

AGRODEP Models

	IFPRI standard model	PEP 1-1	PEP 1-T	PETS model
Class of model	Single country CGE model	Single country CGE model	Single country CGE model	Multi-market partial equilibrium model
Similar models	PEP 1-1, STAGE	IFPRI standard model, STAGE	STAGE, IFPRI standard model, RIAPA	ATPSM, PE-trade model, EMM
Dynamics	static	static	Recursive dynamic	Recursive dynamic
Temporal scale	Short-term (1-3yrs)	Short-term (1-3yrs)	Medium-term (10-20yrs)	Medium-term (10-20yrs)
Spatial scale	National	National	National	Global (default version: 15 countries/regions)
Market clearance	National market clears prices	National market clears prices	National market clears prices	National markets clear prices
Structure of trade	bilateral trade is not tracked	bilateral trade is not tracked	bilateral trade is not tracked	bilateral trade is tracked
Sectors/products	Depends on the focus country SAM: usually 10-20 sectors	Depends on the focus country SAM: usually 10-20 sectors	Depends on the focus country SAM: usually 10-20 sectors	Products defined at HS6 level (more than 5,000 sectors)
Production factors	Depends on the focus country SAM: usually 3-5 factors	Depends on the focus country SAM: usually 3-5 factors	Depends on the focus country SAM: usually 3-5 factors	n/a
Household groups	Depends on the focus country SAM: usually 5-10 representative groups	Depends on the focus country SAM: usually 5-10 representative groups	Depends on the focus country SAM: usually 5-10 representative groups	1 representative household per country/region
Examples of Application (Topic)	Economywide policy analysis: trade, public investment, fiscal policies	Economywide policy analysis: trade, public investment, fiscal policies	Economywide policy analysis: trade, public investment, fiscal policies	Trade policy, trade agreements
Main data sources	Country SAMs	Country SAMs	Country SAMs	COMEXT, BACI and MAcMap-HS6v2
Current base year	Policy intervention year	Policy intervention year	Policy intervention year	Policy intervention year (default version: 2007)
References	Lofgren, Harris & Robinson (2002)	Decaluwe et al. (2009)	Decaluwe et al. (2012)	Laborde and Tokgoz (2005)

	ERATO	Spatial equilibrium model	EMM	MIRAGRODEP
Class of model	Multi-market partial equilibrium model	Multi-market partial equilibrium model	Regional multi-market model	Global multi-country CGE model
Similar models	ATPSM, PETS, EMM	RICEFLOW (Durand-Morat & Wailes, 2003)	IMPACT (core model)	GTAP, LINKAGE, GLOBE, PEP-w-t
Dynamics	static	static	Recursive dynamic	Recursive dynamic
Temporal scale	Short-term (1-3yrs)	Short-term (1-3yrs)	Medium-term (10-20yrs)	Medium-term (10-20yrs)
Spatial scale	Global (default version: 11 countries/regions)	Regional (default version: 5 countries)	Regional (10-15 countries in average)	Global (max 140 countries) MIRAGRODEP-AEZ allows for sub-national levels (5-10 in average)
Market clearance	Global markets clear prices	National markets clear prices	Regional market clears prices	National/regional markets clear prices
Structure of trade	bilateral trade is not tracked	bilateral trade is tracked	bilateral trade is not tracked	bilateral trade is tracked
Sectors/products	Depends on the focus value chain, up to the user (default version: oilseeds)	1 product/sector	Default version: 49 agricultural and agri-food products and 2 non agricultural products	Default structure: 57 sectors/products
Production factors	n/a	n/a	n/a	2 labor (skilled/unskilled), 1 land, and 2 capital (natural resource/other) Dual-dual version with urban and rural labor markets
Household groups	1 representative household per country/region	1 representative household per country/region	2 representative groups: urban and rural	One representative household (with 50+ groups in focal countries with MIRAGRODEP HH)
Examples of Application (Topic)	Trade policy, productivity shocks, tax changes in a sectoral value chain	Analysis of trade costs, transportation costs	Regional trade analysis, impact of productivity growth	Global and regional trade policy
Main data sources	FAO Food balance sheets and FAPRI	FAOSTAT, COMTRADE and MAcMap HS-6	FAOSTAT and WDI	GTAP: SAMs FAOSTAT (PRODSTAT and FBS), (LSMS-equivalent surveys for focal countries for household level analysis in MIRAGRODEP-HH)
Current base year	Policy intervention year (default version: 2007)	Policy intervention year (default version: 2005)	Depends on the study, intervention year	2011
References	Estrades, Gao & Laborde (2012)	Bouet & Metivier (2016)	Diao et al. (2007)	Laborde et al. (2011) Original: Decreux & Valin (2007)

	MIRAGE	GTAP	DREAM	IMPACT
Class of model	Global multi-country CGE model	Global multi-country CGE model	Multi-region partial equilibrium model	Global multi-market model
Similar models	GTAP, WB-LINKAGE, GLOBE, PEP-w-t	MIRAGRODEP, WB-LINKAGE, GLOBE, PEP-w-t	EMM, ERATO	RENAPRI-PE, OECD-AGLINK, FAO-COSIMO
Dynamics	Recursive dynamic	Recursive dynamic	Recursive dynamic	Recursive dynamic
Temporal scale	Medium-term (10-20yrs)	Medium-term (10-20yrs)	Longer-term (25-35yrs)	Longer-term (25-35yrs)
Spatial scale	Global with max 140 countries/regions	Global with max 140 countries/regions (version GTAP-AEZ with sub-national disaggregation)	National or Global (user's choice)	Global with 159 countries and 320 food producing units (FPUs)
Market clearance	National/regional markets clear prices	National/regional markets clear prices	National or regional markets clear prices	Global market clears prices
Structure of trade	bilateral trade is tracked	bilateral trade is tracked	bilateral trade is not tracked	bilateral trade is not tracked
Sectors/products	Default structure: 57 sectors/products	Default structure: 57 sectors/products	Up to the user (1 product at a time)	Within FPUs: 45 agriculture and 17 processing
Production factors	2 labor (skilled/unskilled), 1 land, and 2 capital (natural resource/other)	2 labor (skilled/unskilled), 1 land, and 2 capital (natural resource/other)	n/a	n/a
Household groups	1 representative agent (includes the government)	1 representative household	1 representative producer and 1 representative consumer	n/a
Examples of Application (Topic)	Global and regional trade policy	Global and regional trade policy	Economic impacts of agricultural research & development (R&D) under different policy, market, technology, and adoption conditions	Global production/price projections; Agriculture technology assessments; climate change impacts
Main data sources	GTAP: SAMs	GTAP: SAMs	FAOSTAT and WDI	FAOSTAT
Current base year	2011	2011	Up to the user, depends on the study, intervention year	2005
References	Decreux & Valin (2007) Original : Bchir et al. (2002)	Corong et al. (2017) Original : Hertel & Tsigas (1997)	Wood, You & Baitx (2001)	Robinson et al. (2015) Original: Rosegrant et al. (1995)