

## Partner Search Form

Date	2007	April	Valid until:	2008	December
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### CONTACT DETAILS

Organisation full name	Chinese Academy of Agricultural Sciences		Contact person:	
Organisation acronym (Abbreviation)	CAAS		Title	Senior research fellow
Department / Sector / Faculty	Institute of Agricultural Economics and Development		First Name	Xiaoh
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Former participation in EU research projects as Co-ordinator: YES  NO

### PROJECT IDEA

<b>Title</b>	Analysis on Global Agriculture and Food Markets: Application of Spatial Equilibrium Model and Network in Global Information System	<b>Acronym</b>	AGAFM
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**Project type:** Small or Medium Collaborative Project

### CALL REFERENCE

**Call identification code:** KBBE-2007-1-4-08 FP7-KBBE-2007-1  
**Topic addressed:** Drivers and Limits of Enhanced Trade in Agriculture and Food Products

**Short description of the project idea:** The Institute of Agricultural Economics and Development (IAED) at Chinese Academy of Agricultural Sciences (CAAS), founded in 1957, is a national top research institute in China on agricultural economics and policy. In recent years, our study group mainly engaged in research in the fields of international commodity markets, agricultural and trade policy analysis, trade modelling, WTO multilateral trade negotiations in agriculture and bilateral free trade agreements. A global corn sub-regional supply and demand equilibrium model was developed for the analysis of the reform of agricultural trade policies, freight rates rising caused by international fuel hikes, and the effects of American bio-fuel policy changes on the global corn trade. Through establishing a spatial equilibrium model, combining with a network analysis in the global information system (GIS), the paths and mode of transport, and minimum transport cost are calculated. The model calculated quantity of corn flows and equilibrium market prices through the nonlinear programming of GAMS. A spatial equilibrium model, combining with network analysis model, can perfectly simulate the impacts of global and regional changes in agriculture and trade policy on all types of products and markets.

This project requires establishing a multi-regional and multi-product database and employing a spatial equilibrium model. We propose that the model should include the following regions: EU's Member Countries and its major trade partners, for example, NAFTA, Oceania (Australia, New Zealand), Asian countries (China, Japan, South Korea, India, ASEAN etc.), South American countries (Brazil, Argentina), African countries and other countries in the world. Products studied should include bulk products such as cereals (wheat, rice, maize), oilseeds (soybeans, rapeseed), raw sugar (cane and beet), vegetables, fruits, cotton, wool, cattle, sheep, pigs and poultry; intermediate products such as

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feed (corn, minor cereals, bean meal, fish meal); foods such as flour, rice, vegetable oil (soybean oil, rapeseed oil, palm oil), sugar, and animal products (beef, mutton, pork chicken, eggs, milk); and bio-energy such as the production of bio-ethanol by corn, sugar-cane and cassava, and the production of bio-diesel by rapeseed.

Through the provision of policy tools (such as new Round of WTO tariff reduction program, the tariff-rate quota system and the state trading enterprise and other non-trade concerns) and sensitivity analysis, the model will be used to analyze: WTO multilateral trade negotiations under the framework of agricultural trade reform, the affects of free trade zone negotiations on the EU. Further analysis, such as the extent of trade concentration and competition, the risk of depending on a limited number of suppliers, and the effects of sanitary and phytosanitary issues, will also be conducted.

We are willing to participate as a partner in the KBBE-2007-1-4-08 FP7-KBBE-2007-1 "Drivers and Limits of Enhanced Trade in Agriculture and Food Products" studies. We can engaged in tasks such as the design and implement of spatial equilibrium model, data collection and processing (especially for non-EU's Member Countries, such as china, other Asian countries, other developing country, and other regions in the world), and relevant policy analysis, etc. We would also like to share our experiences and research results on spatial equilibrium model and network analysis in GIS.

<b>Keywords describing the project idea</b>	<b>Sustainable production and management of biological resources from land, forest and aquatic environments:</b>	
	<input type="checkbox"/> Biological resources <input type="checkbox"/> Biodiversity <input type="checkbox"/> Genomics/Proteomics/Metabolomics <input type="checkbox"/> Bioinformatics <input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Forestry <input type="checkbox"/> Fisheries <input type="checkbox"/> Aquaculture <input checked="" type="checkbox"/> Horticulture	<input type="checkbox"/> Novel feeds <input type="checkbox"/> Novel plants <input type="checkbox"/> Plant Health <input type="checkbox"/> Animal Production and Welfare <input checked="" type="checkbox"/> Animal husbandry <input type="checkbox"/> Vaccines and Diagnostics <input type="checkbox"/> Organic production methods <input type="checkbox"/> Dairy Production <input type="checkbox"/> Tracking and tracing
	<b>Fork to Farm: Food, health and well being</b>	
	<input checked="" type="checkbox"/> Consumer behaviour <input type="checkbox"/> Functional Food <input type="checkbox"/> Nutrition Science <input type="checkbox"/> Physiology <input type="checkbox"/> Food Technology <input type="checkbox"/> Food Processing <input type="checkbox"/> Packaging <input type="checkbox"/> Food safety	<input type="checkbox"/> Potable/Safe Drinking Water <input type="checkbox"/> Animal Feed <input type="checkbox"/> Chemical Food Safety <input type="checkbox"/> Microbiological Food Safety <input type="checkbox"/> New detection methods <input checked="" type="checkbox"/> Risk Assessment <input checked="" type="checkbox"/> Food Chain Analysis/Management <input type="checkbox"/> Pesticide/BioActive <input type="checkbox"/> Additives/Substances Control
<b>Life sciences and biotechnology for sustainable non-food products and processes</b>		
<input type="checkbox"/> Biomass production <input type="checkbox"/> Bio-products <input type="checkbox"/> Bio-refinery <input type="checkbox"/> Bio-processes <input type="checkbox"/> Fibres (Wool, cotton, novel-bio-fibres)	<input type="checkbox"/> Wood-production <input type="checkbox"/> Pollution <input type="checkbox"/> Ecology <input type="checkbox"/> Waste Processing	

### PROFILE OF PARTNER SOUGHT

#### Type

Research Organisation
  University
  SME
  Other, please specify:

## Partner Search Form

### Role to cover in the project

- |  |  |                                   |
|--|--|-----------------------------------|
| <input checked="" type="checkbox"/> technology development | <input checked="" type="checkbox"/> research | <input type="checkbox"/> training |
| <input checked="" type="checkbox"/> dissemination          | <input type="checkbox"/> demonstration       | <input type="checkbox"/> other    |

**Country / Region** P.R. China

### Start of collaboration

- |  |                                   |                                    |
|--|-----------------------------------|------------------------------------|
| <input checked="" type="checkbox"/> start-up phase | <input type="checkbox"/> mid-term | <input type="checkbox"/> end-phase |
|--|-----------------------------------|------------------------------------|

### Expertise required

With experiences as a co-ordinator on the EU's projects or engaged in a similar project

**I agree with the publication of my data!**  
Please fill-in in English and return to: ,