant contributions to confront these matters. The state of Iowa is investing more than \$270 million this year in infrastructure, waterway and watershed restoration and protection, and upgrades to drinking and waste water systems to support proper water quality. Iowa State University is moving forward on several natural resource initiatives to stimulate this and related fields:

- I have allocated presidential discretionary funds to launch nine research projects to advance fisheries and wildlife research on topics, including chronic wasting disease; trophy deer

management, habitat, and dispersal; the impact of wind farms on ring-necked pheasants; and the influence of environmental and human factors on large-mouth bass populations.

- Iowa State is establishing a research and teaching center named after Iowan and Boone and Crockett member, Jay N. “Ding” Darling, to provide opportunities for interdisciplinary cooperation across several departments, including natural resources and ecology, agriculture, art and design, journalism, and political science. These disciplines represent Darling’s legacy of achievement and will form a basis for effective development of conservation policies.
- The university is also developing a residential field laboratory in Montana that will offer hands-on, experiential training to the next generation of forestry, wildlife, fisheries, biology, and ecology professionals.

Undoubtedly, the development of effective conservation leaders to create and carry out innovative conservation policy is necessary to ensure a sustainable future; but ultimately, everyone must take ownership, meaning we all have an obligation to protect the environment we cherish. As local stewards of our natural resources and wildlife, responsible conservation can and must start with us. ■