

Holly K. Gibbs

Professor
University of Wisconsin-Madison
Department of Geography
Nelson Institute for Environmental Studies
1710 University Avenue, Madison WI 53726

Phone: (608) 949-4421
E-mail: hkgibbs@wisc.edu
<http://www.gibbs-lab.com/>

EDUCATION

Post-Doctoral Research Fellow, Stanford University, October 2008 – Sep 2011

Focus: U.S. biofuels policies and implications for carbon balance and conservation
Advisors: Rosamond Naylor, Woods Institute, and Chris Field, Dept. of Global Ecology

Ph.D. Environment and Resources, University of Wisconsin-Madison, October 2008

Dissertation: Shifting pathways of tropical land use and their implications for carbon emissions. Advisor: Jonathan Foley, Center for Sustainability and the Global Environment

Post-Masters Research Associate, Oak Ridge National Laboratory, 2001- 2003

Focus: Remote sensing and water cycle. Advisors: Tony King and Robin Graham.

M.S. Natural Resources, The Ohio State University, March 2001

Thesis: Human-induced changes in global vegetation and climatic parameters
Specialization: Remote sensing, geographic information systems, and spatial modeling

B.S. Natural Resources (Degree of Distinction), Ohio State University, March 1999, *cum laude*

Thesis: Obstacle avoidance by hand-raised, captive-born, and wild-caught big brown bats
Specialization: Environmental science, wildlife biology and natural resources

HONORS AND AWARDS

- Paper selected as one of 5 milestone ERL articles published in last 15 yrs 2021
- H. I. Romnes Faculty Fellow 2020
- Most downloaded paper with Applied Geography 2019-2022
- Office of Economic Cooperation and Development Research Fellowship 2018
- Alternate for Fulbright Research Fellowship (New Zealand) 2018
- Mapbiomass Award for collaborative Research paper (2nd place) 2018
- Winner of the Dean's Award for Distinguished Faculty Achievement 2017
- Paper selected as one of 10 "milestone" papers of the decade by ERL 2016
- Chancellor's Distinguished Teaching Award (faculty nominated) 2016
- Administrative Improvement Award (faculty nominated; co-recipient) 2016
- University Housing Honored Instructor Award (student nominated) 2015
- Invited United Nations Environment Program WCMC Fellow 2010-2013
- Science Magazine's "Environment News of the Year" 2009
- Paper selected as "Best of 2008" by Environmental Research Letters 2008
- National Academies of Science Kavli Frontiers of Science Fellow 2008
- David H. Smith Conservation Post-Doctoral Research Fellowship 2008-2010
- Paper selected as "Best of 2007" by Environmental Research Letters 2007

- Selected as International Young Scholar by IGBP – START program 2006
- Department of Energy’s Graduate Environmental Research Fellowship 2005-2008
- Outstanding Student Paper Award, American Geophysical Union 2004
- Student Alumni Society’s Outstanding Student Leadership Award 1999
- Awarded “Outreach Project of The Year” by The Ohio State University 1999
- The Ohio State University’s Honors Summer Research Fellowship 1998
- The Pressey Honors Endowment 1998

PROFESSIONAL EXPERIENCE

Professor of Environmental Studies and Geography, UW-Madison, Sept 2011-current
Teaching and leading research programs around land-use change and agricultural sustainability at the global level as well as case studies in the Brazilian Amazon. Promoted to Associate professor in 2016 and to full professor in 2020.

David H. Smith Conservation Research Fellow, Stanford University, October 2008 – Sep 2011
Leading research on the impacts of U.S. climate and biofuels policies on tropical forest conservation, climate change, and food security.

Doctoral Research Fellow, University of Wisconsin-Madison, August 2003 - September 2008
Developed statistical models to reconcile and hybridize estimates of tropical deforestation during the 1980s and 1990s. Tracked land use dynamics and C emissions across tropics.

Post-Masters Research Associate, Oak Ridge National Laboratory, May 2001 - September 2003
Remote-sensing scientist for an ORNL bioenergy assessment and DOE Global Water Cycle Pilot Project. Developed satellite algorithms and led field campaigns.

DIRECT RESEARCH FUNDING (Sole Primary Investigator unless noted)

Excluding IGERT-related and GLBRC-related funding (which have huge award amounts), I have been PI, Co-PI, or senior personnel on awards totaling > **\$53 million** since arriving at UW. Of these awards, **more than \$18 million have directly supported my research activities at UW-Madison (2011-2021)**.

*Lab members underlined.

- United States Department of Agriculture ERS, \$100,000 direct to GLUE 2022-2023
Gibbs Co-PI with Tyler Lark.
- Kemper Knapp Bequest; \$5,000 2022-2023
- USAID grant, \$3,400,000 direct to Gibbs; \$14,000,000 total; 2022-2027
Co-PI with Solidaridad-lead PI on overall grant.
- Norway’s Climate and Forest Initiative (NORAD) grant, \$1,800,000 2021-2026
direct to Gibbs, \$3,300,000 total; Co-PI with NWF (lead)
- The Gordon and Betty Moore Foundation, \$390,000 Co-PI with NWF 2021-2022

- UW Global Health Initiative Seed Grant, \$25,000 (Gibbs PI with Co-PI Marin Skidmore and Co-I Kaitlyn Sims) 2021-2022
- UW Instructional Continuity (IC) Small Grant, \$5,000 (Gibbs PI) 2021
- The Meridian Institute, \$150,00 (Gibbs PI with Rausch and Doan) 2018-2022
- The United States Geological Survey, \$150,000 (with co-PI Tyler Lark) 2019-2020
- UW Fall Competition, \$ 31,050 (PI Dan Phaneuf, and co-PIs Gibbs, Fanny Moffette and Lisa Rausch) 2019-2020
- The Gordon and Betty Moore Foundation, \$995,000 (Gibbs PI) 2018-2021
- University of Wisconsin Data Science Initiative, \$250,000 (Gibbs PI with Co-Is Prof. AnHai Doan and Dr. Lisa Rausch) 2018-2020
- Great Lake Bioenergy Research Center Award from DOE; \$720,000 to Gibbs (Donohue PI; \$267,000,000 award total) 2017-2022
- National Science Foundation, \$2,000,000 with \$280,000 direct to Gibbs; with David Shaffer (lead PI) and Jeffery Linderoth, 2017-2021
- United Soybean Board (with Tyler Lark), \$40K 2017- 2019
- The Gordon and Betty Moore Foundation, \$485,000 (Gibbs PI) 2017-2018
- National Wildlife Federation, \$544,500 with \$260,000 direct to Gibbs (PI) with Tyler Lark; co-PIs Prof Chris Kucharik (UW), Prof. Aaron Smith (UC-Davis), Nathan Hendricks (KSU) and Jesslynn Brown (USGS) 2017-2018
- David and Lucile Packard Foundation grant, \$130,000 direct to Gibbs (with Lark); \$527,881 total; B. Bramble PI, National Wildlife Federation 2017-2019
- Norway's Climate and Forest Initiative (NORAD) grant, \$1,200,000 direct to Gibbs, \$6,600,000 total; Co-PI with Nathalie Walker, NWF 2016-2021
- Norway's Climate and Forest Initiative (NORAD) grant, \$250,000 for Gibbs field support, \$9,900,000 total; PI Paulo Barreto, Imazon 2016-2021
- The Gordon and Betty Moore Foundation, \$2,140,000 (Gibbs PI) 2016-2017
- Sustainability Innovation in Research and Education Grant, \$20,634 2015-2016
- Sustainability Innovation in Research and Education Grant, \$40,000 (with Prof Adrian Treves and Catherine Middlecamp) 2014
- Norway's Climate and Forest Initiative (NORAD) grant, \$705,000 direct to Gibbs, \$3,400,000 total; Co-PI with Nathalie Walker, NWF 2013-2016
- The Gordon and Betty Moore Foundation, \$782,000 (Gibbs PI) 2013-2015
- Sustainability Innovation in Research and Education Grant, \$40,000 (with co-PIs Prof Adrian Treves and Catherine Middlecamp) 2013
- National Academies of Sciences, \$100,000 (with Claire Kremen et al, UC–Berkeley lead PI) 2012-2013
- California Air Resources Board, \$340,000 (Gibbs PI) 2012-2014
- Wisconsin Bioenergy Initiative Seed Grant, \$44,000 (Gibbs PI) 2011-2012
- Amazon Forest Carbon Partnership / Cargill, \$32,000 2009-2010

- Terrestrial Carbon Group / Heinz Center, \$7,000 2009
- California Air Resources Board, \$50,000 2009-2011
- The Nature Conservancy / Cargill, \$1,000 2009
- David H. Smith Post-Doctoral Conservation Research Grant, \$136,000 2008-2010
- Conservation International Research Grant, \$4,000 2007
- Coalition for Rainforest Nations, \$10,000 2006-2007
- U.S. Department of Energy Research Fellowship, \$123,000 2005-2008
- The Ohio State University GradRoots Research Grant, \$300 2001
- U.S. Fish & Wildlife Services, Endangered Species Division, \$2,000 1999
- Pressey Honors Research Endowment, \$3,000 1999
- Summer Honors Research Fellowship, \$3,700 1999
- School of Natural Resources' Honors Research Fellowship, \$32,000 1997-1999

TEACHING (courses designed and taught at the University of Wisconsin-Madison)

GRADUATE STUDENT SEMINARS

Geography 930 / Environ. Studies 900: *The Global Land Reserve*

Geography 930 / Environ. Studies 900: *Emerging Market Impacts on Global Agriculture*
(hosting visiting scholar from Brazil for three weeks to contribute to course)

Geography 930 / Environ. Studies 900: *Approaches to Reduce Tropical Deforestation*
(established science writing opportunity with Mongabay.com)

LARGE-LECTURE UNDERGRADUATE

Geography / Environ. Studies 309: *People, Land and Food*

- Awarded Kemper Knapp Bequest to support an additional 25% TA appointment for two years to enhance community-engaged learning (2022-2023)
- Awarded Instructional Continuity (IC) Small Grant to support an additional 25% TA appointment to enhance student-to-student engagement and service-learning project outcomes during online learning (2021)
- Received one-time award from the Office of Sustainability to support sustainability content (2016)
- Awarded two SIRE teaching grants from the Office of Sustainability to support a TA to refine semester-long service-learning research projects (2013, 2015)
- Part of Sustainability Certificate and Organic Agriculture Certificate

UNDERGRADUATE CAPSTONES

Environ. Studies 600: *Consumer-driven Food Sustainability: Making Our Choices Matter*

- Awarded SIRE teaching grant from the Office of Sustainability to support a TA.
- Partnered with Unions food retailers

Environ. Studies 600: *Local to Global Solutions to Reduce Food Waste* (with Tyler Lark)

- Awarded SIRE teaching grant from the Office of Sustainability to support a TA.

GRADUATE & POST-GRADUATE MENTORING

I advise undergraduate, graduate, and post-doctoral scientists in the Department of Geography, Nelson Institute for Environmental Studies, Agroecology, and co-advise in Agricultural and Applied Economics (primary AAE advisor but funding and close mentorship from me). I also closely mentor and fund students with primary advisors in Applied and Agricultural Economics. All my students have been fully funded by grants & fellowships. Many mentees have continued in my lab as staff researchers after completing their degrees.

- Current Undergraduate Researchers (2):
 - Larissa Caminha Danielson
 - Olivia Plamann

- Current Graduate Students (6):
 - Tara Mittleberg (Nelson: PhD expected May 2025)
 - Seth Spawn (Geog: PhD expected May 2022)
 - Clare Sullivan (Geog: PhD expected May 2022)
 - Delaney Gobster (Agroecology: M.S. expected May 2022; with Tyler Lark)

- Current Postdoctoral Associates (2):
 - Dr. Yanhua Xie
 - Dr. Amintas Brandão

- Current Staff Researchers and Technical Support Staff (7):
 - Dr. Lisa Rausch
 - Jacob Munger
 - Dr. Tyler Lark
 - Ian Schelly
 - Matthew Bougie
 - Matthew Christie
 - Joseph App

GIBBS LAB ALUMNI (46 students and researchers)

Undergraduate Researchers (22): Colin Higgins, Cynthia Malone, Maxwell Albrecht, Aaron Schroeder, Giso Broman, Stephen Wyman, Ian Schelly, Chrissy Hursh, Aaron Lang, Masrudy Omri, Colin Welton, Haley MeLampy, Jamie Touhill, Olivia Pendergrast, Matthew Christie, Regan Murray, Calder Sell, Joel McClure, Melanie Kohls, Morgan Ripp, Andressa de Azevedo Souza, Clare Hudson, Larissa Caminha Danielson, Olivia Plamann

Post-doctoral/M.S. Researchers (9):

- Dr. Marin Skidmore
- Dr. Raquel Carvalho
- Dr. Ritamauria Pereira

- Dr. Fanny Moffette
- Dr. Meghan Salmon
- Dr. Lisa Rausch
- Jacob Munger
- Dr. Petterson Vale
- Beichen Tian

Completed graduate students (6 in Nelson, 2 in Geog, 4 in AAE):

- Amintas Brandão (Environment and Resources, PhD 2022)
- Juliana Brandão (Environment and Resources, PhD 2021)
- Marin Skidmore (AAE PhD 2020, Jeremy Folz AAE advisor)
- Jens Engelman (AAE PhD 2019, Jen Alix-Garcia AEE advisor)
- Fanny Moffette (AAE PhD 2019, Jen Alix-Garcia AAE advisor)
- Seth Spawn (Geog M.S. 2019)
- Stephanie Herbst (Water Resources M.S. 2018)
- Tyler Lark (Environment and Resources PhD 2017)
- Ticiana Amaral (Environment and Resources M.S. 2016)
- Aline Carrara (Environment and Resources M.S. 2016)
- Jessica L'Roe (Geog Ph.D. 2016; co-advised with Lisa Naughton)
- Philip Rothrock (Environmental Conservation M.S. 2015)

Researchers in Brazil (4): Ricardo Vale, Eduardo Florence, Daniel Meyer, Ticiana Amaral

Visiting Scholars (4): Andressa de Azevedo Souza, Lisa Kelly, Mathew Luskin, Dr. Elizabeth Johnson, Heron Martins

UNIVERSITY SERVICE

- Chair, Geography Finance Committee, 2021-current
- Nelson Institute Annual Review Committee, 2022
- Nelson Institute Dean Paul Robbins's 5-year review committee, 2021-2022
- GISPP committee, 2021-2022
- Wisconsin Energy Institute Executive Committee, 2019-current
- Geography Advisory Committee, 2017-2021
- Nelson Environment and Resources Program Committee, 2016-current
- Nelson Environment and Conservation Committee, 2016-current
- SAGE Investigator's Council, 2011-current
- Geography Finance Committee, 2019-2020
- Geography Graduate Studies, 2015-2018
- Geography Faculty Search Committee for Physical Hire, 2017-2018
- Geography Review committee for the salary and one-time bonus payment exercise, 2017
- Tenure committees: Ken Keefover-Ring, Stephen Young tenure committee.
- Mentor and tenure committee: Christian Andresen & Zuzana Burivalova
- Nelson Interim Chair, Environment and Conservation Committee, Fall 2017

- Geography Yi Fu Tuan Lectures Committee, 2011-2012
- Geography Undergraduate Affairs Committee, 2011-2016
- Environment and Resources Graduate Admissions Committee 2015-2018
- Geography Development & External Relations, 2015 – 2017
- Nelson Review committee for the salary and one-time bonus payment exercise, 2017
- Undergraduate Advisor, Geography People and Environment, 2011-2016
- Panelist for Physical Sciences Divisional Committee meeting, 2017
- Interim Chair of SAGE Investigator’s Council, 2014-2015
- Wisconsin Bioenergy Institute Interim Governance Committee, 2011-2012
- Nelson Institute Academic Planning Council, 2012-2015

SCIENCE LEADERSHIP AND SERVICE

- Editorial Board Member of the journal *Tropical Conservation Science* (2009 - present)
- Editorial Board Member of *Environmental Research Letters* (2010-2014)
- Editorial Board Member of *Land* (2016 – 2018)
- Co-organized Meridian Institute’s Supply Chain Sustainability Learning and Action Symposium, June 12, 2020.
- Co-organized and led Meridian Institute’s Supply Chain Sustainability Research Symposium Deep Dive Session on Beef in Brazil, June 24
- Organized and moderated workshop with Prof. Eric Lambin (Stanford) on “Improving Conservation Outcomes from Supply-Chain Interventions” at the Gordon and Betty Moore Foundation, Palo Alto, CA. April 20-22, 2016.
- Served as organizer, session chair, and discussant for seven paper sessions on two different topics (Sustainable Supply Chains and Our Future Food- and Fuel-scapes) at the Association for American Geographers Annual Meeting, April 19-25, 2015 Chicago, IL.
- Co-organized and moderated (with Eric Lambin) The Global Land Reserve: Myth or More than We Need? The Franqui Foundations’ Global Land Reserve Meeting. Oct 26, 2011, Rome, Italy
- Organized and moderated AAAS symposium “Biofuels’ Uncertain Future: Unraveling the Science and Politics of Indirect Land Use”, Feb 18-22, 2010
- Co-organized AAAS symposium “Biofuels, Tropical Deforestation and Climate Policy: Key Challenges and Opportunities”, February 12-16, 2009
- Guest Co-Editor for special issue of *Environmental Research Letters* “Tropical Deforestation and Carbon Emissions” (2007 - 2008)
- Peer reviewer for the following journals, among others: *Science*, *Nature*, *Nature Climate Change*, *Proceedings of the National Academy of Science*, *Global Change Biology*, *Land Use Policy*, *Regional Environmental Change*, *Forest Trees and Livelihoods*, *Sustainability*, *Journal of Geophysical Research*, *Trends in Ecology & Evolution*, *Environmental Management*, *Ecological Applications*, *Earth Interactions*, *Environmental*

Research Letters, Biomass and Bioenergy, Biological Conservation, Ecology Letters, Tropical Conservation Science Journal, Environmental Science & Technology, Biotropica, Tellus B, Conservation Letters, Philosophical Transactions B

- Facilitated Transdisciplinary Workshop on “Coupled Human-Environment Systems” and several UW-Madison faculty retreats (May - Sept. 2005)
- American Geophysical Union (AGU), Biogeosciences Student Representative (2006)

SCIENCE OUTREACH

- Co-created VISIPEC, the world’s first full cattle supply chain traceability tool that is the basis of tools being developed and used by the Brazilian government and the world’s largest food commodity companies (with the National Wildlife Federation; www.visipec.com)
- Co-created sophisticated website with the National Wildlife Federation to highlight our research and broader context: www.zerodeforestationcattle.org
- Commission Expert Group / Multi-Stakeholder Platform on Protecting and Restoring the World's Forests, including the EU Timber Regulation and the Forest Law Enforcement, Governance and Trade (FLEGT) Regulation, 2020-current
- Invited member of California’s Air Resources Board (CARB) expert panel on Indirect Land Use Change within the Low Carbon Fuels Standard, 2010-2011
- Member of the Roundtable on Sustainable Biofuels Indirect Impacts Expert Group
- Science advisor for policy initiatives led by the Coalition for Rainforest Nations (2005-2007) and Amazon Forest Carbon Partnership (2006 - 2011)
- Co-founder, along with Rhett Butler, of the Bay Area Tropical Forest Network (www.tropicalforestnetwork.org/)

MEDIA AND SCIENCE COMMUNICATION EXPERIENCE

A full list can be seen here: <http://www.gibbs-lab.com/media-coverage/>

Interviews and research results have appeared in print, radio and television media including:

- *Television:* NOVA Science NOW “Algal Fuel”, KQED Public Television “Beyond Ethanol”, New York Time’s RetroReport
- *Radio:* NPR, WORT, BBC “Shared Planet, Canadian Broadcast Company “As it Happens”, PRN “Paradise Parking Lot”, WPR “Larry Meiller Radio Show”, “Voice of America”, and a range of international venues from UNFCCC COPs and scientific conferences
- *Print:* New York Times, Bloomberg, Washington Post, NBC News, Science Magazine’s ScienceNOW, Nature News, NPR, Christian Science Monitor, Guardian, Environmental Research Web, Reuters, Associated Press, Santa Barbara Independent, U.S. News and

World Report, Wisconsin State Journal, and Capital Times, Jakarta Post, Mongabay, Frontline, Santa Barbara Independent, DevNet, Yahoo News among others.

- Specific articles summarized here: <http://www.gibbs-lab.com/media-coverage/>
- Print coverage of research on potential land use implications of biofuel expansion selected as “Environment News of the Year” by Science Magazine (2010)

JOURNAL PUBLICATIONS

As of September 2022, h-index of 48 and 27,862 paper citations.

23 articles published in high-ranked journals such as Science, Nature, the Proceedings of the National Academy of Science, and Global Environmental Change.

In each list of authors, **Gibbs** is listed in bold, and students, postdocs, and researchers in her lab are underlined; “*” indicates mentee was student when research conducted; “***” indicates research for paper was funded through sub-awards from Gibbs.

1. West, T.A.P**, L. Rausch, J. Munger, **H. K. Gibbs**. 2022. Cattle produced in Brazil’s protected areas linked to slaughterhouses with zero-deforestation commitments. *Conservation Letters* (in press).
2. Skidmore, M*., Sims, K*., L.L. Rausch, and **H.K. Gibbs** et al, 2022. Sustainable Intensification in the Brazilian cattle industry: the role for reduced slaughter age. *Environmental Research Letters*
3. Lark, T. J., N.P. Hendricks. A. Smith, N. Pates, S. A. Spawn*, M. Bougie, E. Booth, C. J. Kucharik, H.K. Gibbs. 2022. Environmental Outcomes from the U.S. Renewable Fuel Standard. *Proceedings of the National Academy of Sciences*.
[UW press release](#)
4. Sun, Z., L. Scherer, A. Tukker, S. A. Spawn*, M. Bruckner, **H. K. Gibbs**, P. Behrens. 2022. A double carbon dividend from dietary change in high-income nations. *Nature Food*.
5. Carvalho R., L. Rausch, J. Munger, and **H. K. Gibbs**. 2021. The role of high-volume ranches as cattle suppliers: Supply chain connections and cattle production in Mato Grosso. *Land*.
6. Schelly, I., L. Rausch, H.K. Gibbs. 2021. Brazil’s cattle sector played large role in fires during 2020 moratorium. *Frontiers in Forests and Global Change*.
7. Xie, Y., H.K. Gibbs, T. J. Lark. 2021. Landsat-based Irrigation Dataset (LANID): 30-m resolution maps of irrigation distribution, frequency, and change for the U.S., 1997-2017. *Earth System Science Data*.

8. Spawn-Lee, S.A.*, T.J. Lark, **H.K. Gibbs**, R.A Houghton, C.J. Kucharik, C. Malins et al. 2021. Comment on the ‘Carbon intensity of corn ethanol in the United States: state of the science’. *Environmental Research Letters*.
9. Moffette, Fanny, Skidmore, M.*, and **H.K. Gibbs**. 2021. Environmental policies that shape productivity: Evidence from cattle production in the Brazilian Amazon. *Journal of Environmental Economics and Management*.
10. Rausch, L. **H.K. Gibbs**. 2021. The low opportunity costs of the Amazon Soy Moratorium. *Frontiers in Forests and Global Change* 4, 21.
11. Skidmore, M.*, Moffette, F., **H.K. Gibbs**. 2021. Cattle Ranchers and Deforestation in the Brazilian Amazon: Production, Location, and Policies. *Global Environmental Change*. ([Policy report](#) published with Meridian Institute)
12. Moffette, F.* and **H.K. Gibbs**. 2021. Agricultural displacement and deforestation leakage in the Brazilian Amazon. *Land Economics Journal*.
13. Lark, T.J.*, I Schelly, **H. K Gibbs**. 2020. Accuracy, bias, and improvements in mapping crops and cropland across the United States using the USDA Cropland Data Layer. *Remote Sensing* 13 (5), 968.
14. Heilmayr***, R., L. Rausch, J. Munger, **H. K. Gibbs**. 2020. Brazil’s Amazon Soy Moratorium reduced deforestation. *Nature Food* 12, 801-810.
[UCSB press release](#)
15. Raoni Rajão, Britaldo Soares-Filho, Felipe Nunes, Jan Börner, Lilian Machado, Débora Assis, Amanda Oliveira, Luis Pinto, Vivian Ribeiro, Lisa Rausch, **H.K. Gibbs**, Danilo Figueira. 2020. The Rotten Apples of Brazil’s Agriculture. *Science*.
16. Santika,T., K. A. Wilson, E. A. Law, Freya A.V. St. John, Kimberly M. Carlson, **H.K. Gibbs**, C. L. Morgans, M. Ancrenaz, E. Meijaard & M. J. Struebig. 2020. Impact of palm oil sustainability certification on village well-being and poverty in Indonesia. *Nature Sustainability*.
17. Lark, T. J., S. A. Spawn*, M. Bougie, **H. K. Gibbs**. 2020. Cropland expansion in the United States produces marginal yields at high costs to wildlife. *Nature Communications*.
[UW press release](#)
18. West, T.A.P., J. J. Monge, L. J. Dowling, S. Wakelin, **H.K. Gibbs**. Promotion of afforestation in New Zealand’s marginal agricultural lands through payments for environmental services. 2020. *Ecosystem Services*.
19. Periera, R. L. R. Rausch, A. Carrara*, **H. K. Gibbs**. Characterizing cattle ranching in the Brazilian Amazon: from pasture to markets. 2020. *Tropical Conservation Science*.
20. **Gibbs, H.K.**, F. Moffette*, J. Munger, P. Vale, L. Rausch, J. L’Roe*, P. Barreto, T. Amaral*, S. Hall, and N. Walker. 2020. Strategic Response to Zero-Deforestation Cattle

Agreements Limits Impacts Across the Brazilian Amazon. *Environmental Research Letters* (accepted).

21. Allie Goldstein, W. R. Turner, S. A. Spawn, K. J. Anderson-Teixeira, S. Cook-Patton, J. Fargione, **H. K. Gibbs**, B. Griscom, J. H. Hewson, J. F. Howard, J. C. Ledezma, S. Page, L. P. Koh, J. Rockström, J. Sanderman, Dave Hole. 2020. Protecting irrecoverable carbon in Earth's ecosystems. *Nature Climate Change*.
22. Spawn, S.A.*, C. C. Sullivan*, T. J. Lark, **H. K. Gibbs**. 2020. Harmonized global maps of aboveground and belowground biomass carbon stocks in the year 2010. *Nature Scientific Data*.
23. Brandão Jr. A*, L. Rausch, **H.K. Gibbs**, A. P. Durán, C. Costa Jr., A. Balmford. 2019. Estimating the land available for agriculture and pasture in the Brazilian Amazon and Cerrado biomes under different policy scenarios. *Sustainability*.
24. Soto-Navarro C., C. Ravilious, X. de Lamo, A. Arnell, M. Harfoot, S. Hill, O.R. Wearn, M. Santoro, A. Bouvet, S. Mermox, T. Le Toan, J. Xia, W. Yuan, S.A Spawn*, **H.K. Gibbs**, s. Ferrier, T. Harwood, R. Alkemade, A. Schipper, L. Miles, N.D. Burgess, V. Kapos. 2020. Mapping co-benefits for carbon storage and biodiversity to inform conservation policy and action. *Transactions of the Royal Society of London B: Biological Sciences*.
25. Vale, P., **H.K. Gibbs**, R. Vale*, M. Christie*, E. Florence, J. Munger, D. Sabaini, 2019. The expansion of intensive beef farming to the Brazilian Amazon. *Global Environmental Change* 57, 101922.
26. Rausch, L.L. **Gibbs, H.K.**, I. Schelly, A. Brandão*, D. C. Morton, A. C. Filho, B. Strassburg, N. Walker, P. Noojipady, P. Barreto, and D. Meyer. 2019. Soy Expansion in Brazil's Cerrado. *Conservation Letters*. DOI: 10.1111/conl.12671
27. Spawn S.A.*, TJ Lark, **HK Gibbs**. 2019. Carbon emissions from cropland expansion in the United States. *Environmental Research Letters* 14 (4), 045009
*Student author received Olmstead paper award by department of Geography
28. Xie Y, TJ Lark, JF Brown, **HK Gibbs**. 2019. Mapping irrigated cropland extent across the conterminous United States at 30 m resolution using a semi-automatic training approach on Google Earth Engine. *ISPRS Journal of Photogrammetry and Remote Sensing* 155, 136-149.
29. Vale, P., **H.K. Gibbs**, R. Vale*, J. Munger, A. Brandão*, M. Christie*, E. Florence, 2019. Mapping the cattle industry in Brazil's most dynamic cattle ranching state: slaughterhouses in Mato Grosso, 1967-2016. *PloSOne* 14 (4), e0215286
30. Lima M, CA da Silva Junior, L Rausch, **HK Gibbs**, JA Johann. 2019. Demystifying sustainable soy in Brazil. *Land Use Policy* 82, 349-352

31. Frey G.P., T. A.P. West, T. Hickler, L. Rausch, **H. K. Gibbs** and J. Börner. 2018. Simulated Impacts of Soy and Infrastructure Expansion in the Brazilian Amazon: A Maximum Entropy Approach. *Forests*.
32. Lark, TJ*, B Larson, I Schelly, S Batish, **HK Gibbs**. 2018. Accelerated Conversion of Native Prairie to Cropland in Minnesota. *Environmental Conservation*.
33. Garrett RD, S Levy, KM Carlson, TA Gardner, J Godar, J Clapp, P Dauvergne, R Heilmayr, Y le Polain de Waroux, B Ayre, R Barr, B Døvre, **HK Gibbs**, S Hall, S Lake, JC Milder, LL Rausch, R Rivero, X Rueda, R Sarsfield, B Soares-Filho, N Villoria. 2018. Criteria for effective zero-deforestation commitments. *Global Environmental Change* 54, 135-147.
34. Buckley, K.J., P. Newton, **H. K. Gibbs**, I. McConnel, J. Ehrmann. 2018. Pursuing sustainability through multi-stakeholder collaboration: A description of the governance, actions, and perceived impacts of the roundtables for sustainable beef. *World Development*, <https://doi.org/10.1016/j.worlddev.2018.07.019>
35. Carlson, K. M., Heilmayr, R., **Gibbs, H.K.** et al. 2018. Impact of RSPO certification on deforestation in Indonesia. *Proceedings of the National Academies of Science*.
36. Lambin, E.F., **H.K. Gibbs**, K. Carlson, L. Fleck, R. Garrett, R. Heilmayr, Y. le Polain de Waroux, C. McDermott, D. McLaughlin, P. Newton, C. Nolte, P. Pacheco, L. Rausch, C. Streck, T. Thorlakson, N. Walker. 2018. The role of supply-chain initiatives in reducing deforestation. *Nature Climate Change*.
[Stanford press release](#)
37. Lark, T.J., R. M. Mueller, D. M. Johnson, J. M. Salmon, **H. K. Gibbs**. 2017. Measuring land-use and land-cover change using the U.S. Department of Agriculture's Cropland Data Layer: Cautions and Recommendations. *Agricultural Systems*. Vol 2: 224-235
38. Noojipady, P., D. C. Morton, W. Schroeder, K. M. Carlson, C. Huang, **H. K. Gibbs**, D. Burns, N. F. Walker, and S. D. Prince. 2017. Managing fire risk during drought: the influence of certification and El Niño on fire-driven forest conversion for oil palm in Southeast Asia. *Earth System Dynamics*. <https://doi.org/10.5194/esd-2017-2>
39. Alix-Garcia, J** and **H. K. Gibbs**. 2017. Forest conservation effects of Brazil's zero deforestation agreements undermined by leakage. *Global Environmental Change*.
40. Noojipady, P., D.C Morton, M.N. Macedo, D.C. Victoria, C. Huang, **H. K. Gibbs**, E. L. Bolfe. 2017. Forest carbon emissions from cropland expansion in the Brazilian Cerrado biome. *Environmental Research Letters* 12 (2), 025004.
41. Alix-Garcia, J., L. Rausch, J. L'Roe*, **H. K. Gibbs**, and J. Munger. 2017. Avoided deforestation linked to environmental registration in the Brazilian Amazon. *Conservation Letters*.
[OSU press release](#)

42. Wright, C., B. Larson, T. Lark*, **H.K. Gibbs**. 2017. Recent grassland losses are concentrated around U.S. ethanol refineries. *Environmental Research Letters* 12 (4), 044001.
43. L'Roe, J.*, L. Rausch, J. Munger, **H.K. Gibbs**. 2016. Policy intersections, land registration, and forest clearing patterns in the Amazonian state of Para. *Land Use Policy* 57: 193-203
44. Rausch, L. R. and **H.K. Gibbs**. 2016. Property arrangements and soy production in the Brazilian state of Mato Grosso: Implications for supply chain governance. *Land*, 5(2), 7; doi:10.3390/land5020007.
45. Morton, D.C., P. Noojipady, M.M. Macedo, **H.K. Gibbs**, D. C. Victoria, E. Bolfe. 2016. Dynamics of cropland expansion reveal sharp boundaries in suitability at the Amazon frontier. *Global Environmental Change*, 37:92-101.
46. **Gibbs, H.K.**, J. Munger, J. L'Roe*, P. Barreto, R. Pereira, M. Christie*, T. Amaral*, and N. Walker. 2015. Did Ranchers and Slaughterhouses Respond to Zero-Deforestation Agreements in the Brazilian Amazon? *Conservation Letters* DOI: 10.1111/conl.12175
[UW press release](#)
47. Lark, T.*, J. M. Salmon, **H.K. Gibbs**. 2015. Cropland expansion outpacing biofuel policies in the United States. *Environmental Research Letters* 10(044003): doi:10.1088/1748-9326/10/4/044003
[UW press release](#)
48. **Gibbs, H.K.**, L. Rausch, J. Munger, I. Schelly, D. C. Morton, P. Noojipady, B. Soares-Filho, P. Barreto, L. Micol, and N.F. Walker. 2015. Brazil's Soy Moratorium. *Science* 347 (6220), 377-378.
[UW press release](#)
49. **Gibbs, H.K.** and J.M. Salmon. 2014. Mapping the world's degraded land. *Applied Geography*, 57: 12-21.
[Most downloaded paper in Applied Geography](#)
50. Meyfroidt, Patrick; K. Carlson, M. Fagan, V. Gutierrez-Velez, M. Macedo, L. Curran, R. DeFries, G. Dyer, **Gibbs, H. K.**, E. Lambin, D. Morton, V. Robiglio. 2014. Multiple pathways of expansion of commodity crops in tropical forest landscapes. *Environmental Research Letters*.
51. **Gibbs, H.K.**, S. Yui, and R. Plevin. 2014. New geographically-explicit estimates of soil and biomass carbon stocks by GTAP region and AEZ. Global Trade and Analysis Project (GTAP) Refereed Technical Paper Series.
52. R. Plevin, **H.K. Gibbs**, J. Duffy, S. Yui and S. Yeh. 2014. Agro-ecological zone emission factor model. Global Trade and Analysis Project (GTAP) Refereed Technical Paper Series.

53. Lambin, E.F., **H. K. Gibbs**, L. Ferreira, R. Grau, P. Mayaux, P. Meyfroidt, D.C. Morton, T. Rudel, I. Gasparri, and J. Munger. 2013. Estimating the world's potentially available cropland using a bottom-up approach. *Global Environmental Change*. 23(5):892-901.
54. **Gibbs, H.K.** 2012. Trading forests for oil yields in the Peruvian Amazon. *Environmental Research Letters* 7 (1): 011007.
55. Turner, W. R., K. Brandon, T. M. Brooks, C. Gascon, **H. K. Gibbs**, K. S. Lawrence, R. A. Mittermeier, and E. R. Salig. 2012. Global biodiversity conservation and the alleviation of poverty. *BioScience* 62(1).
56. Koh, L.P., **H. K. Gibbs**, P. V. Potapov, and M. C. Hansen. 2011. REDDcalculator.com: A Web-Based Decision-Support Tool for implementing Indonesia's Forest Moratorium. *Methods Ecology and Evolution* doi: 10.1111/j.2041-210X.2011.00147.x
57. O'Hare M., M. Delucchi, R. Edwards, U. Fritsche, **H. K. Gibbs**, T. Hertel, J. Hill, D. Kammen, D. Laborde, L. Marelli, D. Mulligan, R. Plevin and W. Tyner. 2011. Comment on "Indirect land use change for biofuels: Testing predictions and improving analytical methodologies" by Kim and Dale: statistical reliability and the definition of the indirect land use change (iLUC) issue. *Biomass and Bioenergy* 35(10)4485-4487.
58. West, P. **H. K. Gibbs**, *J.A. Foley*, C. Barford, and J. Wagner. 2010. Trading carbon for food: global comparison of carbon storage vs. crop yields on agricultural land. *Proceedings of the National Academy of Science* 107(46):19627-19632.
[UW Press Release](#)
59. **Gibbs, H. K.**, A.S. Ruesch, *J. A. Foley*, N. Ramankutty, F. Achard, and P. Holmgren. 2010. Forests were the primary land source for new agricultural lands in the 1980s and 1990s. *Proceedings of the National Academy of Science* 107(38) 16732-16737.
[Stanford University Press Release](#)
60. Plevin, R., M. O'Hare, A. D. Jones, M. S. Torn, and **H. K. Gibbs**. 2010. Greenhouse gas emissions from biofuels' indirect land use change are uncertain but may be much greater than previously estimated. *Environmental Science and Technology* 44(21): 8015-8021.
61. Scharlemann, J.P., V. Kapos, A. Campbell, I. Lysenko, N. D. Burgess, M. C. Hansen, **H. K. Gibbs**, B. Dickson, and L. Miles. Securing Tropical Forest Carbon: the Contribution of Protected Areas to REDD. *Oryx* 44:352-257.
62. Bakker VJ, JK Baum, JF Brodie, AK Salomon, BG Dickson, **HK Gibbs**, PB McIntyre. 2010. The changing landscape of conservation science funding in the United States. *Conservation Letters* 00:1-10.
63. Strassburg, B., A. Balmford, J. Price, R. Davies, **H. K. Gibbs** D. Orme, L. Miles, and A. Kelly. 2010. Global Congruence of Carbon Storage and Biodiversity in Terrestrial Ecosystems. *Conservation Letters* 3(2)98-105.
64. Robertson, G.P., V. H. Dale, O. C. Doering, S. P. Hamburg, J. M. Melillo, M. M. Wander, W. J. Parton, R. Pouyat, P. R. Adler, J. Barney, R. M. Cruse, C. S. Duke, P. M. Fearnside,

- R. F. Follett, **H. K. Gibbs**, J. Goldemberg, D. J. Mladenhoff, D. Ojima, M. W. Palmer, A. Sharpley, L. Wallace, K. C. Weathers, J. A. Wiens, W. W. Wilhelm. 2008. Sustainable Biofuels Redux. *Science* 322: 49-50.
65. Patz, J.A., S. H. Olson, C. Uejio, and **H. K. Gibbs**. 2008. Disease emergence from global climate and land use change. *Medical Clinics of North America*. 92(6): 1473-1491.
66. **Gibbs, H. K.**, M. Johnston, *J. A. Foley*, T. Holloway, C. Monfreda, N. Ramankutty, and D. Zaks. 2008. Carbon payback times for crop-based biofuel expansion in the tropics: the effects of changing yield and technology. *Environmental Research Letters* 3 034001.
[UW Press Release](#) // [Stanford University Press Release](#)
67. Patz, J. A., D. Campbell-Lendrum, **H. K. Gibbs**, and R. Woodruff. 2008. Health Impact Assessment of Global Climate Change: Expanding upon Comparative Risk Assessment approaches for Policy Making. *Annual Reviews of Public Health* 29: 27-39.
68. Olander, L. P., **H. K. Gibbs**, M. Steininger, J. J. Swenson, and B. C. Murray. Reference scenarios for deforestation and forest degradation in support of REDD: a review of data and methods. 2007. *Environmental Research Letters* 3 025011
69. **Gibbs, H. K.**, S. Brown, J. O. Niles. *J.A. Foley*. 2007. Monitoring and measuring tropical forest carbon stocks: Making REDD a reality. *Environmental Research Letters* 2(4): 045023.
70. **Gibbs, H. K.** and M. Herold. 2007. Tropical deforestation and carbon emissions: Introduction to special issue. *Environmental Research Letters* 2: 045021.
71. Patz, J. A., **H. K. Gibbs**, *J. A. Foley*, and K. Smith. 2007. Climate change and global health: Quantifying a growing ethical crisis. *EcoHealth* 4(4):1612-1910.
72. Ramankutty, N., **H. K. Gibbs**, F. Achard, R. DeFries, *J.A. Foley*, and R.A. Houghton. 2007. Challenges in estimating carbon emissions from tropical deforestation. *Global Change Biology* 13(1):51-66.
73. *Foley, J.A.*, G.P. Asner, M.H. Costa, M.T. Coe, R. DeFries, **H. K. Gibbs**, et al. 2007. Amazonian revealed: forest degradation and loss of ecosystem goods and services in the Amazon Basin, *Frontiers in Ecology and Environment* 5(1): 25-32.
74. *Foley, J.A.*, R. S. DeFries, G. P. Asner, C. Barford, G. Bonan, S. R. Carpenter, F. Stuart Chapin, M. T. Coe, G. C. Daily, **H. K. Gibbs**, J. H. Helkowski, T. Holloway, E. A. Howard, C. J. Kucharik, C. Monfreda, J. A. Patz, I. C. Prentice, N. Ramankutty, P. K. Snyder. 2005. Global Consequences of Land Use. *Science* 309 (5734): 570-574.
75. Miller, N.L., A.W. King, M.A. Miller, E.P. Springer, M.L. Wesely, K.E. Bashford, M.E. Conrad, K. Costigan, P.N. Foster, **H. K. Gibbs**, J.Jin, J. Klazura, B.M. Lesht, M.V. Machavaram, F. Pan, J. Song, D. Troyan, R.A. Washington-Allen. 2005. The DOE Water Cycle Pilot Study. *Bulletin of the American Meteorological Society* 86(3):359-374.
76. Wali, M.K., F. Evrendilek, T.O. West, S. Watts, D. Pant, **H. K. Gibbs**, B. McClead. 1999.

Assessing terrestrial ecosystem sustainability: Usefulness of modeling regional carbon and nitrogen budgets. *Nature and Resources* 35: 21-33.

77. **Gibbs, H. K.** and D. L. Johnson. 1999. Obstacle avoidance by hand-raised, captive-born, and wild-caught big brown bats. *Olentangy River Wetlands Research Park Review*. 10(20): 201-06.

JOURNAL ARTICLES IN REVIEW

1. Skimore, M*, K. Sims*, and **H.K. Gibbs**. Pesticide exposure and pediatric cancer deaths: Evidence from Brazilian soy production. *American Economic Review*. (in review)
2. **Gibbs, H.**, Skidmore, M*, et al. "Blind spots in the zero-deforestation cattle supply chains." *In review*.
3. Rausch, L.L. and H.K. Gibbs. Brazil's Beef and Soy Moratoriums: Lessons from supply chain initiatives in the Amazon (in prep).
4. Skidmore, M., Sims, K. and H.K. Gibbs. Shifting Supply Chains in the Brazilian Amazon: Land use leakage from Brazil's Public Livestock Commitment. In prep for Special issue of *Ecological Economics*.
5. Brandão, A*, L.L. Rausch, C, Souza, H.K. Gibbs. Mapping current and potential reach of zero-deforestation cattle agreements across the Brazilian Amazon. (in prep)
6. Brandão, A*, L.L. Rausch, C, Souza, H.K. Gibbs. Travel distances for cattle production cycles across the Amazon. (in prep)
7. Skidmore, M., M. Barrozo, **H.K. Gibbs**. Low fidelity transactional relationships across the Amazon challenge supply chain commitments. (in prep)
8. Brandão, J*, L.L. Rausch, J. Collins, L. Naughton, **H.K. Gibbs**. Slave labor in Brazil's cattle production and exports. (in prep)
9. Mittleberg, T*, M. Skidmore, **H.K. Gibbs**. Data transparency in Brazil directly influence compliance with supply chain policies. (in prep for Science)
10. Schelly, I. Schelly, I.; Brandao Jr*, A.; Munger, J.; Rausch, L.L., **Gibbs, H.K.** Large properties responsible for most deforestation in Brazil's Legal Amazon.
11. Levy, S.A.,** F. Cammelli, J. Munger, **H. K. Gibbs**, R. D. Garrett. Deforestation in the Brazilian Amazon could be halved with high market share and strong implementation of zero-deforestation commitments. In review, *Global Environmental Change*

12. Moffette F., Phaneuf D., Rausch L. and **Gibbs H.K.** "Environmental Policy and the Value of Property Rights in the Brazilian Amazon: Evidence from a New Database on Land Sales.
13. Vale, R., P. Vale, L. Rausch, J. Munger, and **H.K. Gibbs.** Expansion and market concentration of Brazil's beef industry, 1966-2017 (RSRS-2020-0100) In review, *Regional Studies, Regional Science.*

Commissioned review papers, technical reports, book chapters, and others

1. Sullivan, C*., L.L. Rausch, A. Camacho Rojas, J.S. Castellanos, M.A. Vianchá and H.K. Gibbs. 2021. "Zero deforestation palm oil in Colombia." Gibbs Land Use and Environment Report Series.
2. Schelly, I., L. Rausch, and **H.K. Gibbs.** 2021. The role of Brazil's cattle sector in the 2020 fire season. *Gibbs Land Use and Environment Report Series*
3. Rausch, L., J. Munger, and **H. K. Gibbs.** 2020. "Amazon deforestation linked to European imports via specially licensed ranches and their suppliers." *Gibbs Land Use and Environment Report Series.*
4. Rausch, L., J. Munger, I. Schelly, and **H. K. Gibbs.** 2020. "The role of Brazil's cattle sector in the 2019 fire season." *Gibbs Land Use and Environment Report Series.* [[Link](#)]
5. Rausch, L., Bennett, A., C. Sullivan*, and **H. K. Gibbs.** 2020. "[Pathways to zero deforestation: oil palm in Peru.](#)" Gibbs Land Use and Environment Report Series
6. National Wildlife Federation and **Gibbs Land Use and Environment Lab.** 2019. "Amazon Soy Moratorium: Delivering Win-Win Outcomes for Forests and Agribusiness." *Policy brief.* [[Link](#)]
7. Sullivan, C.C**., H. K. Gibbs and L.L. Rausch. 2019. "Towards Zero Deforestation Cattle in Colombia." *Policy brief.* [[Link](#)]
8. Rausch, L.L., I. Schelly, S. Hall, and **H. K. Gibbs,** 2018. "Conversion-free soy agreements: Potential impacts on farms in the Cerrado." *Graphical policy brief.* [[Link](#)]
9. Gibbs, B.C., and H.K. Gibbs. 2016. Readyng students for the conflagration. Op-Ed posted on Rethinking Schools blog.
10. Barreto, P. and **H. K. Gibbs.** 2015. "Imazon Research Brief: How to improve the effectiveness of agreements against deforestation associated with ranching in the Amazon?" *Imazon, Belem Brazil and University of Wisconsin-Madison.*
11. Turner, W. R., K. Brandon, T. M. Brooks, C. Gascon, **H. K. Gibbs,** K. S. Lawrence, R. A. Mittermeier, and E. R. Salig. 2012. The potential, realized, and essential ecosystem service benefits of biodiversity conservation. Conservation and Poverty Book. Wiley-Blackwell.

12. **Gibbs, H. K.** J. Sheehan, R. Nelson. 2010. Land Cover Types Subgroup Report on Indirect Land Use Change to the California Air Resources Board. Sacramento, CA.
13. Yeh, S., **H. K. Gibbs**, J. Sheehan, R. Nelson. 2010. Carbon Stocks Subgroup Report on Indirect Land Use Change to the California Air Resources Board. Sacramento, CA.
14. DeFries, R.S. and **H.K. Gibbs**. 2010. Scientific and Technical Considerations for the Amazon Forest Carbon Partnership. A paper commissioned by Columbia University.
15. West, P.C., **H. K. Gibbs**, C. Monfreda, J. Wagner, C. Barford, S. R. Carpenter, and J. Foley. 2011. Reply to Vermeulen and Wollenberg: Distinguishing food security and crop yields (Letter). Proceedings of the National Academy of Sciences 108 (9) E31; doi:10.1073/pnas.1019348108
16. Brodie, J.F., and **H.K. Gibbs**. 2009. Bushmeat hunting as climate threat (commentary). Science 326: 364-365.
17. **Gibbs, H. K.** 2009. Mapping the World's Degraded Land: A Synthesis of Databases and Methodologies. A background paper commissioned by The Nature Conservancy.
18. Miles, L., Kapos, V., **H. K. Gibbs**, Lysenko, I., Campbell, A. 2008. Mapping Vulnerability of Tropical Forest to Conversion and Resulting Potential CO₂ Emissions: A Rapid Assessment for the Eliasch Review. UNEP World Conservation Monitoring Centre.
19. Campbell A., Kapos V., Lysenko I., Scharlemann J.P.W., Dickson B., **H. K. Gibbs**, Hansen M., Miles L. 2008. Carbon emissions from forest loss in protected areas. UNEP World Conservation Monitoring Centre. A report commissioned by The Nature Conservancy as part of the PACT 2020 Innovation Initiative in collaboration with UNEP-WCMC and the IUCN World Commission on Protected Areas.
20. Campbell, A., Miles. L., Lysenko, I., Hughes, A., **H.K. Gibbs**. 2008. Carbon storage in protected areas: Technical report. UNEP World Conservation Monitoring Centre.
21. **Gibbs, H.K.** 2007. Estimating National Level Tropical Forest Carbon Stocks and Emissions. Commissioned Paper for the Coalition for Rainforest Nations (CFRN) in support of the UNFCCC Agenda Item #6, Reducing Emissions from Deforestation and Degradation (REDD).
22. Olander, L. P., B. C. Murray, **H. K. Gibbs**, M. Steininger. 2007. Establishing Credible National Baselines for Efforts to Reduce Emissions from Degradation and Deforestation. Commissioned Paper for the CFRN in support of the UNFCCC Agenda Item #6, REDD.
23. Foley, J.A., Ramankutty, N., Leff, B. and **H. K. Gibbs**. 2007. Global land use changes. In: M.D. King, C.L. Parkinson, K.C. Partington and R.G. Williams (Editors), *Our changing planet: The view from space*. Cambridge University Press, NY, pp. 262-265.

Peer-reviewed data publications (student and post-doc authors underlined)

1. Spawn, S.A.*, **HK Gibbs**. 2020. Global Aboveground and Belowground Biomass Carbon Density Maps for the Year 2020. ORNL DAAC and Google Earth.
2. Ruesch, A.S.* and **H. K. Gibbs**. 2008. New global biomass carbon map for the year 2000 based on IPCC Tier-1 Methodology. ORNL-CDIAC.
3. **Gibbs, H. K.** and S. Brown. 2007. Carbon pools in the forests of tropical Africa: An updated database using the GLC2000 Land Cover Product. NDP-017b. ORNL-CDIAC.
4. **Gibbs, H. K.** and S. Brown. 2007. Carbon pools in the forests of tropical Southeast Asia: An updated database using the GLC2000 Land Cover Product. NDP-017b. ORNL-CDIAC.
5. **Gibbs, H. K.** 2006. Major World Ecosystem Complexes Ranked by Carbon in Live Vegetation: An Updated Database Using the GLC2000 Land Cover Product. NDP-017b. ORNL-CDIAC.
6. **Gibbs, H. K.**, R. L. Graham, and R. B. Cook. 2002. The Oak Ridge Reservation Geographic Information System: Potential for Bioenergy Development. Available on-line [<http://mercury.ornl.gov/EDORA/>] from the Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, U.S.A.

SELECTED PRESENTATIONS (excluding presentations to NGOs / policymakers)

1. Slave Labor in Brazil's Cattle Supply Chains, NORC, Chicago, IL. Feb 2, 2022. (*Invited*)
2. IOP Publishing Environmental Research "5 milestone papers from the last 15 years". Nov. 2021. (*Invited*)
3. Deforestation-free beef production in the Brazilian Amazon. Co-organized Meridian Institute's Supply Chain Sustainability Learning and Action Symposium, June 12, 2020. (*organizer*)
4. Encouraging deforestation-free beef production in Brazil: *Are we targeting the right factors?* Co-organized and led Meridian Institute's Supply Chain Sustainability Research Symposium Deep Dive Session on Beef in Brazil, June 24, 2020. (*organizer*)
5. "Greening the pastures: Can New Zealand's experience with agricultural intensification guide Brazil's pathway?" University of Hawai'i at Mānoa, July 12, 2019.
6. "Greening the pastures: Can New Zealand's experience with agricultural intensification guide Brazil's pathway?" Victoria University of Wellington, New Zealand. May 26, 2019.
7. Data science to assess land use in New Zealand. New Zealand's Ministry of the Environment, June 23, 2019. (*Invited*)

8. Brazil's zero-deforestation commitments. Motu (economic research Institute in New Zealand). Wellington, New Zealand. September 9, 2019. *(Invited)*
9. Can Corporate Zero-Deforestation Promises Save the Rainforests? Fonterra (New Zealand's largest dairy company). Wellington, New Zealand. June 5, 2019.
10. Mapping deforestation outcomes from private sector leadership in the Brazilian Amazon. August 2, 2016. Outrider Foundation. Madison, WI. *(Invited)*
11. Outcome assessment of public and private zero-deforestation policies. Collaboration for Forests and Agriculture Transparency Strategy Meeting, Brasilia, Brazil. July 7, 2016. *(Invited)*
12. Quantifying outcomes from Brazil's supply chain initiatives. Measuring Progress and Outcomes of Market-Based Approaches to Conservation. Meridian Institute. Washington D.C. Dec 12-14, 2016 *(Invited)*
13. Avoided deforestation from zero-deforestation commitments in the Brazilian Amazon. Workshop on "Improving Conservation Outcomes From Supply-Chain Interventions". Moore Foundation April 22, 2016. *(Co-Organizer with Eric Lambin)*
14. Key Policy Trends Influence Soy Expansion in the Brazilian Amazon. The Soy Traders Meeting. Preparing for Anticipated Challenges of Soy Expansion, Deforestation, & Policy Developments in Latin America. Miami, Florida *(Invited)*
15. Zero-Deforestation Agreements are Transforming Cattle Supply Chains in the Brazilian Amazon. In Sustainable supply chains: Interventions and Governance. Association of American Geographers Annual Meeting, April 23, 2015. *(Organizer)*
16. The Promise and Peril of Supply Chain Governance in the Brazilian Amazon. The 9th Annual Nelson Institute Earth Day Conference, Madison, WI. April 20, 2015. *(Invited)*
17. Measuring the Effectiveness of the Zero-Deforestation Agreements. Conference on Brazil's Model of Sustainable Low Carbon Development. Brown University, April 17-18, 2015. *(Invited)*
18. Did Ranchers and Slaughterhouses Respond to Zero-Deforestation Agreements in the Brazilian Amazon? Presentation to the Brazilian and Global Roundtables for Sustainable Beef (GTPS-GRSB) Joint Working Group for Forests, March 3, 2015. *(Invited)*
19. McDonalds' Future in the Amazon? McDonalds Corporate Leadership Teams for Animal Welfare, Environmental Sustainability, and Global Purchasing. Daylong meeting. March 18, 2015. Chicago, IL.
20. Soy Moratorium Summary. Danone Sustainability Team, Webinar. Feb. 26, 2015.
21. Sustainable Supply Chains in the Brazilian Amazon. World Resources Institute Global Forest Watch Team. Webinar. Feb. 11, 2015.

22. Zero-Deforestation Agreements in the Brazilian Amazon. Global Conference for Sustainable Beef, Sao Paulo, Brazil. Nov 5, 2014. *(Invited)*
23. Meatpacker and Rancher Response to MPF-TAC Cattle Agreement, High-level Policymakers Workshop, Brasilia, Brazil. Dec 10 2014. *(Invited)*
24. Zero-Deforestation Agreements in the Brazilian Amazon. Climate, People, and the Environment Seminar at the Center for Climatic Research (CCR), University of Wisconsin-Madison, Oct 17, 2014. *(Invited)*
25. Ending the Soy Moratorium will Mean More Deforestation. Soy Moratorium Working Group meeting (60 attendees). Sao Paulo, Brazil. September 30, 2014. *(Invited)*
26. Achievements of Zero-Deforestation Agreements in Brazil. Greenpeace and National Wildlife Federation Leadership Teams, July 25, 2014. Washington, D.C.
27. Leveraging Globalization for Forest Conservation in the Brazilian Amazon. Global Land Project Annual Meeting. Berlin, Germany, March 20, 2014. *(Invited)*
28. Influence of Zero-Deforestation Agreements on Brazilian Cattle Ranchers and Meatpackers, Global Land Project Annual Meeting. Berlin, Germany, March 20, 2014. *(Invited)*
29. Meatpacker and Rancher Response to MPF-TAC Cattle Agreement, High-level Policymakers Workshop, Brasilia, Brazil. Dec 5 2013. *(Invited)*
30. Harnessing global market demand for forest conservation in the Brazilian Amazon. University of Wisconsin-Washington County Community Lecture Series, Oct 8 2013 *(Invited)*
31. Effectiveness of Zero-Deforestation Agreements in the Brazilian Amazon. Wisconsin Ecology Symposium. Oct 2, 2013 *(Invited)*
32. Methodology for cattle rancher audits in the Brazilian Amazon. Presentation to the Brazilian and Global Roundtables for Sustainable Beef (GTPS-GRSB) Joint Working Group for Forests, March 5, 2013. *(Invited)*
33. Effectiveness of Zero-Deforestation Agreements in the Brazilian Amazon. Yi Fu Tuan Lecture, Oct 26, 2012, University of Wisconsin-Madison.
34. Impacts of Zero-Deforestation Agreements on Brazil's Cattle and Soy Sectors. Department of Forest and Wildlife Ecology Seminar Series, Oct 19, 2012, University of Wisconsin-Madison *(Invited)*
35. Supporting Voluntary Agreements for a Zero-Deforestation Cattle Sector. The Global Roundtable for Sustainable Beef Meeting, Oct 1-3, 2012, Venus, Florida *(Invited)*
36. The Land Use Bottleneck for Bioenergy Policy. Wisconsin International Law Journal Symposium, March 23, 2012, University of Wisconsin-Madison *(Invited)*

37. Effectiveness of Zero-Deforestation Agreements in the Brazilian Amazon. Feeding 9 billion: The Future of Large-Scale Agriculture in Brazil, March 8-9 2012, Brown University, Rhode Island. (*Invited*)
38. Effectiveness of Demand-Side Efforts to Reduce Deforestation. Annual meeting for the Association for American Geographers (AAG), Feb 27, 2012, NYC, NY. (*Invited*)
39. An Uneasy Oil Palm Expansion Pathway. The Franqui Foundation's Global Land Reserve Meeting. Oct 29, 2011, Rome, Italy. (*Organizer*)
40. The Global Land Reserve: Myth or More than We Need? The Franqui Foundations' Global Land Reserve Meeting. Oct 26, 2011, Rome, Italy. (*Organizer*)
41. Forging a Path for Roundtables in REDD. The Role of Commodity Roundtables & Avoided Forest Conversion in Subnational REDD+ . Sep 9, 2011. University of San Diego, CA (*Invited*)
42. Biomass and Soil Carbon Stock Estimates for Indirect Land Use Change Modeling. Sep 8, 2011. California Air Resources Board Public Hearing. Sacramento, CA (*Invited*)
43. Biofuels Carbon Debt and Finding a Way Forward. Environmental and Biogeochemistry Seminar Series. Nov 15, 2010. Stanford University (*Invited*)
44. Biofueling Forest Transition or Destruction? Global Land Project Meeting. Oct 17, 2010, Tempe, AZ.
45. Challenges of Estimating Land Conversion for ILUC. Several presentations to the expert workgroup for the California Air Resources Board. Sept 10, Oct 15 2010, Sacramento, CA. (*Invited*)
46. Developing the AFCP Platinum Carbon Standard: Biomass measurements issues and tools. Presentation to the Amazon Forest Carbon Partnership environmental trust funds and experts. March 26, 2009, Stanford University, Stanford CA. (*Organizer*)
47. Agricultural Expansion Pathways Across the Tropics: Implications for Carbon Payback Time. Coordinating Research Council of petroleum and automotive manufacturers and engineers, October 21, 2009, Argonne National Laboratory, Chicago, IL (*Invited*)
48. Estimating Carbon Stocks and Emissions for Avoided Deforestation Project. Meeting of Environmental Trust Funds from Amazonian Countries, July 14, 2009, NYC, NY (*Invited*)
49. Mapping the World's Degraded Lands. Degraded Lands Workshop, May 13, 2009, Stanford University, Stanford, CA (*Invited*)
50. The Biofuels Boom: Ripple Effects on Tropical Forests and Global Climate. The Field Museum of Natural History, February 11, 2009, Chicago, IL (*Invited*)

51. Mapping Land Sources for Expanding Biofuel Croplands Across the Tropics. American Association for the Advancement of Science Annual Meeting, February 14, 2009, Chicago IL. (*Session Organizer*)
52. The Biofuels Boom: Promise or Peril for Food, Forests and Climate? National Academies of Science Kavli Frontiers of Science Symposium, November 7, 2008, Irvine, CA (*Invited*)
53. Carbon Payback Times for Tropical Biofuel Expansion. The Kathryn Fuller Science for Nature Fund 2008 Science for Nature Symposium: Biofuels – Which are More Sustainable?, November 19, 2008, World Wildlife Fund, Washington D.C. (*Invited*)
54. The Changing Fate of Cleared Land Across the Tropics: Critical New Inputs for Ecosystem Service Evaluation. Land Tenure Center Symposium on Pro-Poor Rewards for Ecosystem Services, April 7-8, University of Wisconsin-Madison. (*Invited*)
55. Navigating the Biofuels Debate. Union of Concerned Scientists Lunchtime Seminar. March 13, 2008, Washington D.C. (*Invited*)
56. Tropical Ecosystems and the Biofuels Boom: Navigating a Sustainable Path Forward? Conference on the Ecological Dimensions of Biofuels. March 10, 2008, Washington D.C.
57. New National-Level Estimates of Tropical Forest Carbon Stocks. United Nations Framework Convention on Climate Change COP-13, Forest Day. December 8, 2007, Bali, Indonesia.
58. Biofuel Expansion in the Tropics May Increase Global Warming. United Nations Framework Convention on Climate Change COP-13, Forest Day. December 8, 2007, Bali, Indonesia.
59. Sustainable pathways of biofuel crop expansion in the Tropics? Large-Scale Biosphere-Atmosphere ECO Meeting, September 26-29, 2007. Bahia, Brazil.
60. Shifting Patterns of Tropical Land Use and Their Implications for Carbon Emissions. Stockholm Resilience Series: Frontiers in Sustainability Science and Policy. Stockholm, Sweden. June 4, 2007. (*Invited*)
61. Estimating Tropical Forest Carbon Stocks. Coalition for Rainforest Nations Science, Technology, and Methods Workshop. Columbia University Business School, NY. January 22-23, 2007. (*Invited*)
62. Tracking the fate of cleared land across the Tropics: Critical New Inputs for Ecosystem Service Evaluation. Large-Scale Biosphere-Atmosphere ECO Meeting, October 4-6, 2006. Brasilia, Brazil.
63. Estimating National Level Tropical Forest Carbon Stocks and Emissions. Pre-Session for the UNFCCC Workshop on COP11 Agenda Item #6 organized by the Coalition for Rainforest Nations Rome, Italy. August 28-29, 2006. (*Invited*)

64. Tracking the Fate of Cleared Land Across Africa: Critical New Inputs for Ecosystem Service Evaluation. *Plenary Session* of Conservation International's Annual Symposium, *Defying Nature's End: The African Context*. Antannarivo, Madagascar. June 20-24, 2006. **(Invited)**
65. Tracking the Fate of Cleared Land Across the Tropics: Critical New Inputs for Ecosystem Service Evaluation. Conservation International's Center for Applied Biodiversity Brownbag, Washington, D.C. May 24, 2006. **(Invited)**
66. Estimating Tropical Deforestation and Carbon Emissions: What We Need, What We Have, and How to Make Ends Meet. Coalition for Rainforest Nation's Policy Workshop on the UNFCCC COP-11 Agenda Item #6. Columbia University, NY. 13-14 March, 2006. **(Invited)**
67. An Improved Spatial Data Set of Tropical Deforestation Rates for the 1980s and 1990s. The American Geophysical Union Fall Meeting. San Francisco, CA. 5-9 December, 2005.
68. Estimating tropical land cover change dynamics for the 1980s and 1990s. The 6th Open Meeting of the Human Dimensions of the Global Environmental Change Research Community, Bonn, Germany. October 9-13.
69. Tracking the fate of deforested land in Central America. NASA Marshall Space Flight Center, Huntsville, AL. 24-25 August 2005. **(Invited)**
70. Addressing Major Uncertainties in Rates of Tropical Deforestation. Department of Energy Global Change Education Program End of the Summer Meeting, Washington, D.C. 22-24 August 2005.
71. Reducing Uncertainty in Rates of Tropical Deforestation and Associated Carbon Emissions. International Earth System Science Network Meeting. Breckenridge CO. 23-25, June 2005.
72. Challenges in Estimating Global Tropical Deforestation in the 1980s and 1990s. Oral Presentation. The American Geophysical Union Fall Meeting. 13-17 December, 2004.
73. Challenges in Estimating Tropical Deforestation in the 1980s and 1990s. LUCC Workshop on Impacts of changes in land use and management on carbon stocks and turnover in the tropics. Institute of Geography, University of Copenhagen, Denmark. 23-25 August, 2004