The Economic Research Service (ERS) of the U.S. Department of Agriculture has contributed to and utilized the products of the Global Trade Analysis Project since its inception. This provides a short summary of recent and forthcoming activities.

CONTRIBUTIONS TO GTAP PRODUCTS

Trade data. Mark Gehlhar provided a revision of the merchandise trade data for the version 6 database in April 2004. He expanded the detailed country coverage from 206 to 214. There were several late reporting countries not available until February 2004. The number of reporting countries increased substantially from the pre-release 6.1. Taiwan's trade as reporter was also included for the first time in the GTAP database. He also worked on methods for dealing with re-exports across time-series data. In version 6 pre-release 3, special attention was given to transshipments via the Netherlands for removing re-export flows. This is an important and growing problem in other countries.

Agricultural protection data for GTAP database version 6. Paul Gibson provided an agricultural tariff dataset. Paul considerably extended the time period of protection measures and increased the number of countries, especially developing countries. Paul was very instrumental in developing a systemic estimation approach of tariffs, establishing a transparent exhibition of commodity aggregation, and incorporating detailed treatment of tariff quota and preferential tariff information. Paul's new database allows analysts to have tariff-line protection data that can be aggregated quickly and easily into various commodity groups. Analysts can view the formulas used for calculating ad valorem equivalent (AVE) and can incorporate formulas for calculating tariff measures. The agricultural tariff data is at the tariff line level and includes both bound and applied rates. GTAP is hosting the agricultural tariff dataset and is making it available for the GTAP consortium members.

Export subsidy data. Aziz Elbehri, created a global export subsidy dataset for GTAP database; completed a new data set based on 2000 WTO export subsidy submissions; submitted the new data set to the GTAP Center in April 2003 (update to the first submission is pending).

Land and water resources database. Roy Darwin, Kevin Ingram, and John Sullivan finished revising the land and water resources database used by the Future Agricultural Resources Model (FARM), a modified version of the first GTAP database and model. The new database is compatible with version 5.3 of the GTAP database. The new database is being documented in three publications. These publications are accompanied by Access databases. Databases accompanying the first two publications provide data in physical units, i.e., km3 water, 1000 ha land, MT, MT/ha, 1000 $s, $'s/ha. The database accompanying the third publication provides value shares with which one can adjust values in version 5.3 of the GTAP database to account for water and heterogeneous land resources. A draft version of A Global Land and Water Resources Database for Economic Models was distributed to GTAP consortium members for comment in February 2004. Draft versions of the two remaining publications are scheduled to be distributed to consortium members for comment in May and June 2004.

A generic version of FARM2.0 that is accompanied by an Access database and model code has been documented and scheduled to be distributed to consortium members for comment by the

end of August. This version enables one with an adjusted 5.3 version of the GTAP database to create a five-region-five-product FARM model. FARM2.0 allows analyses of trade deregulation, land degradation, and weather normalization.

Cooperation with the Center for Global Trade Analysis (CGTA) on an U.S. Environmental Protection Agency funded project to establish an integrated database for assessing the potential of greenhouse gas mitigation in CGE models was terminated in September 2003. During the spring of 2003, we provided data on land cover, crop production, livestock production, and forestry production by agro-ecological zone for mainland China and the United States to CGTA. In June, CGTA requested aggregate data for all countries except the U.S. and China as well as for all countries individually. We informed CGTA that we could provide the aggregate rest-of-world data in short order, but that we first wanted to resolve some technical issues, i.e., e.g., how to handle unmanaged lands, with the person designing the prototype. Resolving this and other issues would likely entail revising some of the files sent earlier. We also informed CGTA that beta versions of data for individual countries other than the United States and China, along with draft documentation of a GTAP Technical Paper, would be provided after the technical issues were resolved and likely be available in the fall of 2003.

CGTA responded that the prototype model was being revised, but that they would share it with us when it was written up. We heard nothing further from CGTA regarding the prototype model, its data requirements, or data for the rest-of-world until September 2003 when we informed CGTA that a draft version of the GTAP technical paper would be ready for review in mid-November. We also asked CGTA if it wanted data for the aggregate rest-of-world region before critical staff took vacation. If so, it would have to be in the same format as the U.S. and Chinese data sent earlier because there wasn't time to resolve the outstanding technical issues we wanted to discuss. CGTA informed us that it would obtain data from other sources and thereby terminated cooperation with us.

PUBLICATIONS

1. Articles

Darwin, R.F. 2004. "Effects of Greenhouse Gas Emissions on World Agriculture, Food Consumption, and Economic Welfare," forthcoming in Climatic Change.

Burfisher, Mary, Sherman Robinson and Karen Thierfelder. "Trade and Welfare Effects of the FTAA," in U.S. Agriculture and the Free Trade Area of the Americas. AER-827, U.S. Department of Agriculture, Economic Research Service, March 2004.

Elbehri, A., T. Hertel, and W. Martin, "Estimating the Impact of WTO and Domestic Reforms on the Indian Cotton and Textile Sectors: A General Equilibrium Approach," Review of Development Economics, Vol. 7(August 2003): 343-359.

Elbehri, A. and S. MacDonald, "Estimating the Impact of Transgenic Bt Cotton on West and Central Africa: A General Equilibrium Approach," (presented at an International Workshop on

Biotechnology Commercialization and Security, in Tashkent, Uzbekistan, October, 14-17, 2003; Submitted to World Development July 2003; revised January 2004).

R.F. Darwin and K. Ingram, 2003. "A Global Land and Water Resources Database for Economic Models," U.S. Department of Agriculture, Economic Research Service, Washington, DC.

R.F. Darwin, J. Sullivan, and K. Ingram, 2003. "Linking Land and Water Resources with World Economic Production," U.S. Department of Agriculture, Economic Research Service, Washington, DC.

R.F. Darwin and J. Sullivan, 2003. "A Global Economic Database with Water and Heterogeneous Land Resources," U.S. Department of Agriculture, Economic Research Service, Washington, DC.

R.F. Darwin, 2004. "A fourth publication, Creating Global Economic Models with Water and Heterogeneous Land Resources," U.S. Department of Agriculture, Economic Research Service, Washington, DC. (documentation of a generic version of FARM2).

Gehlhar M., S. Shapouri, J. Wainio, 2004. "Agricultural Trade Preferences for Developing Countries: Are there still benefits from global market liberalization," forthcoming AIB report, U.S. Department of Agriculture, Economic Research Service, Washington, DC.

Regmi A. Gehlhar M., J. Wainio J. T. Vollrath, 2004. "Market Access for High Value Food Products," forthcoming AER, U.S. Department of Agriculture, Economic Research Service, Washington, DC.

2. Unpublished Conference Presentations and Invited Speeches

Darwin, R.F. 2003. "Simulating Global Climate Change and Variability in Economic Models", Seminar in Climate Dynamics and Energy Transfer, Department of Atmospheric Sciences, University of Washington, Seattle, WA, October 13, 2003.

Terry Roe and Mathew Shane. " Overcoming Food Insecurity and Poverty: A CGE Analysis," selected paper, the 7th Annual conference on Global Economic Analysis, June 17-19, 2004, Washington, D.C.

Elbehri A. "Estimation the impact of MFA removal on global cotton and textile: A CGE quantitative assessment, " selected paper, the 7th Annual conference on Global Economic Analysis, June 17-19, 2004, Washington, D.C.

Wainio J. and M. Gehlhar, 2004. "MFN Tariff Cuts and U.S. Agricultural Imports Under Nonreciprical Trade Preference Programs," selected paper, the 7th Annual conference on Global Economic Analysis, June 17-19, 2004, Washington, D.C.

Gehlhar M. and J Wainio, 2004. "Feasibility of Reducing Agricultural Protection: Implications for Farm Households using GTAP-AGR model" selected paper, the 7th Annual conference on Global Economic Analysis, June 17-19, 2004, Washington, D.C.

Constanza Valdes and Agapi Somwaru. "Brazil's Beef Production and Its Efficiency: A Comparative Study of Scale Economies," selected paper, the 7th Annual conference on Global Economic Analysis, June 17-19, 2004, Washington, D.C.

Stephen MacDonald, Suwen Pan, Agapi Somwaru, and Francis Tuan. "China's Role in World Cotton and Textile Markets," selected paper, the 7th Annual conference on Global Economic Analysis, June 17-19, 2004, Washington, D.C.

Burfisher, M., K. Hanson, J. Hopkins, A. Somwaru. "U.S. Agriculture Response to Policy Reform: Does One Farm Household Type Fit All?" selected paper, the 7th Annual conference on Global Economic Analysis, June 17-19, 2004, Washington, D.C.

3. Briefings

Gehlhar M. Implementation of CAFTA and Australia's bilateral Free Trade Agreements, ERS Staff Analysis

Gehlhar M. "New issues emerging in merchandise trade for GTAP" Documentation of rapid growth in re-export activity and measuring data quality (will be presented at Board Meeting)