Biographical sketch **Christopher Bower Field** **April, 2015**

Department of Global Ecology
Carnegie Institution for Science
260 Panama Street
Stanford, CA 94305
USA

Website http://dge.ciw.edu,
http://chrisfield-ipcc.ciw.edu

Education:

A.B.	Harvard College, 1975 - Biology
Ph.D.	Stanford University, 1981 - Biology

Positions Held:

1981 - 1984	Assistant Professor, Biology, University of Utah
1984 - 2002	Staff Scientist, Carnegie Institution for Science
1986 - 2005	Assistant, Associate, and Full Professor by courtesy, Stanford University
2002 - present	Director, Department of Global Ecology, Carnegie Institution for Science
2005 - present	Professor, Department of Biology, Stanford University
2005 - present	Faculty Director, Jasper Ridge Biological Preserve
2008 - present	Professor, Department of Earth System Science, Stanford University
2012 - present	Melvin and Joan Lane Professor for Interdisciplinary Environmental Studies, Stanford University
Also currently	Senior Fellow, Woods Institute for the Environment, Precourt Institute for Energy (all Stanford University)

Chris Field is the founding director of the Carnegie Institution's Department of Global Ecology, Melvin and Joan Lane Professor for Interdisciplinary Environmental Studies at Stanford University, and Faculty Director of Stanford's Jasper Ridge Biological Preserve. Field's research emphasizes impacts of climate change, from the molecular to the global scale. Field has been deeply involved with national and international scale efforts to advance science and assessment related to global ecology and climate change. He is co-chair of Working Group II of the Intergovernmental Panel on Climate Change, which led the effort on the IPCC Special Report on "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" (2012) and Working Group II contribution to the IPCC Fifth Assessment Report (2014). He is a recipient of the Heinz Award, the Max Plank Research Award, the BBVA Foundation Frontiers of Knowledge Award, and the Roger Revelle Medal. Field was elected to membership in the National Academy of Sciences (2001), and fellowships in the American Association for the Advancement of Science (2009), the American Academy of Arts and Sciences (2010), the Ecological Society of America (2012), and the American Geophysical Union (2014). Field received his PhD from Stanford in 1981 and has been at the Carnegie Institution for Science since 1984.

Fellowships, Awards (United States)

2000 Ecological Society of America, Aldo Leopold Fellow
2001 Elected Member, US National Academy of Sciences
2006 Townsend Distinguished Lecture, University South Carolina
2009 Elected Fellow, American Association for the Advancement of Science
2009 Heinz Award
2010 Elected Fellow, American Academy of Arts and Sciences
2011 W. David Baird Distinguished Lecturer, Pepperdine University
2011 Henry J. Oosting Memorial Lecture in Ecology, Duke University
2012 Elected Fellow, Ecological Society of America
2014 American Geophysical Union Roger Revelle Medal
2014 Elected Fellow, American Geophysical Union
2014 Stephen Schneider Memorial Lecture, American Geophysical Union

Fellowships, Awards (International)

2012 Doctor Honoris Causa, University of Buenos Aires (Argentina)
2012 Foreign Correspondent, Argentine Academy of Environmental Sciences (Argentina)
2013 Max Planck Research Award (Germany)
2014 BBVA Foundation Frontiers of Knowledge Award (Spain)

Service

Editorial review boards: Trees, Ecology, Ecological Applications, Proceedings of the National Academy of Sciences of the United States of America, Global Change Biology

Proposal evaluation panels: US Department of Agriculture, National Science Foundation

Academic program evaluations: Brown University, University of California Santa Barbara, Commonwealth Scientific and Industrial Research Organization (Australia), Argonne National Laboratory, Harvard University

National Research Council Committees (US): Scientific Committee on Problems of the Environment (chair), Ecosystems, Grand Challenges in Environmental Biology, Board on Environmental Studies and Toxicology, Board on International Scientific Organizations, Ecological Impacts of Climate Change (chair), Research Opportunities at the Interface of Physical and Biological Sciences, and Hidden Costs of Energy

Scientific Steering/Advisory Committees: International Satellite Land Surface Climatology Project Americas, International Geosphere-Biosphere Programme Core Project on Biospheric Aspects of the Hydrologic Cycle (chair), National Center for Ecological Analysis and Synthesis, US Carbon Cycle Science Program (chair), Global Carbon Project, National Ecological Observatory Network (chair), International Council for Science Committee on Scientific Planning and Review

Testimony: several committees and sub-committees of the US Senate and House of Representatives.

Elected member: Harvard University Board of Overseers

IPCC

AR4, WGII, Chapter 14, North America, Coordinating Lead Author

AR5 Working Group II co-chair

Selected Publications (from over 330 publications total)
(Google Scholar citations: http://scholar.google.com/citations?user=whhr40wAAAAJ&hl=en)
Over 53,000 citations, "h" index = 110

Anderegg, W. R., A. Flint, C.-y. Huang, L. Flint, J. A. Berry, F. W. Davis, J. S. Sperry, and C. B. Field. 2015. Tree mortality predicted from drought-induced vascular damage. **Nature Geoscience**: doi:10.1038/ngeo2400.

Ravi, S., D. B. Lobell, and C. B. Field. 2014. Tradeoffs and Synergies between Biofuel Production and Large Solar Infrastructure in Deserts. **Environmental Science & Technology 48**:3021-3030.

Diffenbaugh, N. S. and C. B. Field. 2013. Changes in Ecologically Critical Terrestrial Climate Conditions. **Science 341**:486-492.

Kunreuther, H., G. Heal, M. Allen, O. Edenhofer, C. B. Field, and G. Yohe. 2013. Risk Management and Climate Change. **Nature Climate Change 3**:447-450.

Shaman, J., S. Solomon, R. R. Colwell, and C. B. Field. 2013. Fostering advances in interdisciplinary climate science. **Proceedings of the National Academy of Sciences of the United States of America 110**:3653-3656.

DeFries, R. S., E. C. Ellis, F. S. C. III, P. A. Matson, B. L. T. II, A. Agrawal, P. J. Crutzen, C. Field, P. Gleick, P. M. Kareiva, E. Lambin, D. Liverman, E. Ostrom, P. A. Sanchez, and J. Syvitski. 2012. Planetary Opportunities: A Social Contract for Global Change Science to Contribute to a Sustainable Future. **BioScience 62**:603-606.

Georgescu, M., D. B. Lobell, and C. B. Field. 2011. Direct climate effects of perennial bioenergy crops in the United States. **Proceedings of the National Academy of Sciences of the United States of America**:10.1073/pnas.1008779108.

Doughty, C. E., A. Wolf, and C. B. Field. 2010. Biophysical feedbacks between the Pleistocene megafauna extinction and climate: The first human-induced global warming? **Geophysical Research Letters 37**:L15703.

Campbell, J. E., D. B. Lobell, and C. B. Field. 2009. Greater transportation energy and GHG offsets from bioelectricity than ethanol, **Science**, *324*(5930), 1055.

Loarie, S., P. Duffy, H. Hamilton, G. Asner, C. Field, and D. Ackerly (2009), The velocity of climate change, **Nature**, **462**(7276), 1052-1055.

Field, C. B., J. E. Campbell, and D. B. Lobell. 2008. Biomass energy: the scale of the potential resource. **Trends in Ecology & Evolution 23**:65-72.

Houlton, B. Z., Y.-P. Wang, P. M. Vitousek, and C. B. Field. 2008. A unifying framework for dinitrogen fixation in the terrestrial biosphere. **Nature**: doi:10.1038/nature07028.

Canadell, J. G., C. Le Quere, M. R. Raupach, C. B. Field, E. T. Buitenhuis, P. Ciais, T. J. Conway, N. P. Gillett, R. A. Houghton, and G. Marland. 2007. Contributions to accelerating atmospheric CO_2 growth from economic activity, carbon intensity, and efficiency of natural sinks. **Proceedings of the National Academy of Sciences of the United States of America**: 104: 18866–18870, doi: 10.1073/pnas. 0702737104.

Field, C. B., D. B. Lobell, H. A. Peters, and N. R. Chiariello. 2007. Feedbacks of Terrestrial Ecosystems to Climate Change. **Annual Review of Environment and Resources 32**: doi: 10.1146/annurev.energy.1132.053006.141119.

Lobell, D. B. and C. B. Field. 2007. Global scale climate–crop yield relationships and the impacts of recent warming. **Environmental Research Letters 2**:doi:10.1088/1748-9326/1082/1081/014002.

Field, C. B., and M. R. Raupach, editors. 2004. The Global Carbon Cycle: Integrating Humans, Climate, and the Natural World. Island Press, Washington.

Hayhoe, K., D. Cayan, C. B. Field, P. C. Frumhoff, E. P. Maurer, N. L. Miller, S. C. Moser, S. H. Schneider, K. N. Cahill, E. E. Cleland, L. Dale, R. Drapek, R. M. Hanemann, L. S. Kalkstein, J. Lenihan, C. K. Lunch, R. P. Neilson, S. C. Sheridan, and J. H. Verville. 2004. Emissions pathways, climate change, and impacts on California. **Proceedings of the National Academy of Sciences of the United States of America 101**:12422-12427.

Zavaleta, E., M. Shaw, N. Chiariello, B. Thomas, E. Cleland, C. Field, and H. Mooney. 2003. Grassland responses to three years of elevated temperature, CO_2, precipitation, and N deposition. **Ecological Monographs 73**:585-604.

DeFries, R. S., R. A. Houghton, M. C. Hansen, C. B. Field, D. Skole, and J. Townshend. 2002. Carbon emissions from tropical deforestation and regrowth based on satellite observations for the 1980s and 1990s. **Proceedings of the National Academy of Sciences of the United States of America 99**:14256-14261.

Dickinson, R., J. Berry, G. Bonan, G. Collatz, C. Field, I. Fung, M. Goulden, W. Hoffmann, R. Jackson, R. Myneni, P. Sellers, and M. Shaikh. 2002. Nitrogen controls on climate model evapotranspiration. **Journal of Climate 15**:278-295.

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Pacala, S. W., G. C. Hurtt, R. A. Houghton, R. A. Birdsey, L. Heath, E. T. Sundquist, R. F. Stallard, D. Baker, P. Peylin, P. Ciais, P. Moorcroft, J. Caspersen, E. Shevliakova, B. Moore, G. Kohlmaier, E. Holland, M. Gloor, M. E. Harmon, S.-M. Fan, J. L. Sarmiento, C. Goodale, D. Schimel, and C. B. Field. 2001. Convergence of land- and atmosphere-based U.S. carbon sink estimates. **Science 292**:2316-2320.

Ostrom, E., Burger, J., Field, C.B., Norgaard, R.B. and Policansky, D. 1999. Revisiting the commons: Local lessons, global challenges. **Science 284**: 278-282.

Field, C. B., M. J. Behrenfeld, J. T. Randerson, and P. Falkowski. 1998. Primary production of the biosphere: Integrating terrestrial and oceanic components. **Science** 281:237-240.

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Sellers, P. J., L. Bounoua, G. J. Collatz, D. A. Randall, D. A. Dazlich, S. O. Los, J. A. Berry, I. Fung, C. J. Tucker, C. B. Field, and T. G. Jensen. 1996. Comparison of radiative and physiological effects of doubled atmospheric CO_2 on climate. **Science** 271:1402-1406.

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Ehleringer, J. R., and C. B. Field, editors. 1993. Scaling Physiological Processes: Leaf to Globe. Academic Press, San Diego.

Field, C. B., F. S. Chapin, III, P. A. Matson, and H. A. Mooney. 1992. Responses of terrestrial ecosystems to the changing atmosphere: A resource-based approach. **Annual Review of Ecology and Systematics** 23:201-235.

IPCC Products

IPCC, 2014: Summary for Policymakers. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 31 pp.

IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

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Field, C.B., V.R. Barros, K.J. Mach, M.D. Mastrandrea, and 59 other co-authors (2014). Technical Summary. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom, and New York, NY, USA, pp. 35-94.

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IPCC (2012). Meeting Report of the Intergovernmental Panel on Climate Change Expert Meeting on Geoengineering [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, C. Field, V. Barros, T.F. Stocker, Q. Dahe, J. Minx, K. Mach, G.-K. Plattner, S. Schlömer, G. Hansen, and M. Mastrandrea (eds.)]. IPCC Working Group III Technical Support Unit, Potsdam Institute for Climate Impact Research, Potsdam, Germany, 99 pp.

IPCC (2012). Meeting Report of the Intergovernmental Panel on Climate Change Expert Meeting on Economic Analysis, Costing Methods, and Ethics [Field, C.B., V. Barros, O. Edenhofer, R. Pichs- Madruga, Y. Sokona, M.D. Mastrandrea, K.J. Mach, and C. von Stechow (eds.)]. IPCC Working Group II Technical Support Unit, Carnegie Institution, Stanford, CA, USA, 75 pp.

IPCC (2011). Workshop Report of the Intergovernmental Panel on Climate Change Workshop on Impacts of Ocean Acidification on Marine Biology and Ecosystems [Field, C.B., V. Barros, T.F. Stocker, D. Qin, K.J. Mach, G.-K. Plattner, M.D. Mastrandrea, M. Tignor, and K.L. Ebi (eds.)]. IPCC Working Group II Technical Support Unit, Carnegie Institution, Stanford, CA, USA, 164 pp.

Mastrandrea, M.D., C.B. Field, T.F. Stocker, O. Edenhofer, K.L. Ebi, D.J. Frame, H. Held, E. Kriegler, K.J. Mach, P.R. Matschoss, G.-K. Plattner, G.W. Yohe, and F.W. Zwiers (2010). Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties. Intergovernmental Panel on Climate Change (IPCC). Available at <http://www.ipcc.ch>.

Field, C. B., L. D. Mortsch, M. Brklacich, D. L. Forbes, P. Kovacs, J. A. Patz, S. W. Running, and M. J. Scott. 2007. North America. Pages 617-652 in M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, and C. E. Hanson, editors. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge.

IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22.

Parry, M.L., O.F. Canziani, J.P. Palutikof and Co-authors 2007: Technical Summary. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,

M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 23-78.