

The Agricultural Model Intercomparison and Improvement Project (AgMIP) is a distributed climate-scenario simulation exercise for historical model intercomparison and future climate change conditions with participation of multiple crop and world agricultural trade modeling groups around the world (Fig. 1). The goals of AgMIP are to improve substantially the characterization of risk of hunger and world food security due to climate change and to enhance adaptation capacity in both developing and developed countries.

AgMIP will place regional changes in agricultural production in a global context that reflects new trading opportunities, imbalances, and shortages in world markets resulting from climate change and other driving forces for food supply. Historical period results will spur model improvement and interaction among major modeling groups, while future period results will lead directly to tests of adaptation and mitigation strategies across a range of scales.

AgMIP will act as a demonstration of a multi-scale impact assessment utilizing the latest methods for climate and agricultural scenario generation. Scenarios and modeling protocols will be distributed on the web, and multi-model results will be collated and analyzed to ensure the widest possible coverage of agricultural crops and regions. The three-year project will provide the necessary integrated, transdisciplinary framework to assess climate impacts on the agricultural sector.

AgMIP will significantly enhance information (including uncertainty estimates) to guide policymakers regarding risk of hunger, world food security, and agricultural adaptation. A key aspect is to create capacity-building partnerships among agricultural crop and economic modelers around the world, enhancing the ability of each nation to evaluate current and future climate impacts and adaptations. AgMIP will not only provide crucially-needed new global estimates of how climate change will affect food supply and hunger in the agricultural regions of the world, but it will also build the capabilities of developing countries to estimate how climate change will affect their own supply and demand for food.

Such projections are essential inputs from the Vulnerability, Impacts, and Adaptation (VIA) research community to the Intergovernmental Panel on Climate Change Fifth Assessment (AR5), now in the planning stages, and the UN Framework Convention on Climate Change. They will set the context for local-scale vulnerability and adaptation studies, supply test scenarios for national-scale development of trade policy instruments, provide critical information on changing supply and demand for water resources, and elucidate interactive effects of climate change and land use change.

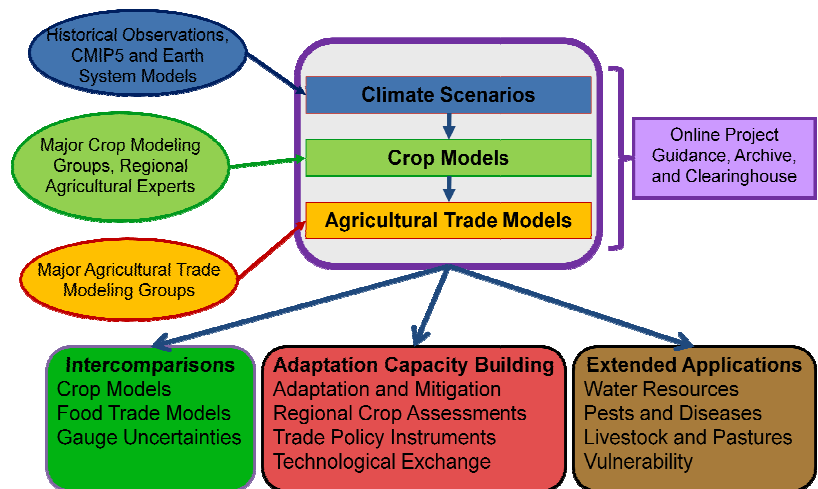


Figure 1: AgMIP organization



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