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# Top Indian and U.S. Scientists Share Prestigious Tyler Prize for Environmental Achievement for Work in Changing Policy

42<sup>nd</sup> Tyler Prize recognizes careers dedicated to informing policy with sound science, engaging local communities

Los Angeles, CA (March 24, 2015) – The Tyler Prize for Environmental Achievement Executive Committee today named the Honorable Jane Lubchenco, PhD, of Oregon State University, and Madhav Gadgil, PhD, of Goa University, as the recipients of the 2015 Tyler Prize for their leadership and engagement in the development of conservation and sustainability policies in the United States, India and internationally.

"Drs. Lubchenco and Gadgil represent the very best in bringing high-quality science to policymaking to protect our environment and ensure the sustainability of natural resources in their respective countries and around the world," said Tyler Prize Executive Committee Chair Owen T. Lind, Professor of Biology at Baylor University. "Both of these laureates have bridged science with cultural and economic realities—like the impact on Indigenous Peoples in India or fishing communities in the United States—to advance the best possible conservation policies."

Since its inception in 1973 as one of the world's first international environmental awards, the Tyler Prize has been the premier award for environmental science, environmental health and energy.

As the winners of the Tyler Prize, Lubchenco and Gadgil will share the \$200,000 cash prize and each receive a gold medallion. The Prize, awarded by the international Tyler Prize Executive Committee with the administrative support of the University of Southern California, honors exceptional foresight and dedication in the environmental sciences and policy—qualities that mirror the prescience of the Prize's founders, John and Alice Tyler, who established it while the environmental debate was still in its infancy.

#### The Laureates

Jane Lubchenco, the University
Distinguished Professor of Marine
Biology at Oregon State University,
served as Under Secretary of
Commerce for Oceans and
Atmosphere and Administrator of
the National Oceanic and
Atmospheric Administration (NOAA)
(2009-2013) and was recently
named first-ever U.S. Science
Envoy for the Ocean by the United
States Department of State.

Madhav Gadgil is the D.D. Kosambi Visiting Research Professor of Interdisciplinary Studies at Goa University and chaired the Western Ghats Ecology Expert Panel for India's Ministry of Environment and Forests. The landmark report on the biodiversity of the region sparked a national conversation about conservation policies and built upon his earlier work helping to draft India's Biological Diversity Act.

Previous laureates include Edward O. Wilson, recognized for his early work on the theory of island biogeography; Jane Goodall, selected for her seminal studies on the behavior and ecology of chimpanzees and her impact on wildlife awareness and environmental conservation; Jared Diamond and Paul and Anne Ehrlich, renowned authors who helped give birth to the

discipline of conservation biology; M.S. Swaminathan, an agricultural scientist who helped dramatically improve crop yields in India; and Thomas Lovejoy, a central figure in alerting the world to the critical problem of dwindling tropical forests. A full list of past winners is available at <a href="http://tylerprize.usc.edu/pastlaureates.html">http://tylerprize.usc.edu/pastlaureates.html</a>.

## Dr. Jane Lubchenco: Protecting the Ocean by Bridging Science and Policy

Lubchenco's career, which has spanned academic appointments and policymaking as the former Administrator of NOAA, has been dedicated to raising awareness of the importance of the ocean and the need to protect it. In December 2014, the U.S. Department of State named Lubchenco the first-ever Science Envoy for the Ocean, to promote this focus on ocean science, marine ecology, climate change and smart policy to a global audience.

"This State Department position gives me a terrific platform to share what works in protecting and restoring the ocean and to promote more—and better—science to inform how we use fisheries and the other resources of the ocean," said Lubchenco.

This appointment builds on Lubchenco's career working to bring attention and good science to address the threats to the ocean.

"When I started my career, I was almost entirely focused on how ocean ecosystems work and the cool discovery part of science: why do species live one place and not another? What are the dynamics between species, such as predators and their prey?" said Lubchenco. "But over time, I saw the ocean was changing—sometimes very dramatically—and nobody was paying attention."

Increasingly, Lubchenco and colleagues grew to understand that many of these changes were caused by humans: dwindling fish stocks from overfishing; increasing ocean acidification due to increased carbon dioxide (CO<sub>2</sub>) in the atmosphere; increased presence of invasive species; and climate change altering which plants and fish thrived in different regions, among other disruptions.

"There were opportunities to change what was happening, but only if more people understood what was happening in our oceans and why it matters," said Lubchenco. "In the process of communicating this science, I began listening more to lay people, fishermen and scientists, and started seeing that there were entirely new scientific questions that we needed to research to better protect our oceans."

The emphasis on conducting science to address practical questions and bringing that science to bear on policy drove much of Lubchenco's work. She served as president of the American Association for the Advancement of Science (AAAS) and the International Council for Science (ICSU), and helped to launch several programs to train scientists to engage more effectively with non-scientists, including the Aldo Leopold Leadership Program, COMPASS and Climate Central.

#### Setting the Policy Agenda: Restoring Fisheries and Ocean Health

Under her tenure as the Administrator of NOAA, Lubchenco brought together passion for restoring the health of the ocean with her experience engaging all sectors to improve the health

of fisheries and ocean ecosystems. Lubchenco advocated for policies based on sound science but flexible for the unique circumstances of different communities and regions.

One of these policies—aimed at restoring fisheries and improving ocean health—is the "catch share" model. This rights-based approach to fisheries changes the economic incentives for fishermen by giving them a stake in the future. Adopted by a number of regional fishery management councils, e.g., in Alaska, along the Pacific Coast, Gulf of Mexico and other regions, this alternate approach to fishery management has driven major advances in restoring healthy fisheries.

"Catch shares provided a powerful complement to the mandate to end overfishing that came from Congress," said Lubchenco. "The two approaches together have turned many important U.S. fisheries around. Between 2000 and 2013, the number of overfished stocks fell by more than one half, from 92 to 40, and the number of recovered stocks went from zero to 34."

Lubchenco points out that this model of conservation and sustainable use has been driven by communities on the ground, in partnership with the federal government. Moreover, she says, it proves that the perceived choice between the economy and the environment is a false dichotomy. "Long term economic prosperity depends on a healthy ocean. Policy changes that align conservation and economic incentives can have powerful outcomes."

"Between the legislative mandate to end overfishing and the adoption of catch shares, we have really transformed U.S. fisheries and demonstrated that there is a path to more profitable, more sustainable fisheries, in healthier ocean ecosystems," said Lubchenco. "And we've inspired other countries to do many of the same things."

## Dr. Madhav Gadgil: Engaging Local People in Conservation Policy

Gadgil's career has been dedicated to not only infusing environmental science into policymaking in India, but promoting the field of environmental science nationally. Through his public speaking and writing, Gadgil has advanced the field of environmental science and put it on the national radar.

"Dr. Gadgil has shaped the academic and public discourse on ecological issues in India in a most profound manner," said Jairam Ramesh, a member of the India Parliament and former Minister for Environment and Forests.

Gadgil's approach to ecology is one inherited from his father, an economist: on-the-ground engagement with the communities affected by economic and environmental policies.

"From an early age, my father's work inspired me to work with people and think about the impact of our collective activities," said Gadgil. "This first came about in my work in 1975 when traditional basket weavers who depended on bamboo in the Western Ghats approached the government and said the overexploitation of bamboo for paper mills was hurting their livelihood."

Gadgil's work began examining the tension between economic development, traditional use of resources among local communities and environmental conservation. This cross-sector approach drove the publication of his first book, *This Fissured Land*, which is used in environmental education across India, as well as a resource for policymakers.

"You have to understand the historical context, the social context and the economic context of what's going on when talking about environmental questions," said Gadgil. "I had the luxury of working with historians and sociologists that my peers in other places did not have. It has been very fruitful in improving my understanding and communicating it to others."

Advising Government on Sustainability: Balancing Development with Conservation Gadgil's engagement with the public and other academic fields has positioned him as a leading voice on environmental issues in India. He was a driving force behind the crafting of India's National Biodiversity Act and more recently chaired the Western Ghats Ecology Expert Panel—known as the "Gadgil Committee"—to offer guidelines on the protection and development of the Western Ghats, a region of India that is a UNESCO World Heritage site and one of the eight most biological diverse areas on earth.

"The Western Ghats are central to India's water supply, genetic diversity, economy and quality of life," said Gadgil. "The Indian constitution is about empowering people and our resource management is too top down. Local communities do a better job of balancing economic development and conservation. We must have policies that empower local people to make these choices."

Following the Gadgil Committee report, a second committee was convened and issued weaker conservation guidelines than the Gadgil report, cutting the number of areas labeled as ecologically sensitive in half.

"The second report said that local communities should not have any control and that is unconstitutional. I'm not alone in criticizing this," said Gadgil.

Working with local forest communities in the central Indian forest belt, Gadgil has seen that that management in the hands of locals is most effective ensuring economic opportunity and sustainable use of natural resources while preserving sacred groves and local cultures.

"We must engage local people who are most directly affected by policies if we want to develop policies that promote sustainability and balance the economics, culture and conservation," said Gadgil. "Empowering people is the key."

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### **Lecture and Award Ceremony**

On Thursday, April 23, at 2 p.m., Lubchenco and Gadgil will deliver public lectures on their work at The Forum at the University of Southern California.

And in a private ceremony, on Friday, April 24, at 7 p.m., the Tyler Prize Executive Committee and the international environmental community will honor Lubchenco and Gadgil at a banquet and ceremony at The Four Seasons Los Angeles at Beverly Hills.

#### About the Tyler Prize

The Tyler Prize for Environmental Achievement is one of the first international premier awards for environmental science, environmental health and energy.

It was established by the late John and Alice Tyler in 1973 and has been awarded annually to sixty-eight individuals and four organizations associated with world-class environmental accomplishments. Recipients encompass the spectrum of environmental concerns including environmental policy, health, air and water pollution, ecosystem disruption and loss of biodiversity, and energy resources. The Prize is awarded by the international Tyler Prize Executive Committee with the administrative support of the University of Southern California.

For more information on the Tyler Prize and its recipients, go to: http://www.tylerprize.usc.edu.