

Letter Regarding Use of Forests for Bioenergy (February 11, 2021)

To President Biden, President von der Leyen, President Michel, Prime Minister Suga, and President Moon,

The undersigned scientists and economists commend each of you for the ambitious goals you have announced for the United States, the European Union, Japan and South Korea to achieve carbon neutrality by 2050. Forest preservation and restoration should be key tools for achieving this goal and simultaneously helping to address our global biodiversity crisis. We urge you not to undermine both climate goals and the world's biodiversity by shifting from burning fossil fuels to burning trees to generate energy.

For decades, producers of paper and timber products have generated electricity and heat as by-products from their process wastes. This use does not lead to the additional harvest of wood. In recent years, however, there has been a misguided move to cut down whole trees or to divert large portions of stem wood for bioenergy, releasing carbon that would otherwise stay locked up in forests.

The result of this additional wood harvest is a large initial increase in carbon emissions, creating a "carbon debt," which increases over time as more trees are harvested for continuing bioenergy use. Regrowing trees and displacement of fossil fuels may eventually pay off this carbon debt, but regrowth takes time the world does not have to solve climate change. As numerous studies have shown, this burning of wood will increase warming for decades to centuries. That is true even when the wood replaces coal, oil or natural gas.

The reasons are fundamental. Forests store carbon - approximately half the weight of dry wood is carbon. When wood is harvested and burned, much and often more than half of the live wood in trees harvested is typically lost in harvesting and processing before it can supply energy, adding carbon to the atmosphere without replacing fossil fuels. Burning wood is also carbon-inefficient, so the wood burned for energy emits more carbon up smokestacks than using fossil fuels. Overall, for each kilowatt hour of heat or electricity produced, using wood initially is likely to add two to three times as much carbon to the air as using fossil fuels.

Increases in global warming for the next few decades are dangerous. This warming means more immediate damages through more forest fires, sea level rise and periods of extreme heat in the next decades. It also means more permanent damages due to more rapid melting of glaciers and thawing of permafrost, and more packing of heat and acidity into the world's oceans. These harms will not be undone even if we remove the carbon decades from now.

Government subsidies for burning wood create a double climate problem because this false solution is replacing real carbon reductions. Companies are shifting fossil energy use to wood, which increases warming, as a substitute for shifting to solar and wind, which would truly decrease warming.

In some places, including Japan and French Guiana, there are proposals not just to burn wood for electricity but to burn palm or soybean oil. Producing these fuels requires expansion of palm or soybean production that leads to clearing of carbon dense tropical forests and reduction of their important carbon sink, both of which add carbon to the atmosphere.

“Sustainability standards” for forest or vegetable oil management cannot alter these results. Sustainable management is what allows wood harvest to eventually pay back carbon debts but cannot alter these decades or even centuries of increased warming. Similarly, any increased demand for vegetable oil adds to the global pressure to clear more forests already created by rising food demands.

Making countries responsible for emissions from land use changes, although desirable, cannot alone fix laws that treat burning wood as carbon neutral because these national responsibilities do not alter the incentives created by those laws for power plants and factories to burn wood. In the same way, the fact that countries are responsible for emissions from diesel fuel use would not fix a law encouraging trucks to burn more diesel on the flawed theory that diesel is carbon neutral. Both treaties that shape national climate responsibilities and each country’s energy laws that implement them must accurately recognize the climate effects of the activities they encourage.

Your decisions going forward are of great consequences for the world’s forests because if the world supplied just an additional 2% of its energy from wood, it would need to double its commercial wood harvests. There is good evidence that increased bioenergy in Europe has already led to greatly increased forest harvests there. These approaches also create a model that encourages tropical countries to cut more of their forests – as several countries have pledged to do – undermining the goals of globally accepted forest agreements.

To avoid these harms, governments must end subsidies and other incentives that today exist for the burning of wood whether from their forests or others. The European Union needs to stop treating the burning of biomass as carbon neutral in its renewable energy standards and in its emissions trading system. Japan needs to stop subsidizing power plants to burn wood. And the United States needs to avoid treating biomass as carbon neutral or low carbon as the new administration crafts climate rules and creates incentives to reduce global warming.

Trees are more valuable alive than dead both for climate and for biodiversity. To meet future net zero emission goals, your governments should work to preserve and restore forests and not to burn them.

Peter Raven, Director Emeritus Missouri Botanical Society, St. Louis, Missouri USA,
Winner U.S. National Medal of Science,
former President of American Association for Advancement of Science

Additional Initiators:

Steven Berry, Professor,
Winner Frisch Medal,
Fellow Econometric Society
Yale University
Connecticut, USA

Wolfgang Cramer, Professor
Aix Marseille Université, CNRS, IRD,
Avignon Université
Member Académie d'Agriculture de France
Aix-en-Provence, France

Felix Creutzig, Professor
Technical University of Berlin
Berlin, Germany

Philip Duffy, President and Executive
Director, Woodwell Climate Research
Center, Massachusetts, USA

Bjart Holtsmark,
Tufts University
Senior Researcher,
Statistics Norway, Oslo, Norway

Daniel Kammen, Professor,
University of California at Berkeley
Berkeley, California, USA

Simon Levin, Professor, Princeton
University, Winner U.S. National Medal of
Science, Member National Academy of
Sciences Princeton, New Jersey, USA

Wolfgang Lucht, Professor Humboldt
University Berlin and Chair of Potsdam
Institute for Climate Impact Research
Department on Earth System Analysis
Potsdam, Germany

Christina Moberg, Emeritus Professor
President European Academies of Science
KTH Royal Institute of Technology
Stockholm, Sweden

William R. Moomaw
Emeritus Professor
Distinguished Visiting Scientist
Woodwell Climate Research Center
Fellow of the American Association for the
Advancement of Science
Tufts University
Massachusetts, USA

Michael Norton,
Environmental Program Chair, European
Academies Science Advisory Panel,
Professor, University of Tokyo (Retired),
Tokyo, Japan

Carsten Rahbek, Professor,
University of Copenhagen, University of
Southern Denmark, and Imperial College,
London, United Kingdom

Timothy D. Searchinger, Senior Research
Scholar, Princeton University,
Princeton, New Jersey

John Sterman, Professor,
Massachusetts Institute of Technology,
Massachusetts, USA

Lars Walløe, Chair EASAC Environment
Steering Panel, Professor Emeritus,
University of Oslo, Oslo, Norway

Jean-Pascal van Ypersele, Professor,
Earth and Life Institute, Université
catholique de Louvain, member Royal
Academy of Belgium,
Louvain-la-Neuve, Belgium

Richard Waring, Ph.D.
Professor Emeritus,
Macus Wallenberg Prize
Oregon State University
Corvallis, Oregon

Maura Hanrahan, Ph.D.
Associate Professor
University of Lethbridge
Lethbridge, Alberta, Canada

Marcia Marques, Ph.D.
Professor
Rio de Janeiro State University-UERJ
Rio de Janeiro, Brazil

Gabriela Kuetting, Ph.D.
Professor
Rutgers University
New Brunswick, New Jersey

Gillian Davies, M.E.S.
Senior Ecological Scientist
Queen Mary University of London
London, United Kingdom

Daniel Rubenstein, Ph.D.
Professor,
Fellow of the American Association
for the Advancement of Science
Princeton University
Princeton, New Jersey

Lee Frelich, Ph.D.
Director
University of Minnesota
Saint Paul, Minnesota

Mayank Sarika, M.A.
Scholar
Princeton University
Princeton, New Jersey

Ciro Cabal, M.Sc.
PhD Candidate
Princeton University
Princeton, New Jersey

Amalesh Dhar, Ph.D.
Researcher
University of Alberta
Edmonton, Alberta, Canada

Aaron Ellison, Ph.D.
Senior Research Fellow & Deputy Director,
Fellow of the Ecological Society of America
Harvard University
Cambridge, Massachusetts

William Anderegg, Ph.D.
Assistant Professor
University of Utah
Salt Lake City, Utah

Jan Kunas, Ph.D.
Scholar
European University Institute
Florence, Italy

Robert Howarth, Ph.D.
Professor
Cornell University
Ithaca, New York

Stephan von Cramon-Taubadel, Ph.D.
Professor
Georg-August Universitat Gottingen
Gottingen, Germany

Pamela McElwee, Ph.D.
Associate Professor
Rutgers University
New Brunswick, New Jersey

Helena Freitas, Ph.D.
Professor
University of Coimbra
Coimbra, Portugal

Patrick Gonzalez, Ph.D.
Associate Adjunct Professor
University of Berkeley
San Francisco, California

James Galloway, Ph.D.
Professor, Member of the

National Academy of Science
University of Virginia
Charlottesville, Virginia

Sean Thomas, Ph.D.
Professor
University of Toronto - St. George Campus
Toronto, Ontario, Canada

Rainer W Bussmann, Ph.D.
Professor
Ilia State University
Tibilisi, Georgia

Alfred Rutherford, Ph.D.
Professor, Fellow of the Royal Society
Imperial College London
London, United Kingdom

Gianangelo Bracco, Ph.D.
Associate Professor
University of Geneva
Geneva, Switzerland

David Bowling, Ph.D.
Professor
University of Utah
Salt Lake City, Utah

Jörn Theuerkauf, Ph.D.
Professor
Polish Academy of Science
Warsaw, Poland

Wil Burns, Ph.D.
Professor
American University
Washington, D.C.

Caroline Farrior, Ph.D.
Assistant Professor
University of Texas
Austin, Texas

Spencer Barrett, Ph.D.
Professor Emeritus, Member of the
National Academy of Science
University of Toronto - St. George Campus
Toronto, Ontario, Canada

Manuel J. Macía, Ph.D.
Associate Professor
Universidad Autonoma de Madrid
Madrid, Spain

Benjamin Phalan, Ph.D.
Head of Conservation
Oregon State University
Corvallis, Oregon

John Harte, Ph.D.
Professor Emeritus,
Fellow of the American Physical Society,
the Ecological Society of America,
and the American Association
for the Advancement of Science
University of California at Berkeley
Berkely, California

Marcus Dostie, M.Sc.
Instructor
University of Lethbridge
Lethbridge, Alberta, Canada

Anni Arponen, Ph.D.
Researcher, Docent
University of Helsinki
Helsinki, Finland

James Aronson, Ph.D.
Professor Emeritus
Missouri Botanical Garden
St. Louis, Missouri

Louro Ricardo, Ph.D.
Assistant Professor
Universidade Nova de Lisboa
Lisbon, Portugal

David Mabberley, D.Sc.
Professor Emeritus,
Member of the Order of Australia
Wadham College, University of Oxford
Oxford, United Kingdom
Lee Janice Ser Huay, Ph.D.
Assistant Professor
Nanyang Technological University
Singapore, Singapore

Phyllis Coley, Ph.D.
Professor, Fellow of the
American Academy of Arts and Sciences
University of Utah
Salt Lake City, Utah

Karen Holl, Ph.D.
Professor, Honorary Fellow of
the Royal Society, Fellow of
Aldo Leopold Leadership
University of California, Santa Cruz
Santa Cruz, California

William Laurance, Ph.D.
Professor, Fellow of the Australian
Academy of Science; Fellow of the
American Association for the
Advancement of Sciences
James Cook University
Cairns, Australia

Weeden Lori, M.Sc.
Senior Lecturer
University of Massachusetts Lowell
Lowell, Massachusetts

Merilä Juha, Ph.D.
Member of Finnish Academy of Science and
Letters
University of Hong Kong
Hong Kong, China

Leander Anderegg, Ph.D.
Assistant Professor
University of California, Santa Barbara
Santa Barbara, California

Blakers Andrew, Ph.D.
Professor
Australia National University
Canberra, Australia

Bock Walter, Ph.D.
Professor Emeritus
Columbia University
New York, New York

Fernando Gonzalez-Candelas, Ph.D.
Professor
University of Valencia
Valencia, Spain

Bengt Gunnar Jonsson, Ph.D.
Professor
Mid Sweden University
Sundsvall, Sweden

Grossart Hans-Peter, Ph.D.
Professor,
American Society of Limnology
and Oceanography,
International Society of Molecular Evolution
Leibniz-Institute of Freshwater Ecology
and Inland Fisheries
Berlin, Germany

Diego Gallego, Ph.D.
Assistant Professor
University of Alicante
Alicante, Spain

Juha Mikola, Ph.D.
University Lecturer
University of Helsinki
Helsinki, Finland

David Coomes, Ph.D.
Director of the Conservation Research Institute
University of Cambridge
Cambridge, United Kingdom

Kuemmerle Tobias, Ph.D.
Professor
University of Berlin Humboldt
Berlin, Germany

Sten Svantesson, Ph.D.
Scientist
University of Gothenburg
Gothenburg, Sweden

Pugnaire Francisco, Ph.D.
Professor
La Estación Experimental de Zonas Áridas
Almería, Spain

Thomas Elmqvist, Ph.D.
Professor
Stockholm University
Stockholm, Sweden

Andy Friedlandm Ph.D.
Professor
Dartmouth University
Hanover, New Hampshire

Åsa Kasimir, Ph.D.
Associate Professor
University of Gothenburg
Gothenburg, Sweden

Susan Page, PhD
Professor
University of Leicester
Leicester, England

Stuart Pimm, Ph.D.
Professor
Duke University
Durham, North Carolina

Rütting Louise, Ph.D.
Head of Research Education
University of Gothenburg
Gothenburg, Sweden

Robert Gamache, Ph.D.
Professor, American Physical Society
University of Massachusetts Lowell
Lowell, Massachusetts

Tobias Plieninger, PhD
Professor
University of Goettingen
Goettingen, Germany

Charlotte Ryan, Ph D. in Philosophy (Sociology)
Professor, Society for the
Study of Social Problems,
International Assn for Media &
Communication Research
University of Massachusetts Lowell
Lowell, Massachusetts

Bruno Carli, Ph.D.
Director, Member of the
Accademia Nazionale dei Lincei
Nello Carrara Institute of Applied Physics
of National Research Council
Florence, Italy

Charles Perrings, Ph.D.
Professor
Arizona State University
Tempe, Arizona

Joann de Zegher, Ph.D.
Assistant Professor
Massachusetts Institute of Technology
Cambridge, Massachusetts

Ghilleen Prance, Ph.D.
Professor Emeritus, Knight Bachelor (Sir)
Royal Botanic Gardens, Kew
London, United Kingdom

Rutger Vos, Ph.D.
Lecturer
Naturalis Biodiversity Center
Leiden, The Netherlands

Alex Latta, Ph.D.
Associate Professor
Wilfrid Laurier University
Waterloo, Ontario, Canada

Jacob Socolar, Ph.D.
Postdoctoral Researcher
Norwegian University of Life Sciences
Aas, Norway

Marta Raquel Cardoso Correia, Ph.D.
Postdoctoral Researcher
Centro Ecologia Funcional, Departamento de
Ciências da Vida
Coimbra, Portugal

Barbara Bozetka, Ph.D.
Postdoctoral Researcher
Nicolaus Copernicus University
Torun, Poland

Björn Norden, Ph.D.
Associate Professor
Norwegian Institute for Nature Research
Fjerdingby, Norway

Anne Ehrlich
Senior Research Scientist Emerita,
Fellow of the American Academy
of Arts and Sciences
Stanford University
Stanford, California

Beverly Law, Ph.D.
Professor Emeritus,
Fellow of the
American Geophysical Union
Oregon State University
Corvallis, United States

Sofia Neves, B.Sc.
Scholar
ITQB NOVA
Lisbon, Portugal

Joerg Niewoehner, Ph.D.
Professor
Humboldt-Universität zu Berlin
Berlin, Germany

Micael Jonsson, Ph.D.
Associate Professor
Umeå University
Umeå, Sweden

Harini Nagendra, Ph.D.
Professor
Azim Premji University
Bangalore, India

Geerte de Jong, M.Sc.
Doctoral Student
Gothenburg University
Göteborg, Sweden

Rajmund Michalski, Ph.D.
Professor, Member of the European
Academies Science Advisory Council,
Environmental Steering Panel
Institute of Environmental Engineering,

Polish Academy of Sciences
Zabrze, Poland

Charlotta Kvarnemo, Ph.D.
Professor
University of Gothenburg
Gothenburg, Sweden

Lars Ericson, Ph.D.
Professor Emeritus
Umeå university
Umeå, Sweden

Kimberli Ponzio, M.Sc.
President
Society of Wetland Scientists,
Professional Certification Program
Gainesville, Georgia

Nina Lundholm, Ph.D.
Associate Professor
University of Copenhagen
Copenhagen, Denmark

Bernhard Schink, Ph.D.
Professor Emeritus, Member of
Leopoldina, Mainz Academy,
European Academy of Microbiology
University of Konstanz
Constance, Germany

Paul Smith, Ph.D.
Director, Fellow of the Linnaean Society
Botanic Gardens Conservation International
London, United Kingdom

Lars Hedenäs, Ph.D.
Senior Curator, Docent
Swedish Museum of Natural History
Stockholm, Sweden

Patrick Meyfroidt, Ph.D.
Associate Professor
UCLouvain
Louvain-la-Neuve, Belgium

Wim Carton, Ph.D.
Senior Lecturer
Lund University
Lund, Sweden

Julio M. Alcántara, Ph.D.
Professor
University of Jaén
Jaén, Spain

Patrick Hostert, Ph.D.
Professor
Humboldt University Berlin
Berlin, Germany

Hugo Alves, M.Sc.
Scholar
ITQB, UNLisboa
Oeiras, Portugal

Iulie Aslaksen, Ph.D.
Senior researcher
Statistics Norway/Research Department
Oslo, Norway

Kranjc Andrej, Ph.D.
Professor Emeritus,
Member of National Academy of Science
Slovenian Academy of Sciences and Arts
Ljubljana, Slovenia

Andrew Balmford, Ph.D.
Professor, Fellow of the Royal Society
University of Cambridge
Cambridge, United Kingdom

Dennis Nürnberg, Ph.D.
Group Leader
Freie Universität Berlin
Berlin, Germany

Daniel Müller, Ph.D.
Senior Lecturer
Leibniz Institute of Agricultural
Development in Transition Economies
Halle (Saale), Germany

Paul Ehrlich, Ph.D.
Professor,
Fellow of the Royal Society
Stanford University
Palo Alto, California

Cleo Chou, Ph.D.
Climate Change Advisor
United States Agency for
International Development
Washington, D.C.

Juha Merilä, Ph.D.
Professor, Member of Finnish Academy
of Science and Letters
The University of Hong Kong
Hong Kong, Hong Kong SAR

Gerardo Ceballos, Ph.D.
Professor, American Academy
of the Advancement of Science
Universidad Nacional Autonoma de Mexico
Toluca, Mexico

Shengxi Shao, Ph.D.
Postdoctoral Researcher
Imperial College London
London, United Kingdom

David White, Ph.D.
Professor Emeritus
Loyola University
New Orleans, Louisiana

Steve O'Kane, Ph.D.
Professor, Fellow of the Linnaean Society
University of Northern Iowa
Cedar Falls, Iowa

Robert M. Hughes, Ph.D.
Senior Research Scientist,
Fellow of American Fisheries Society,
Fellow of Society For Freshwater Sciences
Amnisopes Institute
Corvallis, Oregon

Thomas Givnish, Ph.D.
Professor, Fellow of American
Academy for the Advancement of Science,
Fellow of Linnaean Society,
University of Wisconsin-Madison
Madison, Wisconsin

Michael MacCracken, Ph.D.
Chief Scientist: Climate Change Programs,
Fellow of International Union

of Geology and Geophysics,
former President of International
Association of Meteorology and
Atmospheric Sciences
Climate Institute
Washington, D.C.

Bruce Baldwin, Ph.D.
Professor
University of California, Berkeley
Berkeley, California

Mark Stanback, Ph.D.
Professor
Davidson College
Davidson, North Carolina

Neptali Rameriz-Marcial, Ph.D.
Professor
ECOSUR
San Cristóbal de Las Casas, México

Kasparas Spokas, Ph.D.
Energy Policy Consultant
Princeton University
Princeton, New Jersey

Kingsley Dixon, Ph.D.
Professor, Australian Academy
of Technology and Engineering
Curtin University
Perth, Australia

Janet Franklin, Ph.D.
Professor, Member of
National Academy of Science
University of California
Riverside, California

Alan Mark, Ph.D.
Professor Emeritus,
Fellow of Royal Society of New Zealand,
Knight of New Zealand Order of Merit
University of Otago
Dunedin, New Zealand

Susanna Hecht, Ph.D.
Professor,
Livingston Medal for tropical research,
MacArthur Research Fellow ACLS,

Guggenheim, Institute for Advanced Studies
University of California, Los Angeles
Los Angeles, California

David Zilberman, Ph.D.
Professor,
Wolf Prize Winner
UC Berkeley
Berkeley, California

Eric Crawford, Ph.D.
Professor
Michigan State University
East Lansing, Michigan

Anders Nilsson, Ph.D.
Researcher
University of Gothenburg
Gothenburg, Sweden

Sigmund Hågvar, Ph.D.
Professor
Norwegian University of Life Sciences
Aas, Norway

Magnus Ellström, Ph.D.
Environmental consultant
Lund University
Lund, Sweden

Dominique Homberger, Ph.D.
Professor,
Fellow of American Academy
for the Advancement of Science,
Louisiana State University
Baton Rouge, Louisiana

Walter Bock, Ph.D.
Professor Emeritus
Columbia University
New York, New York

Rose Andrew, Ph.D.
Senior Lecturer
University of New England, Australia
Armidale, Australia

Luis Cayuela, Ph.D.
Associate Professor
Universidad Rey Juan Carlos
Mostelos, Spain

Gerlinde De Deyn, Ph.D.
Professor
Wageningen University
Wageningen, The Netherlands

David Kleijn, Ph.D.
Professor
Wageningen University and Research
Wageningen, The Netherlands

Ricardo Rocha, Ph.D.
Postdoctoral Researcher
CIBIO-InBIO, Univ. of Porto
Funchal, Portugal

Paul Struik, Ph.D.
Professor
Wageningen University & Research
Wageningen, The Netherlands

Roland Jansson, Ph.D.
Associate Professor
Umeå University
Umeå, Sweden

Elio Bottagisio, M.A.
PhD
Gothenburg University
Gothenburg, Sweden

Eloy Revilla, Ph.D.
Director
Estación Biológica de Doñana CSIC
Seville, Spain

Johannes Lundberg, Ph.D.
Curator
Swedish Museum of Natural History
Stockholm, Sweden

José A. Godoy, Ph.D.
Associate Professor
Estación Biológica de Doñana, CSIC
Sevilla, Spain

Anders Wollan, M.Sc.
Administrator and lecturer
Natural History museum, University of Oslo
Oslo, Norway

JOSÉ Antonio Carreira DE LA Fuente, Ph.D.
Professor
University of Jaen
Jaen, Spain

Martin Jung, Ph.D.
Postdoctoral Researcher
International Institute for
Applied Systems Analysis (IIASA)
Laxenburg, Austria

Nayden Chakarov, Ph.D.
Senior Lecturer
Department of Animal Behaviour, Bielefeld
University
Bielefeld, Germany

Hans Henrik Bruun, Ph.D.
Associate Professor
University of Copenhagen
Copenhagen, Denmark
Dag Hessen, Ph.D.
Professor
University of Oslo
Oslo, Norway

Inger Auestad, Ph.D.
Associate Professor
Western Norway University of Applied Sciences
Sogndal, Norway

Alberto Bernués, Ph.D.
Researcher
Centro de Investigación y
Tecnología Agroalimentaria de Aragón
Zaragoza, Spain

Christian Levers, Ph.D.
Assistant Professor
Vrije Universiteit Amsterdam
Amsterdam, The Netherlands

Johan Lind, Ph.D.
Associate Professor
Stockholm University
Stockholm, Sweden

Debora Arlt, Ph.D.
Postdoctoral Researcher
Swedish University of Agricultural Sciences
Uppsala, Sweden
Elizabeth Boakes, Ph.D.
Postdoctoral Researcher
University College London
London, United Kingdom

Håkan Hytteborn, Ph.D.
Professor Emeritus
Norwegian University of Science and
Technology
Trondheim, Norway

Richard Bradbury, Ph.D.
Honorary Fellow
Royal Society Protection of Birds
Sandy, United Kingdom

Enrique Andivia, Ph.D.
Postdoctoral Researcher
Universidad Complutense de Madrid
Madrid, Spain

Anders Bryn, Ph.D.
Associate Professor
University of Oslo
Oslo, Norway

Francisco Garcia-Gonzalez, Ph.D.
Associate Professor
Doñana Biological Station (CSIC)
Sevilla, Spain

Torbjörn Tyler, Ph.D.
Herbarium curator
Lund University
Lund, Sweden

Calum Brown, Ph.D.
Postdoctoral Researcher
Karlsruhe Institute of Technology
Garmisch-Partenkirchen, Germany

Jonathan Green, Ph.D.
Senior Researcher
University of York
York, United Kingdom

Manuel R. García Sánchez-Colomer, Ph.D.
Technical Researcher,
Member of International
Association for Impact Assessment
Centro de Estudios y
Experimentación de Obras Públicas
Madrid, Spain

David Bilton, Ph.D.
Professor,
Fellow of Royal Society of Edinburgh
University of Plymouth
Plymouth, United Kingdom

Anders Lindroth, Ph.D.
Professor Emeritus
Lund University
Lund, Sweden

Thomas Læssøe, Ph.D.
Postdoctoral Researcher
University of Copenhagen
København, Denmark

Matthias Baumann, Ph.D.
Lecturer
Humboldt-Universität zu Berlin
Berlin, Germany

Mikko Mönkkönen, Ph.D.
Professor
University of Jyväskylä
Jyväskylä, Finland

Sam Rabin, Ph.D.
Postdoctoral Researcher
Karlsruhe Institute of Technology
Garmisch-Partenkirchen, Germany

Christoph Meyer, Ph.D.
Lecturer
University of Salford
Salford, United Kingdom

Ian McFadden, Ph.D.
Postdoctoral Researcher
Swiss Federal Research Institute WSL
Zürich, Switzerland

Xavier Lambin, Ph.D.
Professor,
Fellow of Royal Society of Edinburgh
University of Aberdeen
Aberdeen, United Kingdom

Jens Borum, Ph.D.
Associate Professor
University of Copenhagen
Copenhagen, Denmark

Bumsuk Seo, Ph.D.
Postdoctoral Researcher
Karlsruhe Institute of Technology
Garmisch-Partenkirchen, Germany

Enrique de la Montaña, Ph.D.
Professor
Universidad Laica Eloy Alfaro de Manabí
Manta, Ecuador

Nicholas Davidson, Ph.D.
Associate Professor
Charles Sturt University
Albury, Australia

Joana Valente, M.A.
Professor
ESE-IPVC
Ciudadella de Menorca, Spain

Ulrika Jansson, Ph.D.
Ecologist
BioFokus
Åas, Norway
Marta Rueda, Ph.D.
Assistant Professor
University of Seville
Seville, Spain

Maria do Céu Madureira, Ph.D.
Postdoctoral Researcher
Centre of Functional Ecology, Life Sciences
Department, University of Coimbra
Coimbra, Portugal

Alexandra Rodríguez, Ph.D.
Postdoctoral Researcher
University of Coimbra
Coimbra, Portugal

Erik Pihl, Ph.D.
Science officer
Future Earth Global Secretariat
Stockholm, Sweden

Julian Klein, Ph.D.
Researcher
Swedish University of Agricultural Sciences
Uppsala, Sweden

Urban Olsson, Ph.D.
Professor
University of Gothenburg
Gothenburg, Sweden

Attila Marton, M.Sc.
Ph.D. Student
University of Debrecen
Debrecen, Magyarország

Robert Musil, Ph.D.
President
Rachel Carson Council
Bethesda, Maryland

Tom Bradfer-Lawrence, Ph.D.
Postdoctoral Researcher
Royal Society for the Protection of Birds
Edinburgh, Scotland

Tormod V. Burkey, Ph.D.
Visiting Scientist
University of Oslo
Oslo, Norway

Pieter Baas, Ph.D.
Professor Emeritus,
Member of the Royal Netherlands
Academy of Arts and Sciences
Leiden University
Leiden, The Netherlands

Timothy Moss, Ph.D.
Professor
Humboldt University of Berlin
Berlin, Germany

Jerry Melillo, Ph.D.
Professor,
Fellow American Academy of
Arts and Sciences,
American Philosophical Society
Marine Biological Laboratory
Woods Hole, Massachusetts

Aiden Jönsson, M.Sc.
PhD student
Department of Meteorology,
Stockholm University
Stockholm, Sweden

Grant Kemp, Ph.D.
Senior Researcher
Stockholm University
Stockholm, Sweden

Manuel B. Morales, Ph.D.
Associate Professor
Autónoma University of Madrid
Madrid, Spain

Michael Clegg, Ph.D.
Professor Emeritus,
Member of National Academy of Science
University of California, Irvine
Irvine, California

Philip Stoddard, Ph.D.
Professor
Florida International University
Miami, Florida

Peter Horvath, M.Sc.
Research technician
University of Oslo
Oslo, Norway

Ramsha Khan, Ph.D.
Postdoctoral Researcher
Stockholm University
Stockholm, Sweden

Tânia Sofia Oliveira, Ph.D.
Researcher
RAIZ - Forest and Paper Research Institute
Lisbon, Portugal

Daniel Janzen, Ph.D.
Professor, Member of National
Academy of Science
University of Pennsylvania
Philadelphia, Pennsylvania

Cornelius Senf, Ph.D.
Postdoctoral Researcher
Technical University of Munich
Munich, Germany

Sam Davis, Ph.D.
Conservation Scientist
Dogwood Alliance
Asheville, North Carolina

Rolf A. Ims, Ph.D.
Professor
UiT- Arctic University of Norway
Tromsø, Norway

Richard Houghton, Ph.D.
Professor Emeritus,
Fellow of American Geophysical Union
Woodwell Climate Research Center
Falmouth, Massachusetts

Jorge Crisci, Ph.D.
Professor Emeritus,
Member of Argentina National Academy
of Agronomy and Veterinary
Universidad Nacional de La Plata,
La Plata, Argentina

Daniel Obrist, Ph.D.
Professor
University of Massachusetts
Lowell, Massachusetts

David Boufford, Ph.D.
Senior Research Scientist
Harvard University Herbaria
Cambridge, Massachusetts

Barbara Thiers, Ph.D.
Director
The New York Botanical Garden
Bronx, New York

Christine Fürst, Habilitation
Professor
Martin Luther University Halle-Wittenberg, Dept.
Sustainable Landscape Development
Halle, Germany

Luc Lens, Ph.D.
Professor
Ghent University
Ghent, Belgium

Kristine Grimsrud, Ph.D.
Senior Researcher
Statistics Norway
Oslo, Norway

Laura Antonaru, M.Res.
PhD student
Imperial College London
London, United Kingdom

Timo Vesala, Ph.D.
Professor
University of Helsinki
Helsinki, Finland

Bethany Bradley, Ph.D.
Professor
University of Massachusetts, Amherst
Amherst, Massachusetts

Joel Cracraft, Ph.D.
Professor
American Museum of Natural History
New York, New York
Honor C. Prentice, Ph.D.
Professor Emeritus
Lund University
Lund, Sweden

Miles Silman, Ph.D.
Professor
Wake Forest University
Winston-Salem, North Carolina

Michel Sliger, M.Sc.
Lab technician
Universite de Montreal
Sainte-Angele de Premont, Quebec, Canada

Anna Trugman, Ph.D.
Assistant Professor
University of California Santa Barbara
Santa Barbara, California

Christopher Crawford, M.A.
PhD Candidate
Princeton University
Princeton, New Jersey

Jostein Lorås, Ph.D.
Professor
Nord University
Bodo, Norway

Gunnar Kvåle, Ph.D.
Professor Emeritus
University of Bergen, Norway
Bergen, Norway

Tiago Martins, Ph.D.
Postdoctoral Researcher
ITQB NOVA
Oeiras, Portugal

Michiel Wallis de Vries, Ph.D.
Professor
Wageningen University
Wageningen, The Netherlands

Snæbjörn Pálsson, Ph.D.
Professor
University of Iceland
Reykjavík, Iceland

Eric Chivian, M.D.
Founder and Former Director of Center
for Health and the Global Environment of
Harvard Medical School,
Shared 1985 Nobel Peace Prize
for Co-founding International Physicians
for the Prevention of Nuclear War
Harvard University
Boston, Massachusetts

Philippe Ciais, Ph.D.
Professor, Member of National
Academy of Science
LSCE
Gif sur Yvette, France

Henning Rodhe, Ph.D.
Professor Emeritus, Member of
Royal Swedish Academy of Sciences
Stockholm University
Stockholm, Sweden

Thomas Oliver, M.Sc.
PhD Student
Imperial College London
London, United Kingdom

Stefan Wirsenius, Ph.D.
Associate Professor
Chalmers University of Technology
Gothenburg, Sweden

Stefania Viola, Ph.D.
Postdoctoral Researcher
Imperial College
London, United Kingdom

Nicola Ripley, M.Sc.
Director
Betty Ford Alpine Gardens
Vail, Colorado

Lars Tranvik, Ph.D.
Professor
Uppsala University
Uppsala, Sweden

Jakob Skovgaard, Ph.D.
Associate Professor
Lund University
Lund, Sweden

Michael O'Hare, Ph.D.
Professor Emeritus
University of California at Berkeley
Berkeley, California

Jon Evans, Ph.D.
Professor
University of the South
Sewanee, Tennessee

Christopher Dunn, Ph.D.
Director
Cornell Botanic Gardens
Ithaca, New York

Juan M. Dupuy, Ph.D.
Professor
Scientific Research Center of Yucatan (CICY)
Mérida, Yucatán, Mexico

Sarah Bexell, Ph.D.
Associate Professor
University of Denver
Denver, Colorado

Fiona Schmiegelow, Ph.D.
Professor
University of Alberta
Whitehorse, Alberta, Canada

Mariana Chavez-Pesqueira, Ph.D.
Assistant Professor
Centro de Investigación Científica de Yucatán
Merida, Mexico

Miklós Bán, Ph.D.
Assistant Professor
University of Debrecen
Debrecen, Hungary

Gianluca Piovesan, Ph.D.
Professor
University of Tuscia
Viterbo, Italy

Germán Carnevali, Ph.D.
Professor, Member of Mexican
Academy of Sciences
Centro de Investigación Científica de Yucatán
Mérida, México

Zoltan Kun, M.Sc.
Research fellow Wildland Research Institution
University of Leeds
Leeds, United Kingdom

Ian Convery, Ph.D.
Professor
National School of Forestry,
University of Cumbria
Ambleside, United Kingdom

Pierre L. Ibisch, Dr.
Professor
Centre for Economics and
Ecosystem Management –
Eberswalde University for Sustainable
Development
Eberswalde, Germany

Hans D. Knapp, Ph.D.
Professor Emeritus
Succow Foundation
Putbus, Germany

Rubén Torices, Ph.D.
Lecturer
Universidad Rey Juan Carlos
Madrid, Spain

Casandra Reyes Garcia, Ph.D.
Professor, Member of
Academy of National Sciences, Mexico
Centro de Investigación Científica de Yucatán
Merida, México

David Suzuki, Ph.D.
Professor Emeritus,
Companion of Order of Canada,
Order of British Columbia
University of British Columbia
Vancouver, Canada

Adam Eagle, BA (Oxon)
Founder
The Lifescape Project
London, United Kingdom

Karl Vernes, Ph.D.
Associate Professor
University of New England
Armidale, Australia

Daniel Montesinos, Ph.D.
Researcher
James Cook University
Cairns, QLD, Australia

Jeanette Blumroeder, M.Sc.
Academic Researcher
Eberswalde University for Sustainable

Development
Eberswalde, Germany

Jeňýk Hofmeister, Ph.D.
Lecturer
Czech University of Life Sciences Prague
Prague, Czech Republic

Ferenc Horváth, Ph.D.
Engineer
Centre for Ecological Research
Őrbottyán, Hungary

Louise E.M. Vet, Ph.D.
Professor, Member of
Royal Netherlands Academy of Arts and Sciences
Netherlands Institute of Ecology and
Wageningen University
Wageningen, The Netherlands

Elin Götmark, Ph.D.
Assistant Professor
Chalmers University of Technology
Göteborg, Sweden

Volker Deecke, Ph.D.
Associate Professor
University of Cumbria
Ambleside, United Kingdom

Andrew Ringsmuth, Ph.D.
Postdoctoral Researcher
Wegener Center for Climate and Global Change
Graz, Austria

Helge Drange, Ph.D.
Professor
University of Bergen
Bergen, Norway

Marcus Waldherr, M.Sc.
Scientific Associate
Eberswalde University for
Sustainable Development
Eberswalde, Germany

Caroline Greiser, Ph.D.
Postdoctoral Researcher
Stockholm University
Stockholm, Sweden

Linda Engström, Ph.D.
Scholar
Swedish University for Agriculture Sciences
Uppsala, Sweden

Environmental Changes,
Faculdade de Ciências,
Universidade de Lisboa
Lisbon, Portugal

Jordi Martínez-Vilalta, Ph.D.
Professor
CREAF / Autonomous University of Barcelona
Barcelona, Spain

Richard Daley, M.Sc.
Plant scientist
EMD Consulting Group, LLC
Hendersonville, North Carolina

Hans Nooteboom, Ph.D.
Scholar
Leiden University
Leiden, The Netherlands

Sebastian Rüter, Dr.
Senior Research Scientist
Thünen Institute of Wood Research
Hamburg, Germany

Finn Roar Aune, Cand. oecon
Senior Adviser
Statistics Norway
Oslo, Norway

Sonia Wesche, Ph.D.
Associate Professor
University of Ottawa
Ottawa, Ontario, Canada

Suzanne Moore, D.V.M.
Assistant Professor,
Member of American Veterinary
Medical Association
University of Massachusetts
Lowell, Massachusetts

Miguel Brandão, Ph.D.
Associate Professor
KTH - Royal Institute of Technology
Stockholm, Sweden

Bonnie Waring, Ph.D.
Senior Lecturer
Imperial College London
London, United Kingdom

Stephen Mahfood, M.Sc.
Director
Pioneer Forest
Salem, Missouri

Dorothee Killmann, Ph.D.
Postdoctoral Researcher
Universität Koblenz-Landau
Koblenz, Germany

Rodolfo Dirzo, Ph.D.
Professor, Member of
National Academy of Science
Stanford University
Mountain View, California

Per Garnåsjordet, M.Sc.
Postdoctoral Researcher
Statistics Norway, Research Division
Nesoya, Norway

Hans ter Steege, Ph.D.
Professor
Naruralis Biodiversity Center
Leiden, The Netherlands

Pablo Navarro Ruiz, M.A. and M.Sc.
Forestry Engineer
Polytechnic University Madrid
Madrid, Spain

Jens-Christian Svenning, Ph.D.
Professor
Aarhus University
Aarhus, Denmark

Maria Amélia Martins-Loução, Ph.D.
Professor
Centre for Ecology, Evolution and

Alejandro Ordonez, Ph.D.
Assistant Professor
Aarhus University
Aarhus, Denmark

José Rey Benayas, Ph.D.
Professor,
2019 Research Award
Universidad de Alcalá
Alcalá de Henares, Spain

Miroslav Svoboda, Ph.D.
Professor
Czech University of Life Science
Prague, Czech Republic

Robert Buitenwerf, Ph.D.
Assistant Professor
Aarhus University
Aarhus, Denmark

Martin Mikoláš, Ph.D.
Postdoctoral Researcher
CULIS
Prague, Czech Republic

Marek Svitok, Ph.D.
Associate Professor
Technical University in Zvolen
Zvolen, Slovakia

Kate Dooley, Ph.D.
Postdoctoral Researcher
University of Melbourne
Melbourne, Australia

Michal Wiezik, Ph.D.
Associate Professor
Technical University in Zvolen
Zvolen, Slovakia

Frederic Lens, Ph.D.
Assistant Professor
Naturalis Biodiversity Center
Leiden, The Netherlands

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

Hans Martin Seip, Ph.D.
Professor Emeritus, Member of
Norwegian Academy of Science and Letters
University of Oslo
Østerås, Norway

Brendan Rogers, Ph.D.
Associate Scientist
Woodwell Climate Research Center
Falmouth, Massachusetts

Torsten Welle, Ph.D.
Head of Science and Research
Natural Forest Academy
Luebeck, Germany

Bartolomeo Schirone, M.Sc.
Professor
TUSCIA University. Agriculture and Forestry Dept.
Viterbo, Italy

Erik Smets, Ph.D.
Professor
Naturalis Biodiversity Center
Leiden, The Netherlands

Vincenzo Balzani, Ph.D.
Professor,
Accademia dei Lincei (Italy)
University of Bologna
Bologna, Italy

Günther Seufert, Ph.D.
Professor Emeritus
EC Joint Research Centre Ispra
Gemonio, Italy

Gianni Tamino, M.Sc.
Associate Professor
Università di Padova
Padova, Italy

Heather Keith, Ph.D.
Senior Lecturer
Griffith University
Canberra, Australia

H. Jesse Dubin, Ph.D.
Principal Pathologist-Retired
International Maize and Wheat Improvement
Center
Frederick, Maryland

Loretta Leinen, M.Sc.
Research Associate
Natural Forest Academy
Lübeck, Germany

Massimo Blonda, M.Sc.
Researcher
CNR
Bari, Italy

Wayne Walker, Ph.D.
Associate Scientist
Woodwell Climate Research Center
Falmouth, Massachusetts

Glenn Bush, Ph.D.
Environmental Economist,
Fellow of Royal Geographical Society
Woodwell Climate Research Center
Falmouth, Massachusetts

Jakub Hruška, Ph.D.
Professor
Globach Change Research Institute, Czech
Academy of Sciences and Czech Geological
Surveys
Prague, Czech Republic

Filip Oulehle, Ph.D.
head of the Biogeochemistry department
Czech Geological Survey
Prague, Czech Republic

Richard Birdsey, Ph.D.
Senior Scientist,
Distinguished Scientist, U.S. Forest Service
Woodwell Climate Research Center
Falmouth, Massachusetts

Jonathan Sanderman, Ph.D.
Associate Professor
Woodwell Climate Research Center
Falmouth, Massachusetts

Alfredo Romero-Muñoz, Ph.D.
Postdoctoral Researcher
Humboldt-University Berlin
Berlin, Germany

Jennifer Francis, Ph.D.
Senior Scientist
Woodwell Climate Research Center
Falmouth, Massachusetts

Jeffrey Corbin, Ph.D.
Professor
Union College
Schenectady, New York

Seth Gorelik, M.Sc.
Research Associate
Woodwell Climate Research Center
Falmouth, Massachusetts

Koen Sabbe, Ph.D.
Professor
Ghent University
Ghent, Belgium

Alberto Bellini, Ph.D.
Associate Professor
University of Bologna
Cesena, Italy

Dave McGlinchey, J.D.
Chief of External Affairs
Woodwell Climate Research Center
Lowell, Massachusetts

Lee Dyer, Ph.D.
Professor
University of Nevada Reno
Reno, Nevada

Darcy Peter, M.Sc.
Scientist, Woodwell Climate Research Center
Falmouth, Massachusetts

Giuseppe Barbiero, Ph.D.
Assistant Professor
Università della Valle d'Aosta
Aosta, Italy

Arjun Potter, M.Sc.
PhD Candidate
Princeton University
Princeton, New Jersey

Paul Scott, Ph.D.
Assistant Professor
New York University
New York, New York

Mark Rounsevell, Ph.D.
Professor
Karlsruhe Institute of Technology
Garmisch-Partenkirchen, Germany

Raphaël van Ypersele, M.A.
Volunteer at Food and Agriculture Organization of
the United Nations Liaison Office
Brussels, Belgium

James Ehleringer, Ph.D.
Professor, Member of
National Academy of Science
University of Utah
Salt Lake City, Utah

Jenni Nordén, Ph.D.
Associate Professor
Norwegian Institute for Nature Research
Oslo, Norway

Michele Putko, Ph.D.
Associate Professor
UMass Lowell
Cape Neddick, Massachusetts

Christoph Schneider, Ph.D.
Professor
Humboldt-Universität zu Berlin
Berlin, Germany

Diogo F Ferreira, M.Sc.
PhD student
CIBIO-InBIO, University of Porto
Porto, Portugal

Yvonne Eva-Maria Barbara Bohr, Dipl.-Biol. (M.Sc.)
Scientific Staff Member
Naturwald Akademie
Lübeck, Germany

Lyndon Estes, Ph.D.
Associate Professor
Clark University
Worcester, Massachusetts

David Wilcove, Ph.D.
Professor
Princeton University
Princeton, New Jersey

Christopher Williams, Ph.D.
Professor
Clark University
Worcester, Massachusetts

Petr Kjučukov, M.Sc.
Post-Graduate Student
Czech University of Life Sciences
Benešov, Czech Republic

David Storch, Ph.D.
Professor
Charles University
Prague, Czech Republic

Vassiliki Kati, Ph.D.
Associate Professor
University of Ioannina
Ioannina, Greece

Eva Novotny, Ph.D.
Retired
University of Cambridge
Cambridge, United Kingdom

Susan Natali, Ph.D.
Associate Scientist
Woodwell Climate Research Center
East Falmouth, Massachusetts

Fiona McOwan, B.Sc Hons 2.1
Lecturer, Member of Scientists
for Global Responsibility (SGR)
Formerly Heriot Watt University,
Edinburgh, Scotland

Peter Hobson, Ph.D.

Professor

Writtle University College

Chelmsford, United Kingdom

Ágnes Vári, Ph.D.

Postdoctoral Researcher

Center for Ecological Research

Vácrátót, Hungary

Guy Pe'er, Ph.D.

Senior Lecturer

German Centre for integrative Biodiversity

Research (iDiv) Halle-Jena-Leipzig

Leipzig, Germany

Szabó Lilla, M.Sc.

PhD student

Hungarian Academy of Science

Nyíregyháza, Hungary

Colin Chapman, Ph.D.

Professor,

Killiam Fellow,

Humboldt Fellow,

Velan Humanitarian Award

George Washington University

Washington, D.C.

Robin Chazdon, Ph.D.

Professor

University of the Sunshine Coast

Maroochydore, Australia

Rick Savage, M.Sc.

President

Carolina Wetlands Association

Cary, North Carolina

Fabien Condamine, Ph.D.

Research scientist

CNRS

Montpellier, France

David Boufford, Ph.D.

Senior Research Scientist,

Fellow American Association for the Advancement

of Science

Harvard University

Cambridge, Massachusetts

Dennis Baldocchi, Ph.D.

Professor, Fellow of

American Geophysical Union

University of California, Berkeley

Berkeley, California

Timothy Treuer, Ph.D.

Postdoctoral Researcher

University of Vermont

Burlington, Vermont

William Ripple, Ph.D.

Professor

Oregon State University

Corvallis, Oregon

Henk van der Werff, Ph.D.

Professor Emeritus

Missouri Botanical Garden

Saint Louis, Missouri

Mauricio Diazgranados, Ph.D.

Research Leader

Royal Botanic Gardens, Kew

Ardingly, United Kingdom

Brendan Mackey, Ph.D.

Professor

Climate Action Beacon, Griffith University

Southport, Australia

Alfredo Di Filippo, Ph.D.

Associate Professor

Università della Tuscia

Viterbo, Italy

Scott Goetz, Ph.D.

Professor

Northern Arizona University

Flagstaff, Arizona

Peter Phillipson, M.Sc.

Associate Curator

Missouri Botanical Garden

St Louis, Missouri

Christos Georgiadis, Ph.D.

Research and Teaching Assistant,

National and Kapodistrian

University of Athens
Athens, Greece

Hans-Peter Grossart, Ph.D.
Professor
Leibniz Institute for Freshwater Ecology and Inland
Fisheries (IGB)
Berlin-Stechlin, Germany

Roberto Canullo, Ph.D.
Associate Professor
Camerino University
Camerino, Italy

Zoltán Sándor Varga, Ph.D.
Professor Emeritus, Honorary Professor
of Babes-Bolyai University Cluj
University of Debrecen
Debrecen, Hungary

Alessandro Chiarucci, Ph.D.
Professor
Alma Mater Studiorum - University of Bologna
Bologna, Italy

James Aronson, Ph.D.
Senior scientist Emeritus
Missouri Botanical Garden
St Louis, Missouri

Carlos Gracia, Ph.D.
Professor
University of Barcelona
Barcelona, Spain

Juan Masello, Ph.D.
Principal investigator
Justus Liebig University Giessen
Giessen, Germany

Esteban Manrique Reol, Ph.D.
Professor
Real Jardín Botánico
Madrid, Spain

James Blignaut, Ph.D.
Professor
Stellenbosch University
Stellenbosch, South Africa

Mirindi Eric Dusenge, Ph.D.
Postdoctoral Researcher
University of Gothenburg
Gothenburg, Sweden

Elisabeth Jönsson Bergman, Ph.D.
Associate Professor
University of Gothenburg
Göteborg, Sweden
Frank Götmark, Ph.D.
Professor
University of Gothenburg
Göteborg, Sweden

Peter Emmrich, Ph.D.
Senior Research Associate
John Innes Centre / University of East Anglia
Norwich, United Kingdom

Wendy Applequist, Ph.D.
Associate Scientist
Missouri Botanical Garden
St. Louis, Missouri

James Baxter, M.Sc.
PhD Student
Imperial College London
London, United Kingdom

Sergio Carrà, Ph.D.
Dean, Accademia Lincei
Polytechnic University, Milano Italy
Milano, Italy

Göran Englund, Ph.D.
Professor
Umeå University
Umeå, Sweden

Andy Friedland, Ph.D.
Professor, Fellow of
American Association for the
Advancement of Science
Dartmouth College
Hanover, New Hampshire

Juliette Rooney-Varga, Ph.D.
Professor
University of Massachusetts Lowell
Lowell, Massachusetts

Carsten Meyer, Ph.D.

Research Group Leader
German Centre of Integrative
Biodiversity Research (iDiv)
Leipzig, Germany

Viney Aneja, Ph.D.

Professor
North Carolina State University
Raleigh, North Carolina

Filipe Duarte Santos, Ph.D.

Professor, Member of
the Lisbon Academy of Sciences
University of Lisbon
Lisbon, Portugal

Suzanne Milton, Ph.D.

Research Associate
South African Environmental Observation
Network and Nelson Mandela University
Prince Albert, South Africa

Alan Covich, Ph.D.

Professor Emeritus,
Fellow of American Association for
the Advancement of Science,
Fellow of Ecological Society of America
University of Georgia
Athens, Georgia

Susan Masino, Ph.D.

Professor
Trinity College
Hartford, Connecticut

Neva Goodwin, Ph.D.

Founder
Global Development & Environment Institute
Medford, United States

Karlheinz Erb, Ph.D.

Associate Professor
University of Natural Resources and
Life Sciences, Vienna
Vienna, Austria

Frans Sijtsma, Ph.D.

Associate Professor
University of Groningen
Groningen, The Netherlands

Martin Breed, Ph.D.

Lecturer
Flinders University
Bedford Park, Australia

Elizabeth Losos, Ph.D.

Scholar
Duke University
Durham, North Carolina

Flora Tinya, Ph.D.

Postdoctoral Researcher
Centre for Ecological Research
Vácrátót, Hungary

Samuel Levy-Tacher, Ph.D.

Professor
El Colegio de la Frontera Sur, Unidad San Cristóbal
San Cristobal de las Casas, México

Martin Schmid, Ph.D.

Associate Professor
University of Natural Resources and
Life Sciences, BOKU, Vienna
Vienna, Austria

Andrew Szasz, Ph.D.

Professor Emeritus
University of California, Santa Cruz
Santa Cruz, California

Lysanne Snijders, Ph.D.

Assistant Professor
Wageningen University & Research
Wageningen, The Netherlands

Adam Cross, Ph.D.

Senior Lecturer
Curtin University
Perth, Australia

Maria JI Briones, Ph.D.

Professor
Universidad de Vigo
Vigo, Spain

Giovanni Seminara, Ph.D.
Professor Emeritus,
Fellow of Accademia Nazionale dei Lincei
Accademia Nazionale dei Lincei
Rome, Italy

David Edwards, Ph.D.
Professor
University of Sheffield
Sheffield, United Kingdom

Julia Le Noë, Ph.D.
Postdoctoral Researcher
Laboratoire de Géologie de l'ENS
Paris, France

Lucía DeSoto, Ph.D.
Postdoctoral Researcher,
Member of AcademiaNet
Spanish National Research Council (CSIC)
Almería, Spain

Heera Lee, Ph.D.
Postdoctoral Researcher
Karlsruhe Institute of Technology
Garmisch-Partenkirchen, Germany

Francesco Maria Sabatini, Ph.D.
Postdoctoral Researcher
German Centre for Integrative
Biodiversity Research
Halle-Jena-Leipzig, Germany

Carlo Alberto Redi, Ph.D.
Retired Professor
University of Pavia
Pavia, Italy

Giuliano Panza, Ph.D.
Retired full Professor,
Emeritus Honorary professor CEA Beijing,
Honorary Professor,
Beijing University of Civil Engineering and
Architecture (BUCEA),
Prize Ettore Cardani, Fulbright Fellow
University of Trieste
Trieste, Italy

Sandro Fuzzi, Ph.D.
Research Director
Institute of Atmospheric Sciences and Climate -
National Research Council
Bologna, Italy

Francesco Berrilli, M.A.
Professor
Physics Dept., University of Rome
Tor Vergata
Roma, Italy

Markus Kröger, Ph.D.
Associate Professor
University of Helsinki
Helsinki, Finland

Massimo Livi Bacci, Ph.D.
Professor Emeritus,
Member of Accademia dei Lincei
University of Florence
Florence, Italy

Andreas Mayer, Ph.D.
Postdoctoral Researcher
University of Natural Resources and Life Sciences,
Vienna (Boku)
Vienna, Austria

Chelsea Specht, Ph.D.
Professor
Cornell University
Ithaca, New York

Vojtěch Čada, Ph.D.
Postdoctoral Researcher
Czech University of Life Sciences Prague
Prague, Czech Republic

Jay Malcolm, Ph.D.
Professor
University of Toronto
Toronto, Ontario, Canada

Michael Loik, Ph.D.
Professor
University of California, Santa Cruz
Santa Cruz, California

Sandy M Smith, Ph.D.
Professor, FRES
University of Toronto
Toronto, Ontario, Canada

Benjamin Filewod, Ph.D.
Scholar
University of Toronto
Toronto, Ontario, Canada

Daniel Press, Ph.D.
Dean
Santa Clara University
Santa Clara, California

Eliane Ceccon, Ph.D.
Professor
Universidad Nacional Autónoma de México
Mexico City, Mexico

Rosanne Van Schie, Ph.D.
Scholar
University of Toronto
Mattawa, Ontario, Canada

Daniel Crespo, Ph.D.
Postdoctoral Researcher
CIIMAR - Interdisciplinary Centre
of Marine and Environmental Research
Porto, Portugal

James Hallett, Ph.D.
Professor
University of Montana
Missoula, Montana

Diana Silva-Dávila, Ph.D.
Professor,
International Biogeography Society
Universidad Nacional Mayor de San Marcos
Lima, Perú

Francisco Roman-Dañobeytia, Ph.D.
Researcher
Condesan
Lima, Peru

Dragan Chobanov, Ph.D.
Associate Professor
Institute of Biodiversity and
Ecosystem Research-Bulgarian Academy of
Sciences
Sofia, Bulgaria

Matteo Garbarino, Ph.D.
Associate Professor
Università di Torino (DISAFA)
Grugliasco, Italy

William Vargas, M.Sc.
Professor,
Honorary Fellow of Royal Society
Corporación Paisajes Rurales
Cali, Colombia

Daniel Perez, Ph.D.
Professor
National University Of Comahue
Neuquén, Argentina

Thibaud Aronson, M.Sc.
Field biologist
Missouri Botanical Garden
St. Louis, Missouri

Alwin Hardenbol, Ph.D.
Postdoctoral Researcher
University of Eastern Finland
Joensuu, Finland

Gábor Földvári, Ph.D.
Associate Professor
Institute of Evolution,
Centre for Ecological Research
Budapest, Hungary

Sarah Green, Master of Forest Conservation
Scholar
University of Toronto
Toronto, Canada

David Moreno Mateos, Ph.D.
Assistant Professor
Harvard University
Cambridge, Massachusetts

Susanne Baden, Ph.D.
Professor Emeritus
Dept Biology and Environmental Sciences,
University of Gothenburg
Gothenburg, Sweden

Balint Preiszner, Ph.D.
Postdoctoral Researcher
Centre for Ecological Research
Tihany, Hungary

Leili Khalatbari, M.Sc.
PhD Student
University of Porto
Porto, Portugal

Yann Clough, Ph.D.
Professor
Lund University
Lund, Sweden

Krisztina Krassován, M.Sc.
Doctoral Researcher
Pannon University
Balatonfüred, Hungary

Sandro Bertolino, Ph.D.
Associate Professor
University of Turin
Torino, Italy

Stefan Kreft, Ph.D.
Lecturer
Centre for Econics and Ecosystem Management,
Eberswalde University for Sustainable
Development
Eberswalde, Germany

David van der Spoel, Ph.D.
Professor
Uppsala University
Uppsala, Sweden

Alexandre Antonelli, Ph.D.
Professor, Fellow of
Royal Society of Biology,
Fellow of Royal Academy of Arts and Sciences in
Gothenburg
Royal Botanic Gardens, Kew
Richmond, United Kingdom

Ahmet Uludag, Ph.D.
Professor
Canakkale Onsekiz Mart University
Canakkale, Turkey

Jordi Cortina-Segarra, Ph.D.
Professor
University of Alicante
Alacant, Spain

Antonio Gallardo, Ph.D.
Professor
Universidad Pablo de Olavide
Sevilla, Spain

Nuria Selva Fernandez, Ph.D.
Associate Professor
Polish Academy of Sciences Institute
of Nature Conservation
Kraków, Poland

Stefano Chelli, Ph.D.
Postdoctoral Researcher
University of Camerino
Camerino, Italy

Necmi Aksoy, Ph.D.
Professor
Duzce University
Duzce, Turkey

Verónica Ferreira, Ph.D.
Assistant Researcher
University of Coimbra
Coimbra, Portugal

Camilo Carneiro, Ph.D.
Postdoctoral Researcher
University of Iceland
Tartu, Estonia

Tiago Domingos, Ph.D.
Associate Professor
Instituto Superior Técnico,
Universidade de Lisboa
Lisbon, Portugal

Maria Rosa Paiva, Ph.D.
Professor, FRES
Founder of several scientific societies
NOVA University of Lisbon
Lisbon, Portugal

Nicolas Roux, M.Sc.
PhD candidate
University of Natural Resources and Life Sciences,
Vienna
Vienna, Austria

Louise Marie Busck Lumholt, Ph.D.
Universitat Autònoma de Barcelona
København, Denmark

Jens Newig, Ph.D.
Professor
Leuphana University
Lüneburg, Germany

Thilde Bech Bruun, Ph.D.
Associate Professor
University of Copenhagen
Copenhagen, Denmark

Peter Verburg, Ph.D.
Professor
Institute for Environmental Studies,
VU University Amsterdam
Amsterdam, The Netherlands

Žiga Malek, Ph.D.
Assistant Professor
Institute for Environmental Studies (IVM),
VU University Amsterdam
Amsterdam, The Netherlands

Camille Venier-Cambron, M.Sc.
PhD student
Institute for Environmental Studies,
VU Amsterdam
Amsterdam, The Netherlands

Peggy Eby, Ph.D.
Senior Research Fellow
Griffith University
Nathan, Australia

Tiago Reis, M.Sc.
PhD candidate
Uclouvain
Louvain-la-Neuve, Belgium

Mengmeng Li, M.A.
Scholar
VU University Amsterdam
Amsterdam, The Netherlands

Rene Beyers, Ph.D.
Research Associate
University of British Columbia
Vancouver, Canada

Tomasz Wesołowski, Ph.D.
Professor Emeritus
Wrocław University
Wrocław, Poland

Rosa Pols, M.Sc.
Lecturer
Vrije Universiteit Amsterdam
Bussum, The Netherlands

Perrine Laroche, M.Sc.
PhD candidate
Vrije University Amsterdam
Amsterdam, The Netherlands

Jonas Appelt, M.Sc.
PhD-Candidate
Vrije Universiteit Amsterdam
Amsterdam, The Netherlands

Claudia Parra Paitan, M.Sc.
PhD candidate
Vrije Universiteit Amsterdam (VU)
Amsterdam, The Netherlands

Bodil Enoksson, Ph.D.
Retired (officially)
University of Lund
Lund, Sweden

William H. Schlesinger, Ph.D.
Professor of Biogeochemistry,
President (Emeritus) of Cary Institute of
Ecosystem Studies,
Dean (Emeritus), School of the Environment

Duke University
Durham, North Carolina

Dominick A. DellaSala, Ph. D
Chief Scientist,
Wild Heritage Project of Earth Island Institute
Berkeley, California

Giulio Di Toro, Ph.D.
Professor, Member of
Accademia Nazionale dei Lincei (Italy)
Università degli Studi di Padova
Padova, Italy

Grzegorz Neubauer, Ph.D.
Postdoctoral Researcher
Wrocław University
Wrocław, Poland

Tasja Ebersole, M.Sc.
Research Specialist
Technical University of Denmark
Copenhagen, Denmark

Elinor Breman, Ph.D.
Senior Research Leader,
Conservation Science
Royal Botanic Gardens, Kew
London, United Kingdom

Petros Lymberakis, Ph.D.
Curator,
Natural History Museum of Crete
University of Crete
Herakleio, Greece

Jerry Skoglund, Ph.D.
Assistant Professor
University of Agriculture
Uppsala, Sweden

Jae Choe, Ph.D.
Distinguished Professor,
Ewha Womans University
Seoul, South Korea

Hyundo Choi, Ph.D.
Associate Professor
Dongguk University
Seoul, South Korea

Sun-Jin Yun, Ph.D.
Professor
Seoul National University
Seoul, South Korea

Seungwan Kim, Ph.D.
Assistant Professor
Chungnam National University
Daejeon, South Korea

Jiyong Eom, Ph.D.
Associate Professor
Korea Advanced Institute of Science and
Technology (KAIST)
Seoul, South Korea

Hae-Dong Kim, Ph.D.
Professor
Keimyung University
Daegu, South Korea

Youn Yeo-Chang, Ph.D.
Professor
Seoul National University
Seoul, South Korea

Jong Ho Hong, Ph.D.
Professor
Seoul National University
Seoul, South Korea

Massimo Pizzol, Ph.D.
Associate Professor
Aalborg University
Aalborg, Denmark

Carolina María González Albarracín, Ph.D.
Independent consultant
Comité Vecinal Fracc las Américas
Mérida, México

Tiziano Gallo Cassarino, Ph.D.
Postdoctoral Researcher
University College London
London, United Kingdom
Maria Oliveira, Ph.D.
Researcher in Ecology
University of Lisbon
Lisbon, Portugal

Marvin David, Ph.D.
Founder
Salo Sciences, Inc.
San Francisco, California

Yoshiki Seki, Ph.D.
Professor
Takushoku University
Tokyo, Japan

Seongho Lee, Ph.D.
Director
Ketep
Seoul, Korea

Daniela Perrotti, Ph.D.
Professor
Université catholique de Louvain
Louvain, Belgium

Koichi Hasegawa, Ph.D.
Professor
Tohoku University/Shokei Gakuin University
Sendai, Japan

David Powlson, Ph.D.
Emeritus Scientist
Lawes Senior Trust Fellow
Rothamsted Research
Harpenden, U.K.

Pierre Delmelle, Ph.D.
Professor
Université catholique de Louvain
Louvain, Belgium

Caroline Vincke, Ph.D.
Professor
Université catholique de Louvain
Louvain, Belgium

Sophie Opfergelt, Ph.D.
Assistant Professor
Université catholique de Louvain
Louvain, Belgium

Philippe Marbaix, Ph.D.
Postdoctoral Research Fellow
Université catholique de Louvain
Louvain, Belgium

Teranishi Shun'ichi, Ph.D.
Emeritus Professor
Hitosubashi University
Tokyo, Japan

Caroline Niederberg, Ph.D.
Associate Professor
Université catholique de Louvain
Louvain, Belgium

Josef Settele, Ph.D.
Professor
Heimholz Center for Environmental Research
UFZ
Halle, Germany