For Immediate Release

**Over 200 Top U.S. Climate and Forest Scientists Urge Congress:**

**Protect Forests to Mitigate Climate Crisis**

13 May 2020

**Contact:**
William Moomaw, Ph.D. ([William.Moomaw@tufts.edu](mailto:William.Moomaw@tufts.edu); 617-335-3994)
Chad Hanson, Ph.D. ([cthanson1@gmail.com](mailto:cthanson1@gmail.com); 530-273-9290)
Dominick DellaSala, Ph.D. ([dominick@geosinstitute.org](mailto:dominick@geosinstitute.org); 541-621-7223)

As multiple current legislative proposals attempt to shoehorn measures that would increase logging, or increase funding for logging, into COVID-19 stimulus packages, over 200 top U.S. climate and forest scientists are now asking Congressional leaders to avoid using the pandemic emergency as a means for stripping away forest protections and promoting logging. In a historic and unprecedented letter sent to Congress today, the scientists conclude that, in order to avoid the worst impacts of the climate crisis, moving beyond fossil fuel consumption is not enough, and we must also increase forest protections and shift away from energy-intensive and greenhouse-gas polluting wood consumption.

The scientists note that annual carbon emissions from logging in U.S. forests are comparable to emissions from the residential and commercial sectors combined. They ask legislators to reject false climate solutions that promote forest biomass logging (removal and incineration of trees for energy production) under the guise of “climate-friendly” or “carbon neutral” energy or logging for cross-laminated timber (CLT) and other wood products under the guise of carbon storage. Most of the carbon in trees is removed from forests when they are logged and quickly ends up in the atmosphere or in landfills, they caution. The scientists also note that logging, including commercial “thinning,” can often increase fire intensity in forests, while damaging soils and removing vital nutrients, which undermines the carbon sequestration and storage capacity of forests.

“Forests are our only means for removing atmospheric carbon dioxide and storing the carbon long term at the needed scale. Burning wood in place of coal is accelerating global warming and decreasing the capacity of forests to counter the buildup of heat trapping carbon dioxide,” said Dr. William Moomaw of Tufts University. Dr. Chad Hanson, a forest ecologist with the John Muir Project, observed, “The dangerous excess CO2 that we’ve put into the atmosphere with fossil fuel consumption and logging will stay there for far too long if we don’t take serious steps to bring it down, and forest protection is our best and most effective way to do that.” Dr. Dominick DellaSala, Chief Scientist with the Geos Institute, added, “The vast majority of scientists warn that in order to avoid catastrophic climate impacts in the decades ahead, including new pandemics potentially linked to deforestation, we need to keep dinosaur-carbon in the ground and store atmospheric carbon in forests.”
Dear Members of Congress,

As forest and climate change scientists and experts, we are writing to urge you to oppose legislative proposals that would promote logging and wood consumption, ostensibly as a natural climate change solution, based on claims that these represent an effective carbon storage approach, or claims that biomass logging, and incinerating trees for energy, represents renewable, carbon-neutral energy.

We find no scientific evidence to support increased logging to store more carbon in wood products, such as dimensional lumber or cross-laminated timber (CLT) for tall buildings, as a natural climate solution. The growing consensus of scientific findings is that, to effectively mitigate the worst impacts of climate change, we must not only move beyond fossil fuel consumption but must also substantially increase protection of our native forests in order to absorb more CO$_2$ from the atmosphere and store more, not less, carbon in our forests (Depro et al. 2008, Harris et al. 2016, Woodwell 2016, Erb et al. 2018, IPCC 2018, Law et al. 2018, Harmon 2019, Moomaw et al. 2019).

Furthermore, the scientific evidence does not support the burning of wood in place of fossil fuels as a climate solution. Current science finds that burning trees for energy produces even more CO$_2$ than burning coal, for equal electricity produced (Sterman et al. 2018), and the considerable accumulated carbon debt from the delay in growing a replacement forest is not made up by planting trees or wood substitution (noted below). We need to increase growing forests to more rapidly close the gap between emissions and removal of CO$_2$ by forests, while we simultaneously lower emissions from our energy, industrial and agricultural sectors.

In your deliberations on this serious climate change issue, we encourage you to consider the following:

- The logging and wood products industries suggest that most of the carbon in trees that are logged and removed from forests will simply be stored in CLT and other wood products for buildings instead of being stored in forest ecosystems. However, this is clearly incorrect. Up to 40% of the harvested material does not become forest products and is burned or decomposes quickly, and a majority of manufacturing waste is burned for heat. One study found that 65% of the carbon from Oregon forests logged over the past 115 years remains in the atmosphere, and just 19% is stored in long-lived products. The remainder is in landfills (Hudiburg et al. 2019).

- Logging in U.S. forests emits 617 million tons of CO$_2$ annually (Harris et al. 2016). Further, logging involves transportation of trucks and machinery across long distances between the forest and the mill. For every ton of carbon emitted from logging, an additional 17.2% (106 million tons of CO$_2$) is emitted from fossil fuel consumption to support transportation, extraction, and processing of wood (Ingerson 2007). In fact, the annual CO$_2$ emissions from logging in U.S. forests are comparable to yearly U.S. emissions from the residential and commercial sectors combined (https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-
The cumulative climate change impact of logging in the U.S. is even higher, since logging causes substantial reductions in carbon sequestration and storage potential in forests due to soil compaction and nutrient removal, and these combined impacts can often reduce forest carbon storage potential by 30% or more (e.g., Elliott et al. 1996, Walmsley et al. 2009).

- The wood products industry claims that substituting wood for concrete and steel reduces the overall carbon footprint of buildings. However, this claim has been refuted by more recent analyses that reveal forest industries have been using unrealistic and erroneous assumptions in their models, overestimating the long-term mitigation benefits of substitution by 2 to 100-fold (Law et al. 2018, Harmon 2019). The climate impact of wood is even worse if the reduced forest carbon sequestration and storage caused by nutrient loss and soil compaction from logging is included, as discussed above.

In countless public communications, and at numerous Congressional hearings, industry representatives have advocated for increased logging in the context of reducing wildland fire and related emissions. While small-tree thinning can reduce fire intensity when coupled with burning of slash debris (e.g., Perry et al. 2004, Strom and Fulé 2007) under very limited conditions, recent evidence shows intensive forest management characterized by young trees and homogenized fuels burn at higher severity (Zald & Dunn 2018). Further, the extremely low probability (less than 1%, Schoennagel et al. 2017) of thinned sites encountering a fire where thinning has occurred limits the effectiveness of such activities to forested areas near homes. Troublingly, to make thinning operations economically attractive to logging companies, commercial logging of larger, more fire-resistant trees often occurs across large areas.

Importantly, mechanical thinning results in a substantial net loss of forest carbon storage, and a net increase in carbon emissions that can substantially exceed those of wildfire emissions (Hudiburg et al. 2013, Campbell et al. 2012). Reduced forest protections and increased logging tend to make wildland fires burn more intensely (Bradley et al. 2016). This can also occur with commercial thinning, where mature trees are removed (Cruz et al. 2008, Cruz et al. 2014). As an example, logging in U.S. forests emits 10 times more carbon than fire and native insects combined (Harris et al. 2016). And, unlike logging, fire cycles nutrients and helps increase new forest growth.

We are hopeful that a new and more scientifically sound direction will be considered by Members that emphasizes increased forest protections, and a shift away from consumption of wood products and forest biomass energy, to help mitigate the climate crisis. We believe having a dialogue now would be productive, and we could help members of your Committees to be more effective in achieving the conservation and climate change goals that we share. We look forward to hearing from you and are available to provide additional scientific sources and serve as a resource for your Committees as you consider policy proposals on the climate crisis.

Sincerely,

Lead Signatories
* Affiliations listed for identification purposes only
William R. Moomaw, Ph.D.
Emeritus Professor
The Fletcher School and Co-director Global
Development and Environment Institute
Tufts University
Medford, MA, USA

Chad T. Hanson, Ph.D.
Forest Ecologist
Earth Island Institute
Berkeley, CA, USA

Dominick A. DellaSala, Ph.D.
Chief Scientist
Geos Institute
Ashland, OR, USA

George M. Woodwell, Ph.D., Founder
Woods Hole Research Center
Falmouth, MA

James E. Hansen, Ph.D.
Director, Program in Climate Science,
Awareness and Solutions
Earth Institute, Columbia University
New York, NY

William H. Schlesinger, Ph.D.
James B. Duke Professor of Biogeochemistry
Dean (Em.) the School of the Env., Duke Univ.
President (Em.), the Cary Inst. of Eco. Studies
Millbrook, NY

Michael E. Mann, Ph.D.
Distinguished Professor
Director, Earth System Science Center (ESSC)
The Pennsylvania State University
University Park, Pennsylvania

Peter H. Raven, Ph.D.
President Emeritus, Missouri Botanical Garden
George Engelmann Professor of Botany Emeritus,
Washington University in St. Louis
St. Louis, MO

Thomas Lovejoy, Ph.D.
Professor, Environmental Science and Policy
George Mason University
Fairfax City, VA
Senior Fellow, United Nations Foundation

Anne H. Ehrlich, Ph.D.
Center for Conservation Biology
Stanford University
Palo Alto, CA

Paul R. Ehrlich, Ph.D., Professor Emeritus, Biology
Stanford University
President, Center for Conservation Biology
Palo Alto, CA

William Ripple, Ph.D.
Distinguished Professor of Ecology
Oregon State University
Corvallis, OR

Beverly Law, Ph.D., Professor Emeritus, Global
Change Bio. and Terrestrial Systems Science
Department of Forest Ecosystems & Society
Oregon State University
Corvallis, OR

Mark E. Harmon, Ph.D., Professor Emeritus
Department of Forest Ecosystems & Society
Oregon State University
Corvallis, OR

Tara Hudiburg, Ph.D., Associate Professor
Dept. of Forest, Rangeland, and Fire Sciences
University of Idaho
Moscow, ID

Scott Goetz, Ph.D., Professor, Carbon Cycle Science
Northern Arizona University
Science Lead, NASA Arctic Boreal
Vulnerability Experiment
Flagstaff, AZ

Michael Dorsey, Ph.D., M.F.S., M.A.
M.F.S., Yale University, School of Forestry
M.A., The Johns Hopkins Univ., Anthropology
Ph.D., University of Michigan, School for
Environment and Sustainability

Philip B. Duffy, Ph.D.
President and Executive Director
Woods Hole Research Center
Falmouth, MA

Jennifer R. Marlon, Ph.D.
Research Scientist & Lecturer
Yale Program on Climate Change Communication
Yale School of Forestry & Environmental Studies
New Haven, CT
Richard A. Birdsey, Ph.D.  
Senior Scientist, Woods Hole Research Center  
Falmouth, MA  
Volunteer, U.S. Forest Service

Reed Noss, Ph.D.  
President and Chief Scientist  
Florida Institute for Conservation Science  
Chuluota, Florida

Wayne S. Walker, Ph.D.  
Carbon Program Director  
Woods Hole Research Center  
Falmouth, MA

Richard A. Houghton, Ph.D.  
Senior Scientist, George M. Woodwell Chair for Global Ecology at Woods Hole Research Center  
Falmouth, MA

Susan M. Natali, Ph.D.  
Arctic Program Director  
Woods Hole Research Center  
Falmouth, MA

Jennifer Francis, Ph.D.  
Senior Scientist  
Woods Hole Research Center  
Falmouth, MA

Susan A. Masino, Ph.D.  
Vernon Roosa Professor of Applied Science  
Trinity College  
Charles Bullard Fellow (2018-2019)  
Hartford, CT

Mary S. Booth, Ph.D., Director  
Partnership for Policy Integrity  
Pelham, MA

Stuart Pimm, Ph.D.  
Doris Duke Chair of Conservation  
Duke University  
Durham, NC

Juliette N. Rooney-Varga, Ph.D.  
Director, Climate Change Initiative  
Assoc. Prof., Environmental Science  
University of Massachusetts  
Lowell, MA

Barry R. Noon, Ph.D.  
Emeritus Professor  
Colorado State University  
Fort Collins, CO

Scott Denning, Ph.D.  
Monfort Professor of Atmospheric Science  
Colorado State University  
Fort Collins, CO

John Sterman, Ph.D.  
Professor and Director  
MIT Systems Dynamics Group  
Sloan School of Management  
Massachusetts Institute of Technology  
Cambridge, MA

Lori S. Siegel, Ph.D.  
P.E., Senior Modeler  
Climate Interactive  
Upper Valley, NH

Margaret (Meg) Lowman, Ph.D.  
Director, TREE Foundation  
National Geographic Explorer  
Adjunct Professor, Arizona State University  
Research Professor, Universiti Sains Malaysia

James N. Galloway, Ph.D.  
Sidman P. Poole Professor  
Environmental Sciences  
University of Virginia  
Charlottesville, Virginia

William L. Baker, Ph.D.  
Program in Ecology/Department of Geography  
University of Wyoming  
Laramie, WY

Eric Chivian, M.D.  
Founder and Former Director, Center for Health and the Global Environment  
Harvard Medical School  
Boston, Massachusetts

Cathy Whitlock, Ph.D.  
 Regents Professor in Earth Sciences &  
Fellow of the Montana Institute on Ecosystems  
Montana State University  
Bozeman, MT
Derek E. Lee, Ph.D.
Associate Research Professor
Penn State University
University Park, PA

Monica Bond, Ph.D.
Principal Scientist
Wild Nature Institute
Concord, NH

John Talberth, Ph.D.
President and Senior Economist
Center for Sustainable Economy
Portland, OR

Ernie Niemi, President
Natural Resource Economics
Eugene, OR

Dennis C. Odion, Ph.D. (posthumous)
Vegetation Ecologist
Earth Research Institute
University of California, Santa Barbara

Additional Signers

R.W. Abrams, Ph.D.
Principal Ecologist
Dru Associates, Inc.
Glen Cove, New York

Nektaria Adaktilou-Landenberger, Ph.D.
Science & Management Specialist, WVLT, and
Service Assistant Professor
West Virginia Univ. / West Virginia Land Trust
Morgantown, West Virginia

Ileene Anderson, M.S.
Senior Scientist
Center for Biological Diversity
Los Angeles, California

William Anderson, Ph.D.
Professor Emeritus
Grice Marine Biological laboratory
Charleston, South Carolina

Warren Aney, M.S.
Senior Wildlife Ecologist
Oregon Chapter The Wildlife Society
Portland, Oregon

Gregory H. Aplet, Ph.D.
Senior Science Director
The Wilderness Society
Denver, Colorado

A. Z. Andis Arietta, M.S.
Ph.D. Candidate
Yale University
New Haven, Connecticut

William Armbruster, Ph.D.
Senior Research Scientist
University of Alaska
Fairbanks, Alaska

Henry Art, Ph.D.
Emeritus Professor of Biology
Director Center for Environmental Studies
Williams College
Williamstown, Massachusetts

Peter Bahls, M.S.
Executive Director/Conservation Biologist
Northwest Watershed Institute
Port Townsend, Washington

Bryant Baker, M.S.
Conservation Director
Los Padres ForestWatch
Santa Barbara, CA

Jesse Barber, Ph.D.
Associate Professor
Boise State University
Boise, Idaho

Constance Dustin Becker, Ph.D.
Co-Director
Life Net Nature
Willcox, Arizona

Craig Benkman, Ph.D., Professor
University of Wyoming
Laramie, Wyoming
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert L. Beschta, Ph.D.</td>
<td>Professor Emeritus</td>
<td>Oregon State University</td>
<td>Corvallis, Oregon</td>
</tr>
<tr>
<td>Leslie Bishop, Ph.D.</td>
<td>Emerita Professor of Biology</td>
<td>Earlham College</td>
<td>Nashville, Indiana</td>
</tr>
<tr>
<td>Scott Black, M.S.</td>
<td>Executive Director</td>
<td>Xerces Society for Invertebrate Conservation</td>
<td>Portland, Oregon</td>
</tr>
<tr>
<td>Brian Bodenbender, Ph.D.</td>
<td>Professor of Geological and Env.Science</td>
<td>Hope College</td>
<td>Holland, Michigan</td>
</tr>
<tr>
<td>Elizabeth Borer, Ph.D.</td>
<td>Professor</td>
<td>University of Minnesota</td>
<td>Saint Paul, Minnesota</td>
</tr>
<tr>
<td>John Bowman, Ph.D.</td>
<td>Professor</td>
<td>Monash University</td>
<td>Melbourne, Australia</td>
</tr>
<tr>
<td>Buma Buma, Ph.D.</td>
<td>Assistant Professor</td>
<td>University of Colorado, Denver</td>
<td>Denver, Colorado</td>
</tr>
<tr>
<td>Philip Cafaro, Ph.D.</td>
<td>Professor of Environmental Ethics</td>
<td>Colorado State University</td>
<td>Fort Collins, Colorado</td>
</tr>
<tr>
<td>Ken Carloni, Ph.D.</td>
<td>Professor Emeritus</td>
<td>Umpqua Community College</td>
<td>Roseburg, Oregon</td>
</tr>
<tr>
<td>Kai Chan, Ph.D.</td>
<td>Professor</td>
<td>University of British Columbia</td>
<td>Vancouver, British Columbia</td>
</tr>
<tr>
<td>Donald Charles, Ph.D.</td>
<td>Senior Scientist</td>
<td>Academy of Natural Sciences of Drexel Univ.</td>
<td>Philadelphia, Pennsylvania</td>
</tr>
<tr>
<td>Tonja Chi, M.S.</td>
<td>Wildlife Ecologist</td>
<td>Campbell, California</td>
<td></td>
</tr>
<tr>
<td>Joseph Cook, Ph.D.</td>
<td>Regents Prof. of Biology, Curator of Mammals</td>
<td>University of New Mexico</td>
<td>Albuquerque, New Mexico</td>
</tr>
<tr>
<td>Patrick Crist, Ph.D.</td>
<td>Principal</td>
<td>PlanIt Forward</td>
<td>Broomfield, Colorado</td>
</tr>
<tr>
<td>Sam Davis, Ph.D.</td>
<td>Conservation Scientist</td>
<td>Dogwood Alliance</td>
<td>Asheville, North Carolina</td>
</tr>
<tr>
<td>John M. DeCicco, Ph.D.</td>
<td>Research Professor</td>
<td>University of Michigan Energy Institute</td>
<td>Ann Arbor, Michigan</td>
</tr>
<tr>
<td>Alan Dickman, Ph.D.</td>
<td>Professor Emeritus</td>
<td>University of Oregon</td>
<td>Eugene, Oregon</td>
</tr>
<tr>
<td>Craig Downer, Ph.D.</td>
<td>Wildlife Ecologist</td>
<td>Andean Tapir Fund</td>
<td>Minden, Nevada</td>
</tr>
<tr>
<td>Tom Dudley, Ph.D.</td>
<td>Research Biologist</td>
<td>University of California</td>
<td>Santa Barbara, California</td>
</tr>
<tr>
<td>Mary Edwards, Ph.D.</td>
<td>Professor</td>
<td>University of Southampton</td>
<td>Southampton, United Kingdom</td>
</tr>
<tr>
<td>Jerry Estberg, Ph.D.</td>
<td>Professor Emeritus</td>
<td>University of San Diego</td>
<td>Port Angeles, Washington</td>
</tr>
<tr>
<td>Jonathan Evans, Ph.D.</td>
<td>Professor of Biology</td>
<td>University of the South</td>
<td>Sewanee, Tennessee</td>
</tr>
</tbody>
</table>
Daniel Fisher, Ph.D., Professor  
University of Michigan  
Ann Arbor, Michigan

Johannes Foufopoulos, Ph.D.  
Associate Professor  
University of Michigan  
Ann Arbor, Michigan

Janet Franklin, Ph.D.  
Distinguished Professor  
University of California  
Riverside, California

Jerry Freilich, Ph.D., Chief of Research  
Olympic National Park (retired)  
Bend, Oregon

Lee Frelich, Ph.D.  
Director, Center for Forest Ecology  
University of Minnesota  
St. Paul, Minnesota

Christopher Frissell, Ph.D.  
Principal Scientist  
Frissell & Raven Hydrobiological and Landscape Sci.  
Polson, Montana

Evan Frost, M.S.  
Terrestrial Ecologist  
Wildwood Consulting LLC  
Ashland, Oregon

Dana Furgerson, M.S.  
Retired teacher  
Eugene, Oregon

Carol Garrett, Ph.D.  
Retired, Conservation Ecologist  
The Nature Conservancy  
Yreka, California

Daniel Gavin, Ph.D.  
Professor  
University of Oregon  
Eugene, Oregon

Janet Gehring, Ph.D.  
Associate Professor  
Bradley University  
Peoria, Illinois

Robert Good, D.V.M., M.S.  
Epidemiologist  
USDA  
Wellsville, Kansas

Steven Green, Ph.D.  
Emeritus Professor  
University of Miami  
Coral Gables, Florida

Gregory F. Grether, Ph.D.  
Professor  
University of California Los Angeles  
Los Angeles, California

Simon Gunner, M.S.  
Botanist  
Olofson Environmental, Inc.  
Berkeley, California

James G. Hallett, Ph.D.  
Chair, Society for Ecological Restoration  
Washington, District of Columbia

Richard W. Halsey, M.S.  
The California Chaparral Institute  
Escondido, California

Debora Hammond, Ph.D.  
Professor Emerita, Environmental Studies  
Sonoma State University  
Cotati, California

John Harte, Ph.D.  
Professor of Ecosystem Sciences  
UC Berkeley  
Berkeley, California

Susanna Hecht, Ph.D., Professor  
University of California  
Los Angeles, California

Betsy Herbert, Ph.D.  
Environmental scientist & freelance writer  
Betsyherbert.com  
Corvallis, Oregon

Karen Holl, Ph.D.  
Professor of Environmental Studies  
University of California Santa Cruz  
Santa Cruz, California
Richard T. Holmes, Ph.D.
Emeritus Professor of Biology
Dartmouth College
Hanover, New Hampshire

Elizabeth Horvath, M.S.
Associate Professor, Biology
Westmont College
Santa Barbara, California

Malcolm Hunter, Ph.D.
Professor
University of Maine
Orono, Maine

Mark Hunter, Ph.D.
Earl E. Werner Distinguished Univ. Professor
Henry A. Gleason Collegiate Professor
University of Michigan
Ann Arbor, Michigan

Richard Hutto, Ph.D., Professor Emeritus, Biology
and Wildlife Biology
Division of Biological Sciences
University of Montana
Missoula, Montana

Inés Ibáñez, Ph.D.
Associate Professor
School for Environment and Sustainability
University of Michigan
Ann Arbor, Michigan

Marc Imlay, Ph.D.
Natural Places Chair, Sierra Club
Bryans Road, Maryland

Alice Imlay, Ph.D.
Natural Places Chair, Sierra Club
Bryans Road, Maryland

Timothy Ingalsbee, Ph.D., Executive Director
Firefighters United for Safety, Ethics, and Ecology (FUSEE)
Eugene, Oregon

Anne Jacopetti, M.A.
Retired Educator/Teacher
350Sonoma Steering Committee
Santa Rosa, California

Karl Jarvis, Ph.D., Lecturer
Southern Utah University
Cedar City, Utah

Mitchell Johns, Ph.D.
Professor of Crop and Soil Science
California State University
Chico, California

Jacob Kann, Ph.D.
Aquatic Ecologist
Aquatic Ecosystem Sciences LLC
Ashland, Oregon

David Kanter, Ph.D.
Assistant Professor of Environmental Studies
New York University
Vice-Chair International Nitrogen Initiative
New York, New York

James Karr, Ph.D.
Professor Emeritus
University of Washington
Sequim, Washington

Maya Khosla, M.S.
Wildlife Biologist
Rohnert Park, CA

Bruce Kirchoff, Ph.D.
Professor
University of North Carolina at Greensboro
Greensboro, North Carolina

Rick Landenberger, Ph.D.
Science & Management Specialist & Asst.Prof.
West Virginia Univ. / West Virginia Land Trust
Morgantown, West Virginia

Marc Lapin, Ph.D.
Assoc. Lab Prof. & College Lands Ecologist
Middlebury College
Middlebury, Vermont

Prggy Lemaux, Ph.D.
Faculty
UC Berkeley
Berkeley, California

Alan Levine, Director
Coast Action Group
Santa Rosa, California

Gene E. Likens, Ph.D.
President and Dist. Senior Scientist, Emeritus
Cary Institute of Ecosystem Studies
Millbrook, New York
Jay Lininger, M.S.
Principal Scientist
Pyrolysis LLC
Talent, Oregon

Ellen Moyer, Ph.D., P.E., Principal
Greenvironment, LLC
Montgomery, Massachusetts

Frank Logiudice, M.S.
Senior Instructor
University of Central Florida
Orlando, Florida

Rob Mrowka, M.S.
Senior Scientist, Retired
Machias, New York

Chris Maser, M.S.
Social-environmental Sustainability
Corvallis, Oregon

John Mull, Ph.D.
Professor of Zoology
Weber State University
Ogden, Utah

Carl McDaniel, Ph.D.
Professor Emeritas (Rensselaer)
Visiting Professor Oberlin
Rensselaer and Oberlin College
Oberlin, Ohio

Pete Murphy, Ph.D.
Distinguished Professor Emeritus
Michigan State University
East Lansing, Michigan

John McLaughlin, Ph.D.
Associate Professor
Western Washington University
Bellingham, Washington

Dennis Murphy, Ph.D.
Emeritus Research Professor
University of Nevada
Reno, Nevada

Fergus Mclean, B.S.
Retired forester
Dexter, Oregon

K. Greg Murray, Ph.D.
T. Elliot Weier Professor of Plant Science
Hope College
Holland, Michigan

Gary Meffe, Ph.D.
Conservation Biologist, retired
University of Florida
Gainesville, Florida

James Murray, Ph.D.
Retired Ecological Geneticist
University of Virginia
Charlottesville, Virginia

Douglas Meikle, Ph.D., Professor of Biology
Miami University
Oxford, Ohio

Phil Myers, Ph.D.
Professor Emeritus
University of Michigan
Ann Arbor, Michigan

Vicky Meretsky, Ph.D.
Prof., O'Neill School of Public & Env. Affairs
Indiana University
Bloomington, Indiana

Knute Nadelhoffer, Ph.D.
Professor, Dept. of Ecology & Evolutionary Biology
and Director, UM Biological Station
University of Michigan
Ann Arbor, Michigan

Amy Moas, Ph.D.
Greenpeace USA
Oakland, California

Charles R. Neal, B.S.
Ecologist
USDA (retired)
Cody, Wyoming

Terri Moon, M.S.
Rohnert Park, California

Robert Norman, Ph.D.
Lebanon, New Hampshire

John Morse, Ph.D.
Professor Emeritus
Clemson University
Clemson, South Carolina
Richard Nyhof, Ph.D.  
Professor Emeritus  
Calvin University  
Grand Rapids, Michigan

Gordon Orians, Ph.D.  
Professor Emeritus  
University of Washington  
Seattle, Washington

Gustav Paulay, Ph.D.  
Curator & Professor  
University of Florida  
Gainesville, Florida

Timothy Pearce, Ph.D.  
Biologist  
Carnegie Museum of Natural History  
Pittsburgh, Pennsylvania

Barbara Peckarsky, Ph.D.  
Honorary Fellow and Adjunct Professor  
University of Wisconsin - Madison  
Madison, Wisconsin

Michael Pelizzari, Ph.D.  
Astrophysicist, retired  
Xero Carbon  
Milpitas, California

Esther Peters, Ph.D.  
Associate Prof., Env. Science and Policy  
George Mason University  
Fairfax, Virginia

Roger A Powell, Ph.D.  
Professor Emeritus, Dept. of Applied Ecology  
North Carolina State Univ.  
Raleigh, North Carolina

Thomas Power, Ph.D.  
Professor Emeritus  
Univ. of Montana  
Missoula, Montana

James Quinn, Ph.D.  
Professor Emeritus  
Rutgers University  
New Brunswick, New Jersey

John Ratti, Ph.D.  
Professor and Research Scientist, Retired  
University of Idaho  
New Meadows, Idaho

Barbara Reynolds, Ph.D.  
Professor Emeritus  
UNCA  
Asheville, North Carolina

Fred M. Rhoades, Ph.D.  
Research Associate, Biology Department Western  
Washington University  
Bellingham, Washington

Dina Roberts, Ph.D., Professor  
CIEE Global Institute  
Vancouver, Washington

Terry Root, Ph.D.  
Professor Emeritus  
Stanford University  
Stanford, California

Daniel Rosenberg, Ph.D.  
Oregon Wildlife Institute  
Corvallis, Oregon

Edwin Royce, Ph.D., Research Scientist (Retired)  
Department of Plant Sciences  
University of California at Davis  
Davis, California

Matthew Rubino, M.S.  
Research Scholar  
North Carolina State University  
Raleigh, North Carolina

Will Russell, Ph.D.  
Professor  
San Jose State University  
San Jose, California

Robin Salter, Ph.D.  
Professor Emeritus  
Oberlin College  
Oberlin, Ohio

Melissa Savage, Ph.D.  
Assistant Professor Emeritus  
University of California Los Angeles  
Los Angeles, New Mexico

Carol Savonen, M.S.  
Assistant Professor Emeritus  
Oregon State University  
Philomath, Oregon
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