

## GTAP Board Report

Food and Agriculture Organisation of the United Nations

June 2015

FAO has been a member of GTAP Consortium since 2008. Different technical units with FAO have either used the GTAP database, its modeling framework, or have collaborated directly with the GTAP Center for specific projects (ex: livestock GHG mitigation project).

In the past 12 months, FAO activities that relates to GTAP include the following:

1. The Global Perspectives Studies Team of the Agricultural Development Economics (ESA) Division has been involved in four activities that are of potential interest to the GTAP community:
  - a. The team is involved in the second phase of the Agricultural Model Intercomparison and Improvement Programme (AgMIP). In detail, ESA participated with the ENVISAGE model, in an exercise that extended the range of the Shared Socio-Economic Pathways (SSPs) considered in Phase 1 to examine climate impacts on agricultural production and markets.
  - b. In a related effort, the Team participated with the ENVISAGE model on a study for the Trade and Agriculture Department (TAD) of the OECD on quantifying future developments in agriculture and food
  - c. The Team collaborated with the GTAP centre on conceptualising how to model Food Losses and Waste. The empirical analysis was carried out by the GTAP centre with the SIMPLE model.
  - d. Last but not least, the Team developed the first version of the partial equilibrium model GAPS - Global Agriculture Perspectives System – which is already used to derive FAO's long-term projections on agricultural markets and carry out related scenario analysis and is working on the second version.
2. The Monitoring and Analysing Food and Agricultural Policies (MAFAP) Team of the Agricultural Development Economics (ESA) Division of FAO seeks gradually to establish country owned and sustainable policy monitoring and analysis systems in developing countries. As part of its analytical work, the MAFAP team has been working on selected African economies applying alternative methods to identify key policy constraints limiting the development of the agricultural sector or specific value chains. CGE modelling is among the suitable tools and techniques to carry out ex-ante policy impact analysis and as a result the MAFAP team has gradually engaged into more modelling work to strengthen its policy advisory functions. This includes reaching out to partners having long lasting experience in modelling and

more in particular CGE modelling. Those partner institutions include the Joint Research Centre (IPTS) of the EC in Seville, IFPRI, Purdue University and others. Several research/policy topics have already been selected to conduct CGE based analysis on the countries of interest including: (i) export ban on cereals in Ethiopia and Tanzania (ii) the roles of public and private storage facilities on grain price stabilization and food security; (iii) import ban on live cattle from Ethiopia neighboring countries ; and (iv) micro- and macro-level impacts of improved communications and information systems.

Regarding the cooperation with Purdue University on GTAP, the MAFAP database has recently been added to the GTPAP database allowing some new analyses focusing on the 13 African countries covered by MAFAP. As part of this collaboration, a paper titled *Agricultural Policy Reforms in Sub Saharan Africa: A CGE Analysis* was prepared by Jean Balié and Badri Narayanan and will be presented in the next GTAP conference in Melbourne.

In a related effort, the MAFAP Team is part of the Consortium of International Organization on measuring the policy environment for agriculture including the Trade and Agriculture Department (TAD) of the OECD, the World Bank and IFPRI. The members of the Consortium are interested in providing publicly available information on policy effects as measured by standard and shared indicators applied by each institution. These indicators will be gradually captured in a global database which is intended to feed the GTAP and other database available for CGE models.

3. Work using GTAP from FAO staff
  - a. Rakotoarisoa, M. (2015). Analyzing the Africa-China Trade: Some Policy Considerations and Implications. Contributed Paper at the 18<sup>th</sup> Annual GTAP conference