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Report to Congress Forecasts Shortage of Marine Scientists

The federal departments of Commerce and Education are forecasting a serious shortage of scientists trained to do the high-quality research required to rebuild fish stocks and restore marine species in the next decade.

A new joint report to Congress estimates the nation will need between 180 and 340 new fishery stock assessment scientists in the next 10 years, but current institutions will produce only 160. The report projects a shortage of between 20 and 180, with a likely shortage of between 100 and 180 stock assessment scientists for the nation in the next decade.

"At a time when the United States needs more scientists to provide the tools to rebuild valuable fish stocks and restore marine mammals and turtles, we are seeing a shortage of well-trained fishery scientists," said retired Navy Vice Adm. Conrad C. Lautenbacher, Ph.D., under secretary of commerce for oceans and atmosphere and NOAA administrator. "We must work with universities and the private sector to convince young people to pursue careers in marine science."

The report to Congress combines a study of demand for stock assessment scientists at NOAA, other federal agencies, regional fishery commissions, state agencies and other organizations, with an independent report on the supply of scientists trained in this field.

The proportion of university faculty teaching stock assessment and fishery population dynamics in marine science programs is dropping, the report concludes. Student aptitude in modeling and population dynamics, key elements used to project future trends in fish abundance and productivity, has also declined in the last decade. The lack of faculty and quality students translates into fewer graduate students and fewer graduates with master's degrees and doctorates.

The numbers of students and graduates are dropping at the same time that the Magnuson-Stevens Fishery Conservation and Management Act, re-authorized in 2007, gives stock assessment scientists a larger role in fisheries management. More stock assessment scientists are needed to evaluate fishery management measures and craft recovery plans for fish species as well as endangered and protected marine species.

NOAA has several innovative recruiting programs, including fellowships, internships and mentoring programs. And one promising trend is that more young women are pursuing careers in stock assessment science. However, the report concludes these programs must grow if the overall shortage is to be eliminated. Universities and the private sector must also expand educational programs to meet the growing need for stock assessment scientists. Undergraduate education in statistics, mathematics, ecosystem studies and modeling must also be improved.

"We need to get the word out across this nation, to our students, their teachers and parents, that there are rewarding careers in the sciences for students who study stock assessment and fishery biology," said Steven A. Murawski, director of scientific programs and chief science advisor for NOAA's Fisheries Service. "This report to Congress sends a strong message that our students must be better prepared for science careers that are vital to the future of our nation's environment and economy."

To view the full report, read a profile of Dr. Elizabeth Brooks, a young stock assessment scientist, watch video interviews with stock assessment scientists and see other materials, go to: "http://www.nmfs.noaa.gov/scientistshortage/"

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