

# JAMES W. HANSEN

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## EDUCATION

Ph.D. in Agricultural and Biological Engineering, University of Florida, 1996. Dissertation title: “[A Systems Approach to Characterizing Farm Sustainability](#).” Minor in Food and Resource Economics.

M.S. in Agronomy and Soil Science, University of Hawaii, Manoa, 1989. Thesis title: “Influence of Decomposing Organic Material on Aluminum Chemistry and Phytotoxicity.”

B.S. in General Tropical Agriculture, University of Hawaii, Manoa, 1985.

## PROFESSIONAL EXPERIENCE

|                 |  |
|-----------------|--|
| 2014-present    | Senior Research Scientist, International Research Institute for Climate & Society  |
| 2010-2019       | Flagship Leader: <i>Climate Services and Safety Nets</i> , CGIAR research program on Climate Change, Agriculture and Food Security (CAAFS) |
| 2004-2014       | Research Scientist, International Research Institute for Climate & Society   |
| 2002-2010       | Joint Editor-In-Chief, <i>Agricultural Systems</i>   |
| 1999-2004       | Associate Research Scientist, International Research Institute for Climate & Society   |
| 1999            | Assistant Scientist, Agricultural and Biological Engineering, University of Florida  |
| 1997-1998       | Visiting Assistant, Agricultural and Biological Engineering, University of Florida   |
| 1996-1997       | Post-doctoral Associate, Agricultural and Biological Engineering, Univ. of Florida   |
| 1988-89 & 90-91 | Research Associate, Agronomy and Soil Science, University of Hawaii  |
| 1989-1990       | Agriculturalist, Mindanao Baptist Rural Life Center, Davao del Sur, Philippines  |

## OTHER PROFESSIONAL CONTRIBUTIONS

Highly Cited Researcher Award 2020 (Web of Science).

Member of the Leadership Group that developed the successful proposal for a CGIAR Global Challenge Program on *Climate Change, Agriculture and Food Security (CAAFS)*, 2007-2008.

Delegate representing the Scientific and Technological Communities Major Group at the 16th and 17th sessions of the *UN Commission on Sustainable Development*, 2008-2009.

Member of the International Review Team for Australia’s *Managing Climate Variability R&D Program*, 2006.

Member of the Steering Group for the international *Climate Prediction and Agriculture (CLIMAG)* program of the Earth System Science Partnership (ESSP), 2001-2005.

*Agricultural Systems* Editorial Review Board member (2010-2019).

*Climate Risk Management* Editorial Review Board member (2012-present).

Journal reviewer: *African Journal of Agricultural Research; African Journal of Plant Science; Agricultural Systems; Agriculture, Ecosystems and Environment; Agronomy Journal; Atmosphere-Ocean; Biosystems Engineering; Climate and Development; Climate Research; Climate Risk Management; Climatic Change; Current Opinion in Environmental Sustainability; Ecological Applications; Ecological Modeling; Environmental Management; Environmental Science and Policy; Eos; Field Crops Research; Frontiers in Ecology and the Environment; Global Environmental Change; International Journal of Climatology; International Journal of Disaster Risk Reduction; Journal of Applied Meteorology and Climatology; Journal of Arid Environments; Journal of Climate; Journal of Geophysical Research – Atmospheres; Journal of Soil and Water Conservation; Journal of the American Water Resources Association; Journal of Water Resources Planning and Management; Nature Communications; Philippine Journal of Development; Science; Transactions of the American Society of Agricultural and Biological Engineers; Weather, Climate and Society; World Development.*

## REFEREED PUBLICATIONS

Tesfaye, A., **Hansen, J.**, Radeny, M., Belay, S., Solomon, D., 2019. Actor roles and networks in agricultural climate services in Ethiopia: a social network analysis. *Climate and Development*. DOI: 10.1080/17565529.2019.1691485

**Hansen, J.**, Furlow, J., Goddard, L., Nissan, H., Vaughan, C., Rose, A., Fiondella, F., Braun, M., Steynor, A., Jack, C., Chinowsky, P., Thomson, M., Baethgen, W., Dinku, T., Senato, A., Phuong, D., Huq, S., Ndiaye, O., 2019. Scaling Climate Services to Enable Effective Adaptation Action. Global Commission on Adaptation, Rotterdam and Washington, DC. (Referred report. Available at: <https://cdn.gca.org/assets/2019-09/ScalingClimateServices.pdf>)

Gumucio, T., **Hansen, J.**, Huyer, S., Van Huysen, T., 2020. Gender responsive rural climate services: a review of the literature. *Climate and Development* 12:3,241-254. DOI: 10.1080/17565529.2019.1613216

Tesfaye, A., Solomon, D., Kassie, G., **Hansen, J.**, Radeny, M., 2019. Estimating the economic value of climate services for strengthening resilience of smallholder farmers to climate risks in Ethiopia: A choice experiment approach. *Ecological Economics*. DOI: 10.1016/j.ecolecon.2019.04.019

Vaughan, C., **Hansen, J.**, Roudier, P., Watkiss, P., Carr, E., 2019. Evaluating agricultural weather and climate services in Africa: Evidence, methodology, and a “learning agenda.” *WIREs Climate Change* 10(4):e586. DOI: 10.1002/wcc.586

**Hansen, J.**, Vaughan, C., Dinku, T., Kagabo, D.M., Carr, E., Korner, J., Zougmore, R. 2019. Climate services can support African farmers’ context-specific adaptation needs at scale. *Frontiers in Sustainable Food Systems*. DOI: 10.3389/fsufs.2019.00021

Carr, E., Goble, R., Rosko, H. M., Vaughan, C., **Hansen, J.**, 2019. Identifying climate information services users and their needs in sub-Saharan Africa: A learning agenda. *Climate and Development*. DOI: 10.1080/17565529.2019.1596061

Loboguerrero, A.M., Campbell, B.M., Cooper, P.J.M., **Hansen, J.W.**, Rosenstock, T., Wollenberg, E., 2019. Food and earth systems: Priorities for climate change adaptation and mitigation for small and family farms. *Sustainability* 11:1372. DOI: 10.3390/su11051372

Shelia, V., **Hansen, J.**, Sharda, V., Porter, C., Aggarwal, P., Wilkerson, C., Hoogenboom, G. A., 2019. Multi-scale and Multi-model Gridded Framework for Forecasting Crop Production, Risk Analysis, and Climate Change Impact Studies. *Environmental Modeling and Software*. DOI: 10.1016/j.envsoft.2019.02.006

- Hansen, J.W.**, Kagabo, D.M., Nsengiyumva, G., 2018. Can rural climate services meet context-specific needs, and still be scalable? Experience from Rwanda. Pp. 52-57 in: Petrik, D., Ashburner, L. (Ed), Conference Proceedings of Adaptation Futures 2018. Adaptation Futures 2018. University of Cape Town, Cape Town. DOI: 10.15641/0-7992-2543-3 (Refeed conference proceedings. Available at: <https://openbooks.uct.ac.za/AF18/index.php/publications/catalog/book/3>)
- Campbell, B.M., **Hansen, J.**, Rioux, J., Stirling, C.M., Twomlow, S., Wollenberg, E., 2018. Urgent action to combat climate change and its impacts (SDG 13): Transforming agriculture and food systems. *Current Opinion in Environmental Sustainability* 34:13-20. DOI: 10.1016/j.cosust.2018.06.005
- Hansen, J.**, Hellin, J., Rosenstock, T., Fisher, E., Cairns, J., Stirling, C., Lamanna, C. van Etten, J., Rose, A., Campbell, B., 2018. Climate Risk Management and Rural Poverty Reduction. *Agricultural Systems* 172: 28-46. DOI: 10.1016/j.agsy.2018.01.019
- Aggarwal, P.K., Jarvis, A., Campbell, B., Zougmore, R.B., Khatri-Chhetri, A., Vermeulen, S.J., Loboguerrero, A.M. Sebastian, L.S., Kinyangi, J., Bonilla-Findji, O., Radeny, M., Recha, J., Martinez-Baron, D., Ramirez-Villegas, J., Huyer, S., Thornton, P., Wollenburg, L., **Hansen, J.**, Alvarez-Toro, P., Aguilar-Ariza, A., Arango-Londoño, D., Patiño-Bravo, V., Rivera, O., Ouedraogo, M., Yen, B.T., 2018. The Climate-Smart Village Approach: Framework of an Integrative Strategy for Scaling Up Adaptation Options in Agriculture. *Ecology and Society* 23(1):14. DOI: 10.5751/ES-09844-230114
- Dinku, T., Thomson, M.C., Cousin, R., del Corral, J., Ceccato, P., **Hansen, J.**, Connor, S.J., 2017. Enhancing National Climate Services (ENACTS) for Development in Africa. *Climate and Development* 10(7):664-672. DOI: 10.1080/17565529.2017.1405784
- Loboguerrero Rodriguez, A.M., **Hansen, J.**, Baethgen, W.E., Martinez Baron, D., 2017. Climate services and insurance: scaling climate smart agriculture. *Agriculture for Development* 30:31-34.
- Greatrex, H., **Hansen, J.W.**, Garvin, S., Diro, R., Blakeley, S., Le Guen, M., Rao, K.N., Osgood, D.E., 2015. Scaling up index insurance for smallholder farmers: Recent evidence and insights. CCAFS Report No. 14. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. (Refereed report. Available at: [www.ccafs.cgiar.org](http://www.ccafs.cgiar.org))
- Mishra, A., Ines, A., Das, N., Khedun, P., Singh, V., Sivakumar, B., **Hansen, J.W.**, 2014. Anatomy of a local-scale drought: Application of assimilated remote sensing products, crop model, and statistical methods to an agricultural drought study. *Journal of Hydrology* 526:15-29. DOI:10.1016/j.jhydrol.2014.10.038
- Zebiak, S.E., Orlove, B., Vaughan, C., Muñoz, A.G., **Hansen, J.W.**, Troy, T., Thomson, M., Lustig, A., Garvin, S., 2014. Investigating El Niño-Southern Oscillation and society relationships. *Wiley Interdisciplinary Reviews: Climate Change* 6(1):17-34. DOI: 10.1002/wcc.294
- Hansen, J.W.**, Zebiak, S., Coffey, K., 2014. Shaping global agendas on climate risk management and climate services: an IRI perspective. *Earth Perspectives* 2014, 1:13. DOI: 10.1186/2194-6434-1-13
- Cooper, P.J.M., Vermeulen, S., **Hansen, J.**, Thornton, P., Ramirez-Villegas, J., Rippke, U., Parker, L., Jones, E., Campbell, B. and Zougmore, R., 2014. Smallholder Agriculture and Climate Variability and Change in Sub-Saharan Africa: Looking Forward to 2050. Chapter 1 in: *Africa Agricultural Status Report: Climate Change and Smallholder Agriculture In Sub-Saharan Africa*. Alliance for a Green Revolution in Africa (AGRA), Nairobi. (Refereed chapter)
- Tall, A., **Hansen, J.**, Jay, A., Campbell, B., Kinyangi, J., Aggarwal, P.K. Zougmore, R., 2014. Scaling up climate services for farmers: Mission Possible. Learning from good practice in Africa and South Asia. CCAFS Report No. 13. Copenhagen: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). (Refereed report. Available at: [www.ccafs.cgiar.org](http://www.ccafs.cgiar.org)).

- Ines, A.V.M., Das, N.N., **Hansen, J.W.**, Njoku, E.G., 2013. Assimilation of remotely sensed soil moisture and vegetation with a crop simulation model for maize yield prediction. *Remote Sensing of Environment* 138:149-164.
- Mishra, A.K., Ines, A.V.M., Singh, V.P., **Hansen, J.W.**, 2013. Extraction of information content from stochastic disaggregation and bias corrected downscaled precipitation variables for crop simulation. *Stochastic Environmental Research and Risk Assessment* 27:449-457. DOI: 10.1007/s00477-012-0667-9
- Vermeulen, S.J., Aggarwal, P.K., Ainslie, A., Angelone, C., Campbell, B.M., Challinor, A.J., **Hansen, J.W.**, Ingram, J.S.I., Jarvis, A., Kristjanson, P., Lau, C., Nelson, G.C., Thornton, P.K., Wollenberg, E., 2012. Options for support to agriculture and food security under climate change. *Environmental Science and Policy* 15:136-144. DOI: 10.1016/j.envsci.2011.09.003
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- Jarvis, A., Lau, C., Cook, S., Wollenberg, E., **Hansen, J.**, Bonilla, O., Challinor, A., 2011. An integrated adaptation and mitigation framework for developing agricultural research: synergies and trade-offs. *Experimental Agriculture* 47:185-203. DOI: 10.1017/S0014479711000123
- Hansen, J.W.**, Mason, S., Sun, L., Tall, A., 2011. Review of seasonal climate forecasting for agriculture in sub-Saharan Africa. *Experimental Agriculture* 47:205-240. DOI: 10.1017/S0014479710000876
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- Ines, A.V.M., **Hansen, J.W.**, Robertson, A.W., 2010. Enhancing the utility of daily GCM rainfall for crop yield prediction. *International Journal of Climatology*. 31:2168-2182. DOI: 10.1002/joc.2223
- Hansen, J.W.**, Mishra, A., Rao, K.P.C., Indeje, M., Ngugi, R.K., 2009. Potential value of GCM-based seasonal rainfall forecasts for maize management in semi-arid Kenya. *Agricultural Systems* 101:80-90. DOI: 10.1016/j.agsy.2009.03.005
- Mishra, A., **Hansen, J.W.**, Dingkuhn, M., Baron, C., Traoré, S.B., Ndiaye, O., Ward, M.N., 2008. Sorghum yield prediction from seasonal rainfall forecasts in Burkina Faso. *Agricultural and Forest Meteorology* 148:1798-1814. DOI: 10.1016/j.agrformet.2008.06.007
- Meza, F.J., **Hansen, J.W.**, Osgood, D., 2008. Economic value of seasonal climate forecasts for agriculture: review of ex-ante assessments and recommendations for future research. *Journal of Applied Meteorology and Climatology* 47:1269-1286. DOI: 10.1175/2007JAMC1540.1
- Baigorría, G.A., **Hansen, J.W.**, Ward, M.N., Jones, J.W., O'Brien, J.J., 2008. Assessing predictability of cotton yields in the southeastern United States based on regional atmospheric circulation and surface temperatures. *Journal of Applied Meteorology and Climatology* 47:76-91. DOI: 10.1175/2007JAMC1523.1

Peiris, T.S.G., **Hansen, J.W.**, Zubair, L., 2008. Use of seasonal rainfall in forecasting annual national coconut production in Sri Lanka: an integrated approach. *International Journal of Climatology* 28:103-110. DOI: 10.1002/joc.1517

**Hansen, J.W.**, Baethgen, W., Osgood, D., Ceccato, P., Ngugi, R.K., 2007. Innovations in climate risk management: protecting and building rural livelihoods in a variable and changing climate. *Journal of Semi-Arid Tropical Agricultural Research* 4(1). (Available at: <http://www.icrisat.org/Journal/specialproject.htm>).

Robertson, A.W., Ines, A.V.M., **Hansen, J.W.**, 2007. Downscaling of seasonal precipitation for crop simulation. *Journal of Applied Meteorology and Climatology* 46:677-693. DOI: 10.1175/JAM2495.1

Ines, A.V.M., **Hansen, J.W.**, 2006. Bias correction of daily GCM rainfall for crop simulation studies. *Agricultural and Forest Meteorology* 138:44-53. DOI: 10.1016/j.agrformet.2006.03.009

**Hansen, J.W.**, Challinor, A., Ines, A.V.M, Wheeler, T., Moron, V., 2006. Translating climate forecasts into agricultural terms: advances and challenges. *Climate Research* 33:27-41.

**Hansen, J.W.**, 2005. Integrating seasonal climate prediction and agricultural models for insights into agricultural practice. *Philosophical Transactions of the Royal Society B* 360:2037-2047. DOI: 10.1098/rstb.2005.1747

**Hansen, J.W.**, Ines, A.V.M., 2005. Stochastic disaggregation of monthly rainfall data for crop simulation studies. *Agricultural and Forest Meteorology* 131:233-246. DOI: 10.1016/j.agrformet.2005.06.006

Selvaraju, R., Meinke, H., **Hansen, J.W.**, 2004. Approaches allowing smallholder farmers in India to benefit from seasonal climate forecasting. In *New Directions for a Diverse Planet: Proceedings for the 4th International Crop Science Congress, Brisbane, Australia, 26 September - 1 October 2004* (ed. T. Fischer, N. Turner, J. Angus, L. McIntyre, M. Robertson, A. Borrell & D. Lloyd). Gosford, Australia: The Regional Institute Ltd. (Available at: <http://www.cropscience.org.au/icsc2004/>) (Refereed proceeding)

**Hansen, J.W.**, 2004. Can smallholder farmers benefit from seasonal climate forecasts? In *New Directions for a Diverse Planet: Proceedings for the 4th International Crop Science Congress, Brisbane, Australia, 26 September - 1 October 2004* (ed. T. Fischer, N. Turner, J. Angus, L. McIntyre, M. Robertson, A. Borrell & D. Lloyd). Gosford, Australia: The Regional Institute Ltd. (Available at: <http://www.cropscience.org.au/icsc2004/>) (Refereed proceeding)

Selvaraju, R., Meinke, H., **Hansen, J.W.**, 2004. Climate information contributes to better water management of irrigated cropping systems in Southern India. In *New Directions for a Diverse Planet: Proceedings for the 4th International Crop Science Congress, Brisbane, Australia, 26 September - 1 October 2004* (ed. T. Fischer, N. Turner, J. Angus, L. McIntyre, M. Robertson, A. Borrell & D. Lloyd). Gosford, Australia: The Regional Institute Ltd. (Available at: <http://www.cropscience.org.au/icsc2004/>) (Refereed proceeding)

**Hansen, J.W.**, Potgieter, A., Tippet, M., 2004. Using a general circulation model to forecast regional wheat yields in Northeast Australia. *Agricultural and Forest Meteorology* 127:77-92. DOI: 10.1016/j.agrformet.2004.07.005

Kumar, K.K., Kumar, R.K., Ashrit, R.G., Deshpande, N.R., **Hansen, J.W.**, 2004. Climate impacts on Indian Agriculture. *International Journal of Climatology* 24:1375-1393. DOI: 10.1002/joc.1081

**Hansen, J.W.**, Indeje, M., 2004. Linking dynamic seasonal climate forecasts with crop simulation for maize yield prediction in semi-arid Kenya. *Agricultural and Forest Meteorology* 125:143-157. DOI: 10.1016/j.agrformet.2004.02.006

- Hansen, J.W.**, 2002. Realizing the potential benefits of climate prediction to agriculture: issues, approaches, challenges. *Agricultural Systems* 74:309-330. DOI: 10.1016/S0308-521X(02)00043-4
- Podestá, G., Letson, D., Messina, C., Royce, F., Ferreyra, Jones, J., Llovet, I., **Hansen, J.**, Grondona, M., O'Brien, J. 2002. Use of ENSO-related climate information in agricultural decision making in Argentina: a pilot experience. *Agricultural Systems* 74:371-392. DOI: 10.1016/S0308-521X(02)00046-X
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- Letson, D., **Hansen, J.W.**, Hildebrand, P.E., Jones, J.W., O'Brien, J.J., Podestá, G., Royce, F., Zierden, D., 2001. Florida's agriculture and climatic variability: reducing vulnerability. *Florida Geographer* 32:38-57.
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- Hansen, J.W.**, Mavromatis, T., 2001. Correcting low-frequency variability bias in stochastic weather generators. *Agricultural and Forest Meteorology* 109:297-310. DOI: 10.1016/S0168-1923(01)00271-4
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- Irmak, A., Jones, J.W., Stanley, C.D., **Hansen, J.W.**, Irmak, S., Boote, J.K., 1999. Some effects of an antitranspirant (Vapor Gard) on tomato growth and yield. *Soil and Crop Science Society of Florida Proceedings* 58:118-122.
- Hansen, J.W.**, Irmak, A., Jones, J.W., 1998. El Niño - Southern Oscillation influences on Florida crop yields. *Soil and Crop Science Society of Florida Proceedings* 57:12-16.
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**Hansen, J.W.**, Jones, J.W., Beinroth, F.H., 1998. Systems-based land use evaluation in the south coast of Puerto Rico. *Applied Engineering in Agriculture* 14:191-200.

**Hansen, J.W.**, Jones, J.W., Knapp, E.B., 1997. Determinants of sustainability of a Colombian hillside farm. *Experimental Agriculture* 33:425-448. DOI: 10.1017/S0014479797004031

**Hansen, J.W.**, Thornton, P.K., Jones, J.W., Jacobson, B.M., 1997. Toward data standards for enterprise and farm level analysis. Pp. 229-245 in: Teng, P.S., Kropff, M.J., Ten Berge, H.F.M., Dent, J.B., Lansigan, F.P., Van Laar, H.H. (Eds.), *Applications of Systems Approaches at the Farm and Regional Level*. Kluwer Academic Publishers, Dordrecht, The Netherlands. (Refereed proceeding)

Jones, J.W., Thornton, P.K., **Hansen, J.W.**, 1997. Opportunities for systems approaches at the farm scale. Pp. 1-29 in: Teng, P.S., Kropff, M.J., Ten Berge, H.F.M., Dent, J.B., Lansigan, F.P., Van Laar, H.H. (Eds.), *Applications of Systems Approaches at the Farm and Regional Level*. Kluwer Academic Publishers, Dordrecht, The Netherlands. (Refereed proceeding)

**Hansen, J.W.**, Jones, J.W., 1996. A systems framework for characterizing farm sustainability. *Agricultural Systems* 51:181-201. DOI: 10.1016/0308-521X(95)00036-5

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Thornton, P.K., **Hansen, J.W.**, Knapp, E.B., Jones, J.W., 1995. Designing optimal crop management strategies. Pp. 333-351 in: Bouma, J., Kuyvenhoven, A., Bouman, B.A.M., Luyten, J.C., and Zandstra, H.G. (Eds.), *Ecoregional Approaches for Sustainable Land Use and Food Production*. Kluwer Academic Publishers, Dordrecht, The Netherlands. (Refereed proceeding)

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Caldwell, R.M., **Hansen, J.W.**, 1993. Simulation of multiple cropping systems with CropSys. Pp. 397-412 in: Penning de Vries, F.W.T., Teng, P., and Metselaar, K. (Eds.), *Systems Approaches for Agricultural Development*, Vol. 2. Kluwer Academic Publishers, Dordrecht, The Netherlands. (Refereed proceeding)

### **SUBMITTED**

Gumucio, T., Huyer, S., **Hansen, J.**, Simelton, E., Partey, S., Chiputwa, B., Schwager, S., Towards gender-responsive monitoring and evaluation of rural climate services. Submitted to *Climate Services*.

Tesfaye, A., Hansen, J., Kagabo, D., Birachi, E., Radeny, M., Solomon, D. Modeling farmers preference and willingness to pay for improved climate services in Rwanda. Submitted to *Journal of Agricultural and Applied Economics*.

### **BOOKS, EDITED VOLUMES**

van Huysen, T., **Hansen, J.**, Tall, A. (Guest editors), 2018. Scaling Up Climate Services for Smallholder Farmers: Learning from Practice. Special issue of *Climate Risk Management* 22(1).

Sivakumar, M.V.K., **Hansen, J.W.** (Editors), 2007. *Climate Prediction and Agriculture: Advances and Challenges*. Springer, New York.

**Hansen, J.W.**, Sivakumar, M.V.K., Bates, B.C. (Guest editors), 2006. *Advances in Applying Climate Prediction in Agriculture*. Special issue of *Climate Research* 33(1)

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IRI, 2000. Proceedings of the International Forum on Climate Prediction, Agriculture and Development. IRI-CW/00/1. International Research Institute for Climate Prediction, Palisades, New York. (Co-Editor)

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## SIGNIFICANT PRESENTATIONS

*Effectiveness, scalability and sustainability of agricultural climate services: Lessons from Rwanda and Ethiopia.* Sixth International Conference on Climate Services, IITM, Pune, India, 12 February 2020. With Tufa Dinku and Desire Kagabo.

*Climate Service Recommendations to the Global Commission on Adaptation.* CCAFS Flagship 4 ICCS6 Side Event, IITM, Pune, India, 10 February 2020.

Kramer B, Hellin J, **Hansen J**, Rose A, Braun M., *Looking beyond loss and damage: Reframing insurance to promote adaptation and resilience.* Poster presented at 5th Global Science Conference on Climate-Smart Agriculture 2019: Transforming Food Systems Under a Changing Climate. Ayana Resort and Spa, Jimbaran, Bali, Indonesia, 7 October 2019. <https://hdl.handle.net/10568/107103>

*Where are We on Flagship 4 Research and Outcome Goals?* CCAFS Flagship 4 Workshop, Ayana Resort and Spa, Jimbaran, Bali, Indonesia, 7 October 2019.

*Finding the Synergies Between Agricultural and Climate Science.* Transforming Rural Livelihoods Through Effective Climate Services, Columbia University, New York, 25 September 2019.

*Achievements in Agricultural Climate Services in Rwanda.* IRI, Palisades, New York, 24 July 2019. With Desire Kagabo and Aimable Gahigi.



*CCAFS lessons for ACToday on work planning and M&E.* IRI, Palisades, New York, 8 February 2019. With Alison Rose.

*Can CIS Serve African Farmers' Context-Specific Needs, At Scale? Evidence, Good Practice, Remaining Gaps.* Adaptation Community Meeting, Washington, DC, 29 November 2018.

*What are Climate Services, and what is needed to make them work for agriculture in Rwanda?* Climate, Food Systems and Nutrition Workshop, Lamont Campus, Palisades, New York, 4-5 October 2018.

*Climate Smart Agriculture within Country Nationally Determined Contributions.* The Global Alliance for Climate-Smart Agriculture (GACSA): Catalyzing Action towards Climate-Smart Agriculture, The Cornell Club, New York City, 27 September 2018

*The CGIAR Learning Platform for Agricultural Insurance.* CCAFS Flagship 4 Webinar, 20 August 2018. With Berber Kramer.

*Climate Risk Management and Rural Poverty Reduction: a review and research implications.* 4th Independent Steering Committee Meeting, Wageningen, The Netherlands, 28-29 August, 2018

*What about climate change projections scares me?* Bill and Melinda Gates Foundation, Agricultural Development Team Portfolio Reviews, Seattle, July 10, 2018.

*Can rural climate services meet context-specific needs, and still be scalable? Experience in Rwanda.* Adaptation Futures, Cape Town, 21 June 2018. With Desire Kagabo.

*From Climate-Sensitive Decisions to Climate Information Needs.* Climate Services for Resilient Development Retreat, IRI, Palisades, New York, 3 April 2018.

*Climate Services for Risk Management in Agriculture.* Climate Services for Resilient Development Retreat, IRI, Palisades, New York, 3 April 2018.

*Making seasonal climate forecasts useful for farmer decision-making: Experiences in Africa.* Climate Services for Resilient Development Retreat, IRI, Palisades, New York, 3 April 2018.

*Climate Services for Risk Management in Agriculture.* Review of Policy, Planning, and Practice in Climate and Agriculture in Order to Identify Needs. Addis Ababa, 13 -15 March 2018.

*Participatory Processes for Supporting Farmers with Climate Services.* Review of Policy, Planning, and Practice in Climate and Agriculture in Order to Identify Needs. Addis Ababa, 13 -15 March 2018.

*Introduction to Rwanda Climate Services for Agriculture Project.* Nutrition-Climate Workshop, Columbia World Project. The Earth Institute, Columbia University, Lamont Campus, 19 February 2018.

*Flagship 4 Perspective on an Innovative and Transformative CCAFS-EA Future Portfolio.* Setting innovative vision for transforming agriculture and food security under climate variability and change. Arusha, 8-9 February 2018.

*Improving availability, access, and use of climate information in East Africa: Challenges, and opportunities.* Setting innovative vision for transforming agriculture and food security under climate variability and change. Arusha, 8-9 February 2018. With Tufa Dinku.

*Roadmap for Evidence-Based Insurance Development for Nigeria's Farmers: Overview and Context.* Federal Ministry of Agriculture and Rural Development (FMARD), Abuja, 20 November 2017.

*Making seasonal climate forecasts useful for farmer decision-making: Experiences in Africa with relevance to Asia.* Participatory and Institutional Approaches to Agricultural Climate Services Development, Dhaka, 17-19 September 2017.

*Weather and Climate Information for Farmers: Lessons from CCAFS Global Experience.* Participatory and Institutional Approaches to Agricultural Climate Services Development, Dhaka, 17-19 September 2017.

*Making Climate Services Work for Smallholder Agriculture: Innovations and Lessons from Across the Developing World.* APEC Climate Symposium, Can Tho, Vietnam, 18-20 August 2017.

*CCAFS Climate Services HelpDesk Contributions and Needs.* Scoping workshop for the development of the GFCS HelpDesk, Offenbach, Germany, 19-20 June 2017.

*Project Overview and Context.* Stakeholder's planning workshop for Rwanda Climate Services for Agriculture, Lemigo Hotel, Kigali, 6-7 March 2017.

*Climate Services for Agriculture, and Overview of the CCAFS Climate Risk Management Flagship in Phase II.* CIAT, Hanoi, 31 March 2017.

*Climate Services for Agricultural Productivity.* ASEAN-CRN Knowledge Exchange Event on Effective Climate Information Services for Agriculture in ASEAN, Cebu, The Philippines, 21-23 March 2017.

*Bridging the Demand and Supply Sides of Climate Services for Agriculture in Rwanda.* Fifth International Climate Services Conference, Cape Town, 28 February 2017.

*Strengthening Evidence on Design and Implementation.* Climate Services Evaluation Methodological Review Workshop, University of Cape Town, 27 February 2017.

*ENACTS User Aspects – thru an Agriculture Lens.* ENACTS Transformation at Scale, Comer Building, Lamont, January 6, 2017.

*Setting the Scene: a Global Perspective on Climate Services.* Webinar: Climate Services for Smallholder Farmers and Pastoralists in Africa, 23 November 2016.

*Agricultural climate insurance to address climate change impacts.* COP22 side event: Collaborations on Agriculture Climate Insurance in South East Asia, COP22, Marrakech, Morocco, 10 November 2016.

*Index-based agricultural insurance for a variable and changing climate.* COP22 side event: Adaptation au changement climatique de l'agriculture au Maghreb et en Afrique. COP22, Marrakech, Morocco, 8 November 2016.

*Climate Services to Enable a Climate-Smart Agriculture Transformation in Rwanda.* Adaptation of African Agriculture: From Science to Action to be held on Sunday, Marrakech, Morocco, 13 November 2016. With Daphrose Gahakwa, Desire Kagabo.

*Climate Risk Management: Practices in CCAFS Regions.* Climate-Smart Village Approach in Nepal: Learnings from global, regional and local knowledge. Kathmandu, 14 September 2016.

*Rationale for the Proposed Maproom Products and Formats.* Presentation of Regional Climate Services for Agriculture Project; Demonstration and Discussion on Agricultural Maprooms, GHACOF44, Kampala, 30 Aug 2016.

*Rwanda Climate Services for Agriculture: Empowering Farmers to Manage Risk and Adapt to a Changing Climate.* Joint launch of ENACTS and Rwanda Climate Services for Agriculture, Kigali, 23 March 2016.

*Innovations in Climate Services for Agriculture and Food Security.* Inter-departmental workshop on Promoting Agricultural Livelihood Resilience: Approaches, Techniques and Technologies, African Development Bank, Abidjan, 8 March 2016.

*CCAFS Climate Risk Management Flagship.* Lecture for M.S. program in Climate Change, Agriculture & Food Security, University of Galway (via videoconference), 25 October 2015.

*CCAFS Strategy for Climate Services*. CCDA-V pre-event on Strengthening Regional Capacity for Climate Services in Africa, Victoria Falls, 27 October 2015.

*CCAFS Flagship 2: Climate Information Services and Climate-Informed Safety Nets*. International Water Management Institute (IWMI) seminar, Colombo, Sri Lanka, 3 September 2015.

*Opportunities to Build Resilient Farming Systems through Rural Climate Services and Climate-Informed Decision-Making*. UNECA workshop on Farming Systems in Africa: Context, Key Issues, Opportunities and Strategic Policy Options, Nairobi, 22-24 July 2015.

*Recent Developments in CCAFS Work on Climate Services*. CCAFS 8th Independent Science Panel Meeting, Nairobi, 8 May 2015. (With Arame Tall)

*Flagship 2 Portfolio: Climate Information Services and Climate-Informed Safety Nets*. Integrated Agricultural Production and Food Security Forecasting System in East Africa (INAPFS) Inception Workshop, Nairobi, 15 April 2015.

*CCAFS Flagship 2 Portfolio Overview*. CASCAID Inception Workshop, Bamako, 10-12 February 2015.

*Climate Services for Smallholder Farmers: CCAFS Strategy*. University of Reading, Reading, UK, 29 January 2015.

*Lessons and Insights from Successful Insurance Initiatives Targeting Smallholder Farmers*. FMARD-CCAFS knowledge-sharing workshop on Evidence-Based Insurance Development for Nigeria's Farmers, London, 27-28 January 2015.

*Climate Services for Smallholder Farmers*. FARMD Webinar, 3 December 2014.

*Under-Exploited Opportunities to Make Rural Livelihoods More Climate Resilient*. International Symposium on Weather and Climate Extremes, Food Security and Biodiversity, George Mason University, Fairfax, Virginia, 20 October 2014.

*Ongoing and Planned CCAFS Initiatives that Support the GFCS*. Meeting on the Implementation Coordination of GFCS, WMO, Geneva, 29 September - 1 October 2014.

*Insurance Mechanisms for Climate Risk Management*. CCAFS Latin America Regional Planning Workshop, CIAT, Cali, Colombia, 18 September 2014.

*Risk management within the Climate Change, Agriculture and Food Security (CCAFS) program of the CGIAR*. CCAFS - World Bank GFDRR Collaboration Meeting, IFPRI, Washington, DC, July 15, 2014.

*Uncertainty, Variability, Risk and Resilience: What Could & Should Household Models Do?* Household Level Modeling in CCAFS, Humid Tropics and Other CRPs. CATIE, Turrialba, Costa Rica, 13-15 May 2014.

*Integrating Climate and Other Information for Agricultural Forecasting*. Managing climate risks to agriculture in Central America: Improving the pull-through of climate science and use of climate data, reanalyses and forecasts to meet user requirements. CATIE, Turrialba, Costa Rica, 28 April - 2 May 2014.

*A CCAFS Perspective on Managing Climate Risks to Agriculture in Central America*. Managing climate risks to agriculture in Central America: Improving the pull-through of climate science and use of climate data, reanalyses and forecasts to meet user requirements. CATIE, Turrialba, Costa Rica, 28 April - 2 May 2014.

*Adaptation through a Resilience Lens: A Flagship 2 Perspective*. CCAFS Science Meeting. San Lorenzo de El Escorial, Spain, 8 April 2014.

*Production Forecasting: Making the Climate – Crop Model Connection.* Integrated Food Security Modeling in Eastern and Southern Africa. Nairobi, Kenya, 10-12 February 2014.

*Challenges and Opportunities for Supporting Smallholder Farmers through Climate Services – At Scale.* Climate Change Group Policy Team Seminar on Climate Services in Agriculture – From Smallholders to Scale. World Bank, Washington, DC, 23 January 2014.

*Climate Information Services: Experiences from CGIAR Research Program on Climate Change, Agriculture and Food Security.* ESA Climate Change, Land and Gender Workshop. Nairobi, Kenya, 17 October 2013.

*Climate and Crop Forecasting Tools within CCAFS.* FAO-WFP-CCAFS joint meeting on Climate, Crop and Food Security Forecasting. FAO, Rome, 9 October 2013.

*Integrating Seasonal Climate Forecasts with Crop Models.* IMCASE Project Inception Workshop, IRRI, Los Banos, Philippines, 3-5 September 2013.

*Climate Information Services: Experiences from CGIAR Research Program on Climate Change, Agriculture and Food Security.* IFAD ESA Climate Change, Land and Gender Workshop, Nairobi, Kenya, 17 October 2013.

*The CCAFS Regional Agricultural Forecasting Toolbox (CRAFT).* Herramientas para la Adaptación y Mitigación del Cambio Climático en la Agricultura en Centroamérica, Panamá, 6-8 August 2013.

*Workshop Process for Presenting Downscaled Seasonal Forecasts as Probability Distributions.* Workshop on Developing a methodology to communicate climate services at scale through intermediaries for farmer communities in Africa and South Asia, Nairobi, Kenya, 12-14 June 2013.

*Climate Change, Agriculture and Food Security (CCAFS) program of the CGIAR.* IRI Review, Columbia University, New York, 24 June 2013. With K. Coffey.

*CCAFS: Building Climate-Resilient Rural Livelihoods with Climate Information and Services.* IMHEN, Hanoi, Vietnam, 8 May 2013.

*The Role of CPT in CRAFT.* Training Workshop on Launch of CRAFT: CCAFS Regional Agricultural Forecasting Toolbox, Delhi, India, 10 May 2013.

*Climate Risk Management and the CGIAR.* Improving Resilience to Climate Impacts in Ethiopia Through Improved Availability, Access and Use of Climate Information: Dialogue With Users, Addis Ababa, Ethiopia, 3 May 2013.

*What do we mean by “mid-level assessment?”* CSP workshop on Defining a Methodology to Evaluate Climate Services, Lamont-Doherty Earth Observatory, Palisades, New York, 11 March 2013.

*Making Climate Information More Relevant to Smallholder Farmers.* Workshop on Scaling Up Climate Services for Farmers in Africa and South Asia, Saly, Senegal, 10 December 2012.

*Emerging Opportunities to Adapt Agriculture and Food Systems to a Variable Climate.* IRRI, Los Banos, Philippines, 13 November 2012.

*CCAFS Strategy for Climate Services.* ICCS2 Development Day, Brussels, Belgium, 4 September 2012.

*A Case Study of Good Practice in Climate Services from India.* ICCS2, Brussels, Belgium, 5 September 2012. With Kalpana Venkatasubramanian.

*Crop Forecasting within the CCAFS Program.* Workshop on Combining crop models and remote sensing for yield prediction: Concepts, applications and challenges for heterogeneous, smallholder environments, JRC, Ispra, Italy, 13 June 2012.

*Modeling Household Climate Resilience: An Evolving Theme 2 Perspective.* Workshop on Farm-household Modeling with a focus on Food security, Climate change adaptation, Risk management and Mitigation: a way forward, Amsterdam, 23-25 April 2012.

*Adapting to Current Climatic Risks: Global Approaches.* Science-Policy Interface on Climate Change, Agriculture and Food Security, Pulchowk, Nepal, 20 April 2012.

*Adapting to Current Weather Variability.* APAARI-CCAFS-WMO workshop on Climate Smart Agriculture in Asia: Research and Development Priorities, Bangkok, Thailand, 12 April 2012.

*Where are the Emerging Opportunities to Adapt Agriculture to a Variable Climate?* ICRISAT, Patancheru, India, 13 April 2012.

*CCAFS Strategy for Crop Forecasting.* CCAFS workshop on Seasonal Weather Forecasts Linked Pre-Harvest Estimates of Crop Production: Methodological Approaches, Colombo, Sri Lanka, 16 April 2012.

*Integrating Seasonal Climate Forecasts into Crop Forecasts.* CCAFS workshop on Seasonal Weather Forecasts Linked Pre-Harvest Estimates of Crop Production: Methodological Approaches, Colombo, Sri Lanka, 17 April 2012.

*Modeling Household Climate Resilience: An Evolving Theme 2 Perspective.* CCAFS workshop on Farm-Household Modeling with a Focus on Food Security, Climate Change Adaptation, Risk Management and Mitigation: A Way Forward, Amsterdam, The Netherlands, 23 April 2012.

*Index Insurance for Managing Climate-Related Agricultural Risk: Toward a Strategic Research Agenda.* I4-CCAFS Workshop on Index Insurance for Managing Climate-Related Agricultural Risk: Toward a Strategic Research Agenda, IFPRI, Washington, DC, October 27-28, 2011.

*Improving Management of Climate Impacts on Food Security: Toward a Strategic Agenda.* CCAFS Workshop on Improving Management of Climate Impacts on Food Security: Toward a Strategic Research Agenda, Nairobi, Kenya, 10 September 2011.

*Seasonal to Inter-Annual Climate Forecasts and their Applications in Agriculture.* International Workshop on Addressing the Livelihood Crisis of Farmers: Weather and Climate Services, Belo Horizonte, Brazil, 13 July 2010.

*The CGIAR Climate Change, Agriculture and Food Security Challenge Program: Adaptation Pathways Based on Managing Current Climate Risk.* Department of Applied Economics and Management, Cornell University, 12 March 2010.

*Designing Climate-Robust Agriculture.* COP-15 side event, Designing a Climate Robust Agriculture, Holland Climate House, Copenhagen, Denmark, 11 December 2009. With Holger Meinke.

*Climate Change and Agriculture: A Crisis of Opportunity?* Beyond Copenhagen: Scientific Perspectives on Adaptation and Sustainability Water, Agriculture & Terrestrial Resources, Delegation of the European Commission, Washington DC, 1 October 2009. Public seminar series co-organized by American Association for the Advancement of Science, EC Delegation and Sweden Embassy.

*Value-Added Climate Information for Food Security Monitoring.* WFP Food Security Monitoring Stakeholder Consultation, Rome, Italy 18-19 June 2009.

*Climate Risk, Information and Market Participation for African Farmers.* AGRA-ILRI conference, Towards Priority Actions for Market Development for African Farmers, Nairobi, Kenya, 13 May 2009. With Stephen Zebiak, Walter Baethgen, Amor Ines, Daniel Osgood.

*Managing Current Risks and Preparing for Progressive Change: The Twin Pillars of Climate Adaptation.* Climate Change, Agriculture and Food Security, UN, New York, 6 May 2009. Side event at the 17th session of the UN Commission on Sustainable Development.

*Are the Earth's Rural Populations Ready?* Columbia Climate Center symposium, Anthropogenic Climate Change: Are We Ready? Columbia University, New York, 13 November 2008.

*Contributions of Agricultural Systems Modeling to Weather Index Insurance.* Technical Issues in Index Insurance, IRI, Palisades, New York, 7 October 2008. With Walter Baethgen, Amor Ines, James Jones, Holger Meinke, Pasquale Steduto.

*Climate Risk Management, Food Security at the IRI.* IFRC Partnership Meeting on Climate Change and Food Security, Dakar, 17 December 2007. With Sylwia Trzaska.

*Innovations in Climate Risk Management: Protecting and Building Rural Livelihoods in a Variable and Changing Climate.* ICRISAT & CGIAR 35th Anniversary Symposium, "Climate-Proofing Innovation for Poverty Reduction and Food Security," ICRISAT, Patancheru, India, 24 November 2007. With Walter Baethgen, Dan Osgood, Pietro Ceccato, Robinson Ngugi.

*Innovations in Climate Risk Management.* CIRAD, Montpellier, France, 16 November 2007.

*Innovations in Climate Risk Management: Protecting and Building Rural Livelihoods in a Variable and Changing Climate.* FAO, Rome, 15 November 2007.

*At the Intersection of Two Crises: Responding to Hunger in a Changing Climate.* 12th Annual Mennonite Central Committee-UN Student Seminar: The Tie that Binds, Church Center of the United Nations, New York, 2 November 2007.

*Models for Managing Climate Risk: Predicting Impacts and Assessing Responses.* AGRIDEMA Workshop, Valladolid, Spain, 28 June 2007.

*Climate Risk and the MDG Hunger Target.* Earth Institute Initiatives to Tackle Hunger and Promote Health: Presentation and Discussion with the Congressional Hunger Fellows. Columbia University, New York, 2 February, 2007.

*Assessing Use and Value of Seasonal Climate Forecasts by Smallholder Farmers.* International Association of Agricultural Economists conference, IAAE2006 Australia, Gold Coast, Australia, 15 August 2006. With F. Meza.

*Predicting Crop Response to Drought Using Advance Climate Information: An International Perspective.* 36th Biological Systems Simulation Conference, Fort Collins, Colorado, 11-13 April 2006. With A. Challinor, A.M.V. Ines, A. Mishra, T. Chee-Kiat.

*Managing Risk and Capturing Opportunity in a Variable Climate.* Project Inception Workshop: Making the Best of Climate - Adapting Agriculture to Climate Variability, Nairobi, Kenya, 6-10, February 2006.

*Climate as a Key Driver of Risk.* Stakeholder Workshop on Managing Climate Risk, ICRISAT, Patancheru, India, 9-11 November 2005.

*Long-Lead, Climate-Based Forecasts of Sorghum Yields in Burkina Faso: Approaches and Preliminary Evidence.* AMMA-CIRAD workshop: Monitoring and Forecasting the African Monsoon Impacts on Agriculture and Vegetation, Thiès, Sénégal, 1 December 2005. With A. Mishra, C. Baron, O. Ndiaye, M. Dingkuhn, S. Traore, N. Ward.

*Translating Climate Forecasts into Agricultural Terms: Advances and Challenges.* International Workshop on Climate Prediction and Agriculture: Advances and Challenges. WMO, Geneva, 11 May 2005. With A. Challinor, A. Ines, T. Wheeler, V. Moron.

*Integrating Seasonal Climate Prediction and Agricultural Models for Insights into Agricultural Practice.* Food Crops in a Changing Climate. Royal Society, London, 26 April 2005.

*Crop Forecasting Using Atmospheric General Circulation Models.* Dept. of Meteorology, Univ. of Reading, 25 April 2005.

*Climate Variability and Agriculture: Predicting and Managing the Impacts.* Impact of Climate Variability on Agricultural and Natural Resource Management Symposium. ASA-SSSA-CSSA 96th Annual Meeting, Seattle, 3 November 2004.

*Seasonal Climate Prediction: An Under-exploited Weapon in Our Arsenal against Hunger and Poverty.* Thomas G. Bullen, CFG Memorial Lecture Series in Science and Technology, Iona College, New Rochelle, New York, 21 October 2004.

*Seasonal Climate Forecasts for Agricultural Risk Management.* Gujarat Agricultural University, Anand, Gujarat, India, 7 October 2003.

*Coping with Climate in Poor Countries of the Tropics: Managing Risk and Preparing for Change.* Lamont-Doherty Open House, 4 October 2003. With P. Sanchez.

*Local Opportunities to Respond to Global Climate Teleconnections.* Weather Interpretations for Crop & Pest Management at Different Spatial Scales Symposium. ASA-SSSA-CSSA 94th Annual Meeting, Indianapolis, November 2002.

*Seasonal Climate Forecasts for Agricultural Risk Management.* International Crops Research Institute for the Semi-Arid Tropics, Patancheru, Andhra Pradesh, India, 3 October 2002.

*Seasonal Climate Forecasts for Agricultural Risk Management.* Indian Meteorological Society, Delhi, India, 1 October 2002.

*An International Sampling of Agricultural Applications of Seasonal Climate Forecasts.* Seasonal Climate Forecasts in Agriculture Conference, Tamil Nadu Agricultural University, Coimbatore, India, 26 September, 2002.

*The Use of Climate Forecasts in Agriculture: Experience in the Americas.* USDA Agricultural Outlook Forum 2002. Arlington, Virginia, 21 February 2002.

*Managing Climate Risk in South Asia's Rainfed SAT.* CGIAR International Centers Week special session, "Can Seasonal Climate Prediction Contribute to Food Security, Poverty Reduction and Sustainable Resource Management?" World Bank, Washington, DC, 29 October 2001.

*Linking Agriculture and Climate Prediction through Systems Analysis.* Seminar presented to the Center for Soil and Crop Management Studies, Tamil Nadu Agricultural University, Coimbatore, India, 8 September 2000. With H. Meinke.

*ENSO Impacts on Crop Production in the Southeast US.* Impacts of El Niño and Climate Variability on Agriculture symposium. 92nd ASA-SSSA-CSSA Annual Meeting, Baltimore, 1998.

## **CONFERENCES AND WORKSHOPS (Co-)ORGANIZED**

*Transforming Rural Livelihoods Through Effective Climate Services.* Pulitzer Hall, Columbia University, New York, 25 September 2019.

*Design Meeting for Meteo-Rwanda Maproom for Local Government.* CIAT-Rwanda, Kigali, 5 September 2019.

*GHACOF50 side event: How can climate science support food security and nutrition interventions?* Entebbe, Uganda, 12 February 2019. Co-organizer and co-sponsor (through Climate Services for Africa).

*CCAFS Flagship 4 Portfolio Design Workshop; and ACToday - CCAFS Partnership Meeting.* Lamont Campus, Columbia University, Palisades, New York, July 25-27 2018.

*Advancing the Use of Gridded, Online Climate Information for Risk Management in the Horn of Africa.* GHACOF48 dinner side event, Mombasa, Kenya, 13 February 2018. Co-organized with ICPAC.

*Existing and New Tools for Drought Monitoring and Forecasting in Eastern Africa. Climate Services for Resilient Development (CSRD) Technical Exchange in Eastern Africa.* Zanzibar, Tanzania, 23-25 August 2017. Co-organized and co-sponsored workshop with CSRD, ICPAC, IRI, DfID WISER program.

*Scaling Up Agricultural Adaptation through Insurance: Bringing together insurance, big data and agricultural innovation.* Bonn, Germany, 14 May 2017.

*Stakeholder's planning workshop for Rwanda Climate Services for Agriculture,* Lemigo Hotel, Kigali, 6-7 March 2017.

*Climate Services Evaluation Methodological Review Workshop.* University of Cape Town, 27 February 2017.

*Climate Risk Management Parallel Session. Adaptation of African Agriculture: From Science to Action to be held on Sunday,* Marrakech, Morocco, 13 November 2016.

*Training workshop on Understanding, Communicating and Using the Downscaled Seasonal Forecast.* Kigali, 1 September 2016.

*Demonstration and Discussion of Agricultural Maprooms.* Project launch dinner event at 44th Greater Horn of Africa Climate Outlook Forum, Kampala, 30 August 2016.

*Joint launch of ENACTS and Rwanda Climate Services for Agriculture.* Kigali, 23 March 2016. Sponsors: CCAFS, CIAT, Meteo-Rwanda.

*Planning workshop for Rwanda Climate Services for Agriculture.* Kigali, 21-22 March 2016. Sponsors: CCAFS, CIAT.

*Strengthening Regional Capacity for Climate Services in Africa.* Pre-event to Fifth Climate Change and Development in Africa Conference (CCDA-V), Victoria Falls, Zimbabwe, 27 October 2015. Sponsors: CCAFS, ILRI, ACPC.

*FMARD-CCAFS Knowledge-Sharing Workshop: Evidence-Based Insurance Development for Nigeria's Farmers.* London, 27-28 January 2015. Sponsor: CCAFS.

*Household Level Modeling in CCAFS, Humid Tropics and Other CRPs.* CATIE, Turrialba, Costa Rica, 13-15 May 2014. Sponsor: CCAFS.

*Integrated Food Security Modeling in Eastern and Southern Africa.* Nairobi, Kenya, 10-12 February 2014. Sponsor: CCAFS.

*Mobilizing a CGIAR Agricultural Insurance Research Community.* IFPRI, Washington, DC, 20-22 January 2014. Sponsors: CCAFS, PIM.

*FAO-WFP-CCAFS joint meeting on Climate, Crop and Food Security Forecasting.* FAO, Rome, 9 October 2013.

*Developing a Methodology to Communicate Climate Services for Farmers At Scale.* Nairobi, 12-14 June 2013. Sponsor: CCAFS.

*Scaling Up Climate Services for Farmers in Africa and South Asia.* Saly, Senegal, 10-12 December 2012. Sponsors: CCAFS, CSP, USAID, WMO.

*Combining Crop Models and Remote Sensing for Yield Prediction: Concepts, Applications and Challenges for Heterogeneous Smallholder Environments.* JRC, Ispra, Italy, June 13-14, 2012. Sponsors: CCAFS, JRC.

*Third Annual CCAFS Science Workshop.* Copenhagen, Denmark, 1-2 May 2012. Sponsor: CCAFS.

*Index Insurance for Managing Climate-Related Agricultural Risk: Toward a Strategic Research Agenda.* IFPRI, Washington, DC, 27-28 October 2011. Sponsors: CCAFS, IFPRI.



*Improving Management of Climate Impacts on Food Security: Toward a Strategic Research Agenda.* Nairobi, Kenya, 10 September 2011. Sponsor: CCAFS.

*Climate Change Adaptation and Mitigation in Agriculture Science Workshop.* Playa del Carmen, Mexico, 1-2 December 2010. Sponsor: CCAFS.

*International Workshop on Climate Prediction and Agriculture: Advances and Challenges.* WMO, Geneva, 11-13 May 2005. Sponsors: WMO, START, IRI.

*Advanced Training Institute on Climate Variability and Food Security.* IRI, Palisades, New York, 8-16 July 2002.

*Linking Climate Prediction Model Output with Crop Model Requirements.* IRI, Palisades, New York, 28-29 April 2000. Sponsors: IRI, START.

*International Forum on Climate Prediction, Agriculture and Development.* April 26-28, 2000, Palisades, New York. Sponsors: IRI, START, WMO.

## TEACHING AND MENTORING

Guest lecturer on climate risk management in agriculture, in *Integrative Seminar: Managing Climate Variability and Adapting to Climate Change II* (EESC G4402.001), Columbia University, 2005-2010.

Guest lecturer on use of climate information and analyses that inform decision making in agriculture, in *Regional Dynamics, Climate, and Climate Impacts* (EESC W4404.001), Columbia University, 2005-2006.

Guest lecturer on policy implications of ENSO, *Science and Society* (EESC V1003), Earth and Environmental Science, Columbia University, 2002-2007.

Organized and co-taught *Tailored Climate Forecast Information Workshop* for Zambia Meteorological Department, Livingstone, Zambia, 5-7 September 2005.

Organized and co-taught training workshops on climate applications for agricultural scientists from developing countries, at the International Research Institute for Climate Prediction (9-19 December 2003) and Indian Institute for Tropical Meteorology (12-16 May 2003).

Director and Instructor, *Advanced Training Institute on Climate Variability and Food Security*, IRI, 8-26 July 2002.

Instructor, *Training Institute on Climate and Society in the Asia-Pacific Region*, East-West Center, Honolulu, 5-23 February 2001.

Instructor and Agriculture Mini-project Coordinator, *First IAI/UM Summer Institute on Interdisciplinary Global Change Science in the Americas: Interactions between Seasonal-To-Interannual Climate Variability and Human Systems*, University of Miami, 11-30 July 1999.

Guest lecturer in *Simulation of Agricultural and Biological Systems* (AGE 5646), University of Florida, 1995 and 1997.

Post-doctoral Associates supervised: Sabine Marx, Amor Ines, Ashok Mishra, Helen Greatrex.

Graduate student committee member: Ayse Irmak, Agricultural and Biological Engineering, University of Florida.

External Ph.D. examiner: N.J. Walker, School of Bioresources Engineering and Environmental Hydrology, University of KwaZulu-Natal, Pietermaritzburg, South Africa (2005). G.A. Baigoria, Wageningen University, The Netherlands (2005). N.K. Gontia, Indian Institute of Technology Kharagpur, India (2006). M.E. Moeletsi, Soil and Crop and Climate Sciences, University of the Free State, Bloemfontein, South Africa (2011), Nega Emiru Debela, University of Tasmania, Hobart, Australia (2016).

Visiting scientists mentored: Carlos Messina (Argentina), Roberto Villalobos (Costa Rica), Angel Villalobos (Mexico), Saseendran Anapalli, Kripan Ghosh (India), Francisco Meza (Chile), Ferdinand Mawunya (Ghana), Meshack Malo (FAO, Ethiopia).