International community charts course for land model benchmarking. Following on the heels of early efforts to develop systematic evaluation approaches for the land component of climate models, including the DOE-sponsored Carbon-Land Model Intercomparison Project (C-LAMP), an international group of researchers assembled to define a common framework for benchmarking land model performance. Participants identified challenges to routine model performance characterization and proposed a benchmarking framework designed to measure model prediction skills for simulating ecosystem responses and feedbacks to climate change based on comparison with best-available observations. In a recent paper, candidate benchmarks for simulation of biophysical processes, biogeochemical cycles, and vegetation dynamics were proposed as the baseline standards for the International Land Model Benchmarking (ILAMB) Project. Adoption of this benchmarking framework will standardize model assessments, encourage routine evaluation of model performance throughout development, and provide a basis for quantifying model improvements.

Reference: Luo, Y. Q., J. T. Randerson, G. Abramowitz, C. Bacour, E. Blyth, N. Carvalhais, P. Ciais, D. Dalmonech, J. B. Fisher, R. Fisher, P. Friedlingstein, K. Hibbard, F. Hoffman, D. Huntzinger, C. D. Jones, C. Koven, D. Lawrence, D. J. Li, M. Mahecha, S. L. Niu, R. Norby, S. L. Piao, X. Qi, P. Peylin, I. C. Prentice, W. Riley, M. Reichstein, C. Schwalm, Y. P. Wang, J. Y. Xia, S. Zaehle, and X. H. Zhou (2012) "A Framework for Benchmarking Land Models." Biogeosci., 9(10):3857–3874. doi:10.5194/bg-9-3857-2012.

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