Multi-Scale Synthesis and Terrestrial Biospheric Model Intercomparison Project (MsTMIP)

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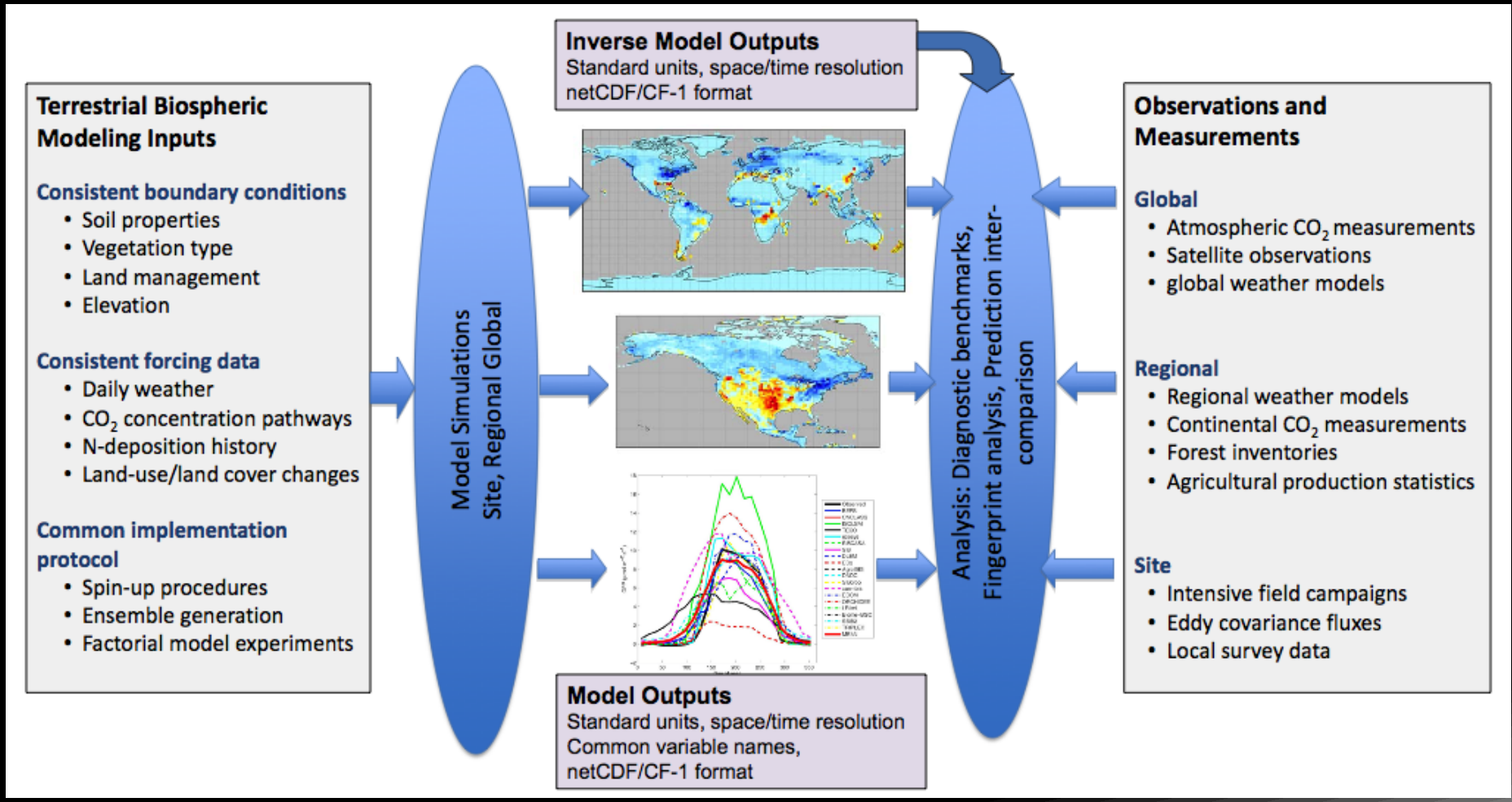
What is driving the variability seen in the model estimates?



MsTMIP Overview

- Three scales of estimation
  - Global (0.5° by 0.5°)
  - Regional (North America) (0.25° by 0.25°)
  - Site level – with regional meteorology
- Consistent driver data
- Formal protocol
- Model evaluation framework built off of C-LAMP (now iLAMB)
- Model team support (mini-grants)

Baseline Simulations

Domain	Simulation Name	Simulation Period	Climate Forcing	Land-Use & Disturbance History	Atmospheric CO_2	Nitrogen Deposition
Global (0.5° x 0.5°)	BG1	1901-2008	CRU+NCEP	Time-varying	Time-varying	Time-varying
North America (0.25° x 0.25°)	BR1	1980-2008	NARR[1]	Time-varying	Time-varying	Time-varying

Provide a model's best attempt at representing the spatial and temporal distribution of land-atmosphere carbon flux as influenced by:

Climate, land-use / disturbance, and nutrient deposition

Sensitivity Simulations

Domain	Simulation Name	Simulation Period	Climate Forcing	Land-Use & Disturbance History	Atmospheric CO_2	Nitrogen Deposition
Global (0.5° by 0.5°)	SG1	1901-2008	CRU+NCEP	Constant	Constant	Constant
	SG2			Time-Varying	Constant	
	SG3			Time-Varying	Time-Varying	
North America (0.25° by 0.25°)	SR1	1980-2008	NARR[1]	Constant	Constant	Constant
	SR2			Time-Varying	Constant	
	SR3			Time-Varying	Time-Varying	

Help to partition observed NEE among processes such as climate variability, CO_2 fertilization, nitrogen limitation, current land management, and the recovery from historical land use and disturbance