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SCIENTIST AT WORK : JANE LUBCHENCO

## NOAA Chief Believes in Science as Social Contract

By [CORNELIA DEAN](#)

The marine ecologist Jane Lubchenco has long urged scientists to abandon the habitual reticence of the research community and spend more time engaging the public and public officials about scientific and technical issues.

Now Dr. Lubchenco, a professor at [Oregon State University](#), is following her own advice all the way to Washington to head the National Oceanic and Atmospheric Administration, one of the government's premier science agencies.

This is only the latest step in a long career of practicing what she preached. In 1997, as president of the American Association for the Advancement of Science, Dr. Lubchenco called for "a new social contract" for science, aimed at helping policy makers take steps to sustain the biosphere.

The next year, she founded the [Aldo Leopold Leadership Program](#), which trains environmental researchers in communication, policy-making and related skills.

She was an organizer of the [Communication Partnership for Science and the Sea](#), which since 1999 has offered information on marine conservation science to policy makers and the public. And she was a founding director of [Climate Central](#), a Web site that went online last year with what she calls "credible and nonadvocacy" information on [global warming](#).

Although some global warming dissidents expressed dismay over [President Obama's](#) choice of an outspoken climate activist to head a leading government agency that deals with climate issues, a wide range of scientists acclaimed the appointment — and Dr. Lubchenco was approved by the Senate without objection on Thursday.

"If you look at her record, it's pretty stunning," said Jeremy B. C. Jackson, an oceanographer at the Scripps Institution of Oceanography. He cited a range of her work, including what he called "path-breaking" studies on the ecology of algae and seaweed, her deciphering of biological interactions along rocky shorelines and her wider assessments of environmental sustainability.

"She has done a lot," Dr. Jackson said in an interview. "Jane has got some blockbuster papers, cited a thousand times."

But as another practitioner of scientific outreach, Dr. Jackson said he particularly admired her efforts in that direction. When she was president of the Ecological Society of America, he said, "she got them to recognize

that there was a big bad world out there and that ecology had not contributed to the dialogue.” The Leopold program has been “extremely useful,” he said.

According to conventional scientific wisdom, researchers cannot spare time for public involvement, much less public service. Many believe that if they are not constantly immersed in new findings and new methods they will fall far and fast into the research backwash. As a result, the theory goes, those who significantly interrupt their work might as well abandon it, especially if they take on an assignment as daunting as heading a major federal agency.

Dr. Lubchenco (pronounced LOOB-chen-ko) said she intends to escape this fate.

“I remain passionately interested in the discovery part of science,” she said in an interview. She and her colleagues at Oregon State — including her husband and fellow marine ecologist, Bruce Menge — have spent 30 years building a database about the state’s coast. “You don’t walk away from that gold mine of information,” she said.

Dr. Lubchenco, 61, said her “absolutely amazing” colleagues had agreed to pick up some of the work she will leave behind when she goes to Washington. With luck, she said, “I will be able to go back to that team once I am through here, whenever that is.”

Meanwhile, Dr. Lubchenco said, one of her goals at NOAA is to establish a climate information service modeled on the [National Weather Service](#), which is part of the agency. The weather service provides “just a phenomenal service” in making information available in ways ordinary people can understand it and act on it, she said. Dr. Lubchenco believes climate models are now sufficiently “robust” to help scientists start to do the same with climate, to help businesses, elected officials and regulators make good decisions on issues like where to put buildings or roads or [wind farms](#).

“It is no longer enough to know what the wind patterns were for the last hundred years,” she said. “You want to know what they will be for the next hundred years — and they undoubtedly won’t be the same. So there are huge opportunities to provide services to the country.”

The idea, which she said had been broached by the [National Academy of Sciences](#), would have to be a joint effort with other agencies involved in the issue, like the [Environmental Protection Agency](#), [NASA](#) or the [United States Geological Survey](#), she said.

Another major item on the NOAA agenda is the dismal state of many of the nation’s fisheries. “Congress has mandated that overfishing be ended in 2011, 2012 — there are different dates for different fisheries,” Dr. Lubchenco said. “We are not on track to doing that now.”

She said there are a range of regulatory tools to apply to the problem, particularly catch shares, a term applied to various efforts to allocate percentages of a particular fish catch in a particular area to particular individuals, companies or communities. The idea has been used successfully on parts of the west coast, but it has yet to catch on widely in the east. Dr. Lubchenco said it had “tremendous merit” as a tool for restoring the sustainability of the ocean ecosystem.

But first, she said, fishing communities, scientists, regulators and other stakeholders in the debate need to

overcome a legacy of bitterness and distrust. “It really is pretty dysfunctional,” Dr. Lubchenco said. But, she added, “in the end fishing jobs depend on fish, and fish depend on healthy oceans.”

If Dr. Lubchenco does eventually return to a robust research career, it will not be the first time she has successfully challenged the way science is typically practiced.

A Denver native who attended Colorado College, she earned master’s and doctoral degrees in marine ecology from the [University of Washington](#) and Harvard and came to Oregon State in 1977, when it was a given that female scientists who wanted to have children would have a difficult time building successful research careers.

She and Dr. Menge negotiated an arrangement in which they shared one faculty appointment, and one faculty salary. “As far as we know that had never been done before,” she said in an interview shortly after Mr. Obama named her as his choice for NOAA. Eventually, they worked into full-time jobs. And their son, Duncan Lubchenco Menge, who earned a Ph.D. last year, is a postdoctoral fellow at the National Center for Ecological Analysis and Synthesis, in Santa Barbara, Calif., Dr. Lubchenco said.

Dr. Lubchenco, a member of the National Academy of Sciences and a MacArthur grant recipient, said she did not take the NOAA job thinking it would be another chance for her to chip away at the culture of science — not consciously, anyway. “I took the job because I had the chance to be helpful,” she said.

And she acknowledged that not all scientists will do well in the public eye. But those who remain at the lab bench can support those who speak out, Dr. Lubchenco said, as her colleagues have pledged to support her. Will that support be enough? “We’ll have to see,” she said.

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