



**GTAP Advisory Board Meeting Summary**  
**West Lafayette, IN, USA**  
**June 5-6, 2017**

## **Attendance**

**GTAP Center:** Angel Aguiar, Uris Lantz Baldos, Ginger Batta, Mary Burfisher, Caitlyn Carrico, Maksym Chepeliev, Erwin Corong, Jeremy Douglas, Iman Haqiqi, Thomas Hertel, Kayenat Kabir, Roman Keeney, Jing Liu, Verena McClain, Robert McDougall, Dominique van der Mensbrughe

**Board Representatives:** Mohamed Abdelbasset Chemingui, Laurent Cretegny, Rob Dellink, Aziz Elbehri, Jean Fouré, Joseph Francois, Stephen Karingi, Kenichi Kawasaki, Bob Koopman, Zornitsa Kutlina-Dimitrova, David Laborde, Shantong Li, Maryla Maliszewska, Mondher Mimouni, Gopinath Munisamy, Sergey Paltsev, Janine Pelikan, William Powers, Bert Saveyn, Natalie Soroka, Kirsten Urban, Hans van Meijl

**Guests:** Pierre Boulanger, Mark Gehlhar, Mark Horridge, Jan Michalek

## **A. Summary of Goals and Accomplishments in the Past Year**

[http://www.gtap.agecon.purdue.edu/events/Board\\_Meetings/2017/documents/2017\\_IssuesReport.pdf](http://www.gtap.agecon.purdue.edu/events/Board_Meetings/2017/documents/2017_IssuesReport.pdf)

## **B. Summary of Agency Activities in the Past Year**

[http://www.gtap.agecon.purdue.edu/events/Board\\_Meetings/2017/default.asp#agencyreports](http://www.gtap.agecon.purdue.edu/events/Board_Meetings/2017/default.asp#agencyreports)

## **C. Overview of Broad Goals for the Center**

1. **Data Goal:** To Improve the quality of data products through:
  - a. Improving the quality of contributed I-O data
  - b. Addition and improvement of other datasets
  - c. Monitoring of data quality using comparison programs
  - d. Version control and documentation
2. **Research Goal:** To actively participate in quantitative economic analysis of pressing global concern in the areas of Trade and Development and Global Environmental Issues
3. **Model Goal:** To promote further development of GTAP-based models
4. **Education Goal:** To expand and improve education for global economic analysis worldwide
5. **Staffing Goal:** To actively seek and encourage talented staff and graduate students
6. **Collaboration Goal:** To actively seek opportunities for fostering collaboration with institutions around the world
7. **Communication Goal:** To facilitate communication amongst members of the network as well as between the Center and key stakeholders

## D. Overview of Priorities and Responsibilities, by Goal Type

### 1. Data Goal: To Improve the quality of data products

| Tasks  | Responsibility                 |
|--|--------------------------------|
| <b>Improving the quality of contributed I-O data (core)</b>  | <b>Aguiar</b>                  |
| <i>Primary Priorities</i>  |                                |
| <ul style="list-style-type: none"> <li>Work with contributors to improve I-O tables (US, others)</li> </ul>  | Aguiar                         |
| <ul style="list-style-type: none"> <li>Compare IOT with data base to work with contributor on where the largest adjustments occur</li> </ul>   | Aguiar                         |
| <ul style="list-style-type: none"> <li>Energy subsidies integration to the GTAP Data Base</li> </ul>   | Chepeliev, McDougall           |
| <ul style="list-style-type: none"> <li>Development of the substitution elasticities data base (secondary priorities/satellite data)</li> </ul>   | Chepeliev                      |
| <i>Secondary Priorities</i>  |                                |
| <ul style="list-style-type: none"> <li>Finalize the guidelines for contribution of Supply and Use tables including domestic margins (Ongoing work with current progress to be presented during the board meeting. Document will be made available in the GTAP website by 3<sup>rd</sup> pre-release of GTAP 10)</li> </ul> | Corong                         |
| <ul style="list-style-type: none"> <li>Finalize the implementation of the dwellings module</li> </ul>  | McDougall                      |
| <b>Addition/Improvement of Datasets used in GTAP Data Base (core)</b>  | <b>Aguiar</b>                  |
| <i>Primary Priorities</i>  |                                |
| <ul style="list-style-type: none"> <li>Services Trade</li> </ul>   | McDougall                      |
| <ul style="list-style-type: none"> <li>Program data separation (Work will shift to full gears this summer. Expected to be operational by the latter half of 2017)</li> </ul>   | Corong                         |
| <ul style="list-style-type: none"> <li>Data and processing improvements in commodity and income/factor taxes</li> </ul>  | McDougall                      |
| <ul style="list-style-type: none"> <li>Export subsidies update</li> </ul>  | Beckman, Mimouni               |
| <ul style="list-style-type: none"> <li>Improved Agricultural Production data (FAO and OECD consistent) and AG-IOT</li> </ul>   | McDougall, Chepeliev           |
| <ul style="list-style-type: none"> <li>CDE parameters</li> </ul>   | van der Mensbrugge             |
| <i>Secondary Priorities</i>  |                                |
| <ul style="list-style-type: none"> <li>Examine possibility of targeting trade balances</li> </ul>  | McDougall                      |
| <ul style="list-style-type: none"> <li>Examine the availability of NSO data (production, etc., by year) to update I-O tables as part of FIT process (when redo FIT)</li> </ul>   | Aguiar                         |
| <ul style="list-style-type: none"> <li>Examine integration of biofuels into standard data base</li> </ul>  | Aguiar, McDougall, Taheripour  |
| <ul style="list-style-type: none"> <li>Domestic support, PSE database for Latin America and Africa – MAFAP</li> </ul>  | van Tongeren, Balié, Boulanger |
| <ul style="list-style-type: none"> <li>APT integration into FIT and other industry targeting</li> </ul>  | McDougall                      |
| <b>Addition/Improvement of Satellite Data (core)</b>   | <b>Aguiar</b>                  |
| <i>Primary Priorities</i>  |                                |
| <ul style="list-style-type: none"> <li>Domestic Margins: special version for GTAP 9 and 10 (GTAP version 9.2 Data Base with domestic margins to be presented during the conference and will be made available to the Board. Domestic margins will be included in 3<sup>rd</sup> pre-release of GTAP 10.)</li> </ul>        | Corong                         |

### 2. Research Goal: To actively participate in quantitative economic analysis of pressing global issues

| Tasks   | Responsibility |
|---|----------------|
| <b>Global Energy and Environmental Issues</b> |                |

|   |                             |
|---|-----------------------------|
| <i>Primary Priorities</i>   |                             |
| <ul style="list-style-type: none"> <li>Continue to publish papers on energy and environmental issues with a special focus on the land-water-energy-climate nexus</li> </ul> | Staff and graduate students |

**3. Model Goal:** To promote further development of GTAP-based models

| Tasks  | Responsibility  |
|--|---|
| <i>Primary Priorities</i>  |   |
| <ul style="list-style-type: none"> <li>Consolidate changes in new standard GTAP Model. Combine new standard model with some of the model variations (GTAP-E, GDyn).</li> </ul> | van der Mensbrugghe, Aguiar, Chepeliev, Corong, McDougall |

**4. Education Goal:** To expand and improve global economic analysis education worldwide

| Tasks  | Responsibility  |
|--|---|
| <b>Education Plan</b>  | <b>Various</b>  |
| <i>Primary Priorities</i>  |   |
| <ul style="list-style-type: none"> <li>2017 GTAP Short Course (Purdue)</li> </ul>  | Keeney, Batta, Douglas  |
| <ul style="list-style-type: none"> <li>GTAP 101 Courses</li> </ul>   | Burfisher, Batta, Douglas   |
| <ul style="list-style-type: none"> <li>GTAP PTA Course</li> </ul>  | Burfisher, Batta, Douglas   |
| <ul style="list-style-type: none"> <li>Update instructional materials for GTAP Model updates</li> </ul>  | Keeney, Aguiar, Chepeliev, Corong, McDougall, van der Mensbrugghe |
| <i>Secondary Priorities</i>  |   |
| <ul style="list-style-type: none"> <li>Further investigate development of online mini-courses on special topics</li> </ul>   | Burfisher, van der Mensbrugghe, Hertel                            |
| <ul style="list-style-type: none"> <li>Continue development and implementation of an “Alumni Outreach/Continued Learning Initiative” for short course graduates</li> </ul> | Keeney, Batta, Douglas  |
| <ul style="list-style-type: none"> <li>Investigate potential incorporation of our courses with Purdue/FutureLearn</li> </ul>   | van der Mensbrugghe, Hertel, Keeney, Burfisher, Aguiar            |

**5. Staffing Goal:** To actively seek and encourage talented staff and graduate students

| Tasks  | Responsibility      |
|--|---------------------|
| <i>Primary Priorities</i>  |                     |
| <ul style="list-style-type: none"> <li>Continue to implement the new program to mentor our graduate students.</li> </ul>         | van der Mensbrugghe |
| <ul style="list-style-type: none"> <li>Look into the possibility of hiring a part-time web designer for the GTAP wiki</li> </ul> | van der Mensbrugghe |

**6. Collaboration Goal:** Actively seek opportunities for fostering collaboration with institutions around the world.

| Tasks | Responsibility |
|-------|----------------|
|-------|----------------|

| <b>GTAP Conferences and Board Meetings</b>  | <b>Batta, van der Mensbrugge</b> |
|---|----------------------------------|
| <i>Primary Priorities</i>   |                                  |
| <ul style="list-style-type: none"> <li>• 2018 Conference and Board Meeting (Cartagena, Colombia)</li> </ul> | Batta, van der Mensbrugge        |
| <ul style="list-style-type: none"> <li>• 2019 and 2020 Conference Proposals</li> </ul>                      | Batta, van der Mensbrugge        |
| <ul style="list-style-type: none"> <li>• 2020+ Conference Proposals</li> </ul>                              | van der Mensbrugge               |

**7. Communication Goal:** To facilitate communication amongst members of the network as well as between the Center and key stakeholders.

| <b>Tasks</b>   | <b>Responsibility</b>                            |
|--|--|
| <b>Improve user support system</b>   |  |
| <i>Primary Priorities</i>  |  |
| <ul style="list-style-type: none"> <li>• GTAP-L, gtap-support, contactgtap: Continue offering support</li> </ul> | Aguiar, Batta, Chepeliev, Corong, Douglas, Kabir |

## **E. Summary of Discussions**

Following Dominique van der Mensbrugge’s meeting overview, the following items were discussed.

### **1. Welcome and Overview**

**Policies Shaping the Next 25 Years** – Dominique van der Mensbrugge (GTAP) highlighted the significant progress of GTAP’s first 25 years—from 15 to 141 regions (of which 121 countries), 37 to 57 sectors, and data/model extensions (energy, greenhouse gas emissions, power, international migration and remittances, labor splits, land decomposition and incorporation of water). As a maturing product, the pace of change may slow down, though with increasing emphasis on improving quality and deepening the applicability of the data and model extensions. There are potential sector and region gaps—for example maize, cotton, poultry, pork, other mining, processed foods, liquid fuels (including bio-fuels), fertilizers, and supply-chain oriented goods such as parts versus assembly. The largest regional gaps are in Africa including some large countries by population such as D.R. Congo and Sudan. Ongoing data upgrades include commodity trade flows (particularly re-exports), services trade, domestic support to agriculture, fiscal instruments, more complete treatment of the balance of payments and agricultural targeting. The Center is already working on a number of model extensions—GTAP-MRIO, domestic margins, GTAP-HET and energy subsidies. Looking ahead, future model extensions could include the incorporation of other emission indicators, introduction of new energy technologies, a consumer ‘make’ matrix. Somewhat more speculative would be to increase the ‘dimensionality’ of GTAP, for example multi-household and/or sub-national data. Model validation is an increasingly urgent task, and with the addition of additional reference years, one that could become somewhat easier though still a difficult exercise. The overview ended with some speculation on emerging policy issues: a) changing regional and global environment for trade policy; b) disruptive structural change (e.g. automation, digitalization of trade and commerce); c) changes in macro drivers such as demographics and income distribution and d) changes induced by climate change (impacts, adaptation, new technologies) and/or climate policies (COP21, carbon pricing, etc.).

## 2. The GTAP Data Base: Updates on Core Components

- a. **GTAP 9.2 and 10 Data Bases** – Angel Aguiar (GTAP) discussed how every new GTAP Data Base is constructed progressively over time with three planned pre-releases. Some improvements planned for version 10 have been introduced in the interim releases of version 9, which are closed to the public to benefit Board Members and data contributors with exclusive access. Interim release 9.2 occurred in January 2017, followed by the first pre-release of version 10 in March 2017. For version 10, the data team is considering a number of improvements, which include new sectors, domestic margins, and the update of all key inputs to produce a data base for four reference years: 2004, 2007, 2011, and 2014. Board members can help the data team with more IO table contributions. This will be welcome as they begin to match IO tables to a specific reference year and currently for the majority of countries we only have one IO table for all reference years in GTAP. There was a request to make available the components of ad-valorem tariff equivalents, to which the data contributor, Mondher Mimouni (ITC), agreed. A working group held a meeting to discuss the correct treatment for tariff aggregation. There is a paper available to help determine the correct treatment for data construction and policy simulation. Lack of heterogeneity in 5 labor skills was reported, particularly between electronics and textiles. Another working group was formed to further investigate this. As a way forward, it was suggested that the issue be illustrated by comparing version 7 and 9. A third group was composed regarding improvements in the documentation and coverage of agricultural domestic support. Finally, a call to maintain satellite data sets updated for interim releases was made.
- b. **EU Tables** – Angel Aguiar presented on how the collaboration between the European Commission JRC and DG Trade made possible the important update of the 28 EU IO tables. These tables are one of the key inputs in the 9.2 release. The EC is interested in maintaining the EU data current. One request that would facilitate the contribution process, is to update the concordance of GTAP sectors to ISIC revision 4. This will be done as we move to new GTAP sectoral classification that expands long standing 57 sectors into 65, see below.
- c. **New Sectoral Breakout** – Angel Aguiar discussed that the data team will re-scale down to 65 sectors and are using concordances to latest CPC and ISIC. Word of caution not to spread too much if there is no supporting information to e.g., provide skill splits in new sectors.
- d. **Incorporation of Energy Subsidies** - Maksym Chepeliev (GTAP) provided an overview of the current efforts on consumption fossil-fuel energy subsidies incorporation to the GTAP Data Base. After taking further steps on the update of energy export and import prices in the energy module this approach would be implemented to the special issue of GTAP 9 Data Base.
- e. **Update on Quality Control** – Angel Aguiar presented that the current checks and proposed plans for improving the quality of the data base were discussed. The threshold of tax has been reduced from 200% tax or subsidy to a 100%. The data team now rely more on expert reviewers from board member institutions. A commentary section has been introduced for network members to comment on the quality of the country data. This country webpage can be edited to provide other/more information. The data team are also planning to re-construct an IO table after the GTAP Data Base is compiled and compare it with the contributed table to identify issues with supplementary data and/or issues with our methods. Improved documentation to transparent the Center's processes is also planned for public and internal use. These will be open to the board, data contributors, and subscribers and will be linked to current repository of data issues.

## 3. Education, Outreach, and Strategic Communication

- a. **Education Plan** - Mary Burfisher (GTAP) updated the board on participation figures and goals of the GTAP 101 and PTA Courses. Roman Keeney (GTAP), lead course instructor for

the standard short course, presented on the 2017 Short Course and discussed the upcoming task of updating course materials to reflect the updates to the GTAP Model. The next dynamic short course is scheduled for Fall 2018 and will be re-structured to focus on baseline construction.

- b. ***Journal of Global Economic Analysis*** – Tom Hertel (GTAP) provided a status update on the next issue of the JGEA, which is expected by June 30, 2017 in order to be assessed by and assigned a Thomson Reuters Impact Factor, hopefully by late 2017. In the forthcoming issue, there will be four papers: two on advances in theory and methods, one on parameters and one on pedagogy. The co-editors are starting to accumulate a stock of papers, which is good.
- c. **Network Outreach and Mentoring** - Ginger Batta (GTAP) presented details on the GTAP Conference Mentoring Program to the board. Twenty-seven first-time presenters at the GTAP Conference were paired with mentors to help the mentee deliver a successful presentation and also network during the conference. Moving forward, based on evaluation results, Ginger will make adjustments as needed to continuously improve this program.
- d. **GTAP Network, the Next 25 Years** – Dominique van der Mensbrugghe first highlighted the exponential growth of the GTAP Network—growing between 14-26 percent per annum across various regions. This growth was similarly reflected in a large increase in GTAP-related work in China with the evidence provided by GTAP’s new Board Member, the Development Research Center, China. GTAP has been steadily increasing its course offerings and expects to offer additional GTAP-U type courses, for example GTAP-HET, modeling of climate change, etc. After the successful launch of the JGEA, we might want to focus more on broadening GTAP’s reach—for example expanding our outreach to connected disciplines and the media (traditional and social networks). One obvious, yet under-exploited, low-hanging fruit is to provide materials for teaching economics as well as the development of visualization tools for a wider public. The Center is gratified by the strong show of support from the GTAP Advisory Board that has held pretty steady at close to 30 members, which could be further strengthened by additional diversification to notably the private sector and emerging economies.

#### 4. **Parking Lot: Other Data and Modeling Issues**

The parking lot was largely an extension of Session 1 and the next 25 years for GTAP. David Laborde pleaded for an open source model for the GTAP Data Base. He recognized that this was probably not feasible in the near term but should be a long-term objective of the Center. There was also a discussion on scenario development and there was a consensus that the Center should convene a workshop before the next board meeting with all interested parties. The Center aims to hold this workshop end-Fall/early Winter.

#### 5. **New Developments at the Interface of Data and Modeling**

- a. **GTAP Model Facelift** – Tom Hertel (GTAP) reported that the GTAP Model facelift is complete, forthcoming in the June issue of the JGEA, and that it will be incorporated into next year’s short course and eventually into GTAP 101.
- b. **Mainstreaming AEZ/Land Use Database** - Uris Baldos (GTAP) provided an overview of the GTAP 9 Land Use Data Base, which is currently under review and will be released in August. A FlexAgg version for this database will be developed this year.
- c. **Ag-Incentives Database** - David Laborde (IFPRI) presented on the Ag-Incentives Consortium: a consortium inspired by GTAP and composed of key international agencies (CGIAR, FAO, IDB, IFPRI, World Bank and OECD) with the collective aim of monitoring global agricultural distortions on a sustainable basis. David informed the board that estimates

of nominal rate of protection (NRP) and value of distortions at the farmgate level for 64 products in 41 countries from years 2005 to 2016 are now publicly available ([www.Ag-Incentives.org](http://www.Ag-Incentives.org)). David also mentioned that the NRP estimates complement the GTAP Data Base and a satellite account can be created, but doing so would require adjustments to export and import flows.

- d. **Domestic Support** - Pierre Boulanger (European Commission JRC) presented on domestic support. He suggested improved documentation of domestic support so producer support estimates (PSE) can easily be tracked in the GTAP Data Base. Pierre also mentioned the need to incorporate domestic support for all OECD and emerging countries for which PSE are available for the year 2014—for inclusion in GTAP Data 10 pre-release 3. The GTAP data team and JRC (with possible cooperation with the OECD, MAFAP, and IDB) will explore the integration of other domestic support categories (CSE, and possibly not controversial GSSE) via a research paper to be presented at the next GTAP conference.
- e. **Global EPAs Research Consortium Update** - Ken Kawasaki (GRIPS) provided an update on the Global Economic Partnership Agreements (EPAs) Research Consortium. Ken confirmed that the ITC has finalized the database on tariff concessions for a number of EPAs (e.g., intra-RCEP, APEC, EU, and extra-TPP), while UNCTAD has published estimates of non-tariff measures (NTMs) for Papua New Guinea and Hong Kong, in addition to NTM estimates for EU, TPP and ASEAN countries.

## 6. The Network

- a. **GTAP Research Fellows** - The Board approved the following individuals to serve as GTAP Research Fellows for 2017-2020.
  - Badri Narayanan
  - Tamas Revesz
  - Farzad Taheripour
  - Niven Winchester
  - Glyn Wittwer
- o The following individuals have agreed to serve on the 2018 Research Fellows Committee.
  - Kenichi Kawasaki (Chair)
  - Stephen Karingi
  - Thomas Hertel
- b. **GTAP Conferences** - Presentations and subsequent discussions on the current and future GTAP Conferences were held with the following outcomes.
  - **2017 Conference Update** – Ginger Batta updated the Board on the 20<sup>th</sup> Annual Conference on Global Economic Analysis, focusing on the events for the week and conference demographics for the past decade.
  - **2018 Conference Update** – Dominique van der Mensbrugge presented an update on planning for the 21<sup>st</sup> Annual Conference, which will be held June 13-15, 2018 in Cartagena, Colombia. The 2018 Conference Program Committee was established prior to the board meeting and met during the conference to begin formal discussions on potential sources of funding, plenary speakers, and organized session topics. Moving forward, the committee will continue these discussions via email.
  - **2019 Conference Update** - Jan Michalek (University of Warsaw) presented the proposal to hold the 22<sup>nd</sup> Annual Conference in Warsaw, Poland in June 2019. The board unanimously approved this proposal.

## 7. Priorities for Forthcoming Year

- a. **Center Finances** – Dominique van der Mensbrugghe reported that the Center had a small deficit in 2016, a downward revision from a projected small surplus due to lower than anticipated external funding. The 2017 finances are expected to show a small deficit as well, typical in the database cycle as version 9 sales are slowing in anticipation of the release of version 10.
- b. **Priorities for Forthcoming Year** – Dominique van der Mensbrugghe stated that the highest priority for the forthcoming year was the release of the GTAP 10 Data Base. Board members should receive pre-release 3, with all expected revisions and innovations, before the end of the calendar year. We will continue to work with Board members to improve the incoming data including country IO tables. The model focus will be to finalize the new facelift version of the GTAP Model: 1) incorporate the facelift into some of the GTAP Model extensions (GTAP-E, GTAP-AEZ); and 2) re-vamp documentation and instructional materials to reflect database and model changes—next year’s short course will use the new model standard. Research is focused on consolidating recent advances: MRIO, domestic margins, HET and extending work in water and land-use. We will also have a focus on dynamic baselines that will include a new project in collaboration with the WTO and a workshop to compare how different research teams develop their baselines. We are looking into the possibility of a new GTAP-U course on the HET model. Time and resources permitting, we will start re-vamping the GTAP website—initially with a focus on the database/model components.

## 8. Additional Meetings

- a. **Reconciling Bilateral Trade: An Update** - Mark Gehlhar (Department of the Interior, Office of Policy Analysis and Budget) presented on making a significant upgrade in the trade data – extending his treatment of re-exports to more than 50 countries. This represents a significant improvement, which will be available in GTAP 10.
- b. **Services Trade: Recent Developments** – Joe Francois (World Trade Institute) updated the Board on recent advances in the compilation of information on trade in services: 1) bilateral trade (including new Balance of Payment definitions); 2) measures of barriers to trade in services; and 3) policy developments. This is an active research area involving a number of players including the IMF, the EC, OECD, UNCTAD, WTO, World Bank, GTAP and several universities and institutes.