



Global Trade Analysis Project

GTAP Advisory Board Meeting Summary

June 23-24, 2025

Prepared by:

Center for Global Trade Analysis
Department of Agricultural Economics
Purdue University

Meeting Attendees

Center for Global Trade Analysis

- Angel Aguiar (aaguiar@purdue.edu)
- Channing Arndt (carndt@purdue.edu)
- Uris Lantz Baldos (ubaldos@purdue.edu)
- Ginger Batta (gbatta@purdue.edu)
- Maksym Chepeliiev (mchepele@purdue.edu)
- Erwin Corong (ecorong@purdue.edu)
- Alla Golub (golub@purdue.edu)
- Thomas Hertel (hertel@purdue.edu)
- Holly McIntire (hcmcinti@purdue.edu)
- Dominique van der Mensbrugghe (vandermd@purdue.edu)

GTAP Consortium Representatives

- Eddy Bekkers - World Trade Organization (eddy.bekkers@wto.org)
- Mike Bourne - Department for Environment, Food and Rural Affairs (michael.bourne@defra.gov.uk)
- Mohamed Abdelbasset Chemingui - UN Economic and Social Commission for Western Asia (cheminguim@un.org)
- Shenjie Chen - Global Affairs Canada (shenjie.chen@international.gc.ca)
- Rob Dellink - Organisation for Economic Co-operation and Development (rob.dellink@oecd.org)
- Neil Foster-McGregor - Asian Development Bank (nfostermcgregor@adb.org)
- Stephen Karingi - United Nations Economic Commission for Africa (karingi@un.org)
- Aikaterini Kavallari - Food and Agriculture Organization of the United Nations (aikaterini.kavallari@fao.org)
- Maryla Maliszewska - The World Bank (mmaliszewska@worldbank.org)
- Badri Narayanan - Infinite Sum Modelling, LLC (badri@infisum.com)
- Janine Pelikan - Thünen Institute of Market Analysis (janine.pelikan@thuenen.de)
- Hugo Rojas-Romagosa - International Monetary Fund (hrojas-romagosa@imf.org)
- Jan Schmitz - European Commission - DG Trade (jan.schmitz@ec.europa.eu)
- Susumu Suzuki - Economic and Social Research Institute, Cabinet Office (susumu.suzuki.j8b@cao.go.jp)
- Fousseini Traore - International Food Policy Research Institute (fousseini.traore@cgiar.org)
- Hans van Meijl - Wageningen Economic Research (hans.vanmeijl@wur.nl)
- Matthias Weitzel - European Commission - Joint Research Centre (matthias.weitzel@ec.europa.eu)
- Wei Xie - Peking University (xiewei.cc@pku.edu.cn)

Members at Large

- Environment/Sustainability Community
 - Ruth Delzeit - University of Basel (ruth.delzeit@unibas.ch)
- Software/Modeling Community
 - Michael Jerie - Centre of Policy Studies, Victoria University (michael.jerie@vu.edu.au)
- Trade/Globalization Community
 - Anna Strutt - University of Waikato (astrutt@waikato.ac.nz)

Meeting Summary

Meeting and Operational Updates

- **Meeting Overview**

Channing Arndt (Center for Global Trade Analysis) presented a short and simple session emphasizing the focus of day 1 on proximate issues and day 2 on longer-term visions. Other items included a short summary of the attributes/flaws of the new director.

- **Center Management and Finances**

Channing Arndt (Center for Global Trade Analysis) reported that the CGTA recorded negative cash flow of \$360K in FY2024-25. CGTA used approximately 25% of reserves to cover the loss. Naïve forecasts project a loss in FY2025-26, though this is something the CGTA will seek to avoid. The principal sources of the change relative to FY2023-24 were the very difficult funding environment in place since November 2024 and the addition of the new Director and his associated costs.

Modes for closing the gap put forward and discussed were an increase in the consortium fee and increased revenues from database sales. In terms of consortium fees, it was pointed out that:

- There has been no fee increase since 2016.
- Real equivalent of 2016 level is \$27,210.
- An annual increase of up to 4% was agreed in 2016.

At the same time, the CGTA recognized that the environment is difficult in general, including for consortium members. This point was reiterated by various consortium members, including the possibility that a hike in consortium fees could cause some members to drop from the consortium.

Concern was also registered that the 2019 base year planned for version 12 is too old.

- **Upshots of Consultations**

Channing Arndt (Center for Global Trade Analysis) began this session with a review of the consultations that had been undertaken by the new Director since January 1, 2025. The three main activity areas of GTAP (the new elevator pitch) were then reviewed in preparation for the discussions of the longer-term vision scheduled for day 2.

- **GTAP Scientific Council Update**

Tom Hertel (Center for Global Trade Analysis) presented that at the 2024 GTAP Advisory Board Meeting, the Board voted to establish the GTAP Scientific Council to solicit a broader range of input from the scientific community in order to enrich and inform discussions at the next board meeting. The Council is comprised of the following members: Joseph Francois (Chair): U. of Bern & World Trade Institute, Frank van Tongeren (Vice-Chair): EconSail, Emily Blanchard: Dartmouth College, Simeon Ehui: IITA/CGIAR, Lionel Fontagne: Banque de France, Thomas Hertel (Secretary): Purdue University, Frances Moore: University of California at Davis, Navin Ramakutty: University of British Columbia and Aline Mosnier: UN Sustainable Development Network and FABLE Consortium. The Council identified important issues in three areas: data, theory and model validation.

On the data front, they recommended that the GTAP Center remain THE trusted and readily accessible for source for harmonized data to support global multi-sector modeling, including Multi-Region Input-Output analysis. They also recommended that GTAP extend and consolidate the database to cover more trade-related policies, i.e., subsidies, as well as keeping tabs on import and export instruments. There was also an interest in

developing more ‘hooks’ for linking disaggregated domestic data on production, consumption and household activity to the sector-focused GTAP database. This will allow for deeper analysis of the distributional impacts of trade policies. While the Center would likely not collect these data, it could act as a repository while providing technical advice on how it might be used. And finally, the Center could assist in tracking and understanding impact of current trade actions

On the theory front, the Council recommended better positioning global CGE analysis in the current academic discussions vis a vis the New Quantitative Trade Modeling as well as the Dynamic macro-modeling. It was also recommended that the Center explore new and dynamic areas in the global economy, including: digital trade, multinational service companies (digital and other). This will require addressing issues of measurement as well as the development of theory and modeling approaches. Finally, the role of AI in the economy and in global trade analysis deserves further exploration.

Finally, it was recommended that the GTAP community consider following the lead of the energy modeling forum, undertaking more coordinated work on model validation and benchmarking. The Board concluded that the *Journal of Global Economic Analysis* could also play a valuable role here, encouraging publication of model validation exercises.

In addition to these points, which the Board endorsed, the Board recommended that the Center consider developing a White Paper highlighting future research challenges in global economic analysis. Such a White Paper could play an important role in shaping future research calls from organizations such as the European Commission.

- **GTAP-EU**

Dominique van der Mensbrugghe (Center for Global Trade Analysis) described the main objectives of the Center’s project to open an office in Europe and the current state of play—as there has been limited progress over the last 12 months. The Center is working with Purdue University’s senior management to finalize the details before requesting approval from Purdue University’s Board of Trustees. The Center is prepared to proceed immediately with implementation when the project gets the final greenlight. Board members, particularly those in Europe, have been enthusiastic supporters of this project.

GTAP Data and Modelling Updates

- **GTAP 12 Data Base and Input-Output Tables**

Angel Aguiar (Center for Global Trade Analysis) provided an overview of releases since last board meeting, which included Circular Economy and MRIO extensions of GTAP 11, for which there were scheduled sessions. In addition in February, the Center had an interim release of GTAP (11.1) that expanded the regional coverage and reduced the number of aggregate regions. The interim release of the standard database was followed by the GTAP-E and Power extensions with consistent satellite emissions.

Reviewing the GTAP 12 cycle, it was explained that the Board chose 2019, rather than 2021, to avoid the effects of the pandemic. A later reference year would have delayed the release of GTAP 12, thereby selecting 2019, the Center will be able to shorten the data base cycle from 3 to 2 years. The updates of the first and second pre-releases of GTAP 12 were listed and explained that the Center hopes to include revised tariffs that the ITC will contribute on the final release. The revised tariffs include US trade remedies as part of the effective tariffs. Regarding the second pre-release of GTAP 12, three following sessions provided details on energy and emissions, labor and income data, and land use and cover data. The latter is one of two novelties of GTAP 12, with the second is about the inclusion of external transfers (i.e., remittances, investment income, and official aid).

Angel also reviewed the contribution process of input-output tables. The UNECA and UNESCWA were recognized because they have been very active in the contribution process. GTAP 12 will have at least four new countries and 15 updated IOTs. These IOTs are matched to each reference year. For the majority of countries, the Center still has a single IOT that is used for all reference years.

The session ended listing three upcoming releases of satellite and extension data. The SSP satellite was emphasized during the presentation because the extensions were going to be discussed later on. The current SSP utility is used in the dynamic course and may be difficult for those who have not taken the course; therefore, the Center plans to include the SSP within the GTAP distributions to make it easier for the subscriber to use this information.

- **Labor Data and Income & Factor Taxes**

Erwin Corong (Center for Global Trade Analysis) presented updates to labor, income and factor tax flows in the GTAP 12 Data Base. The data inputs to update employment volumes and wage flows for 139 countries are taken from the International Labor Organization (ILO), while income and factor tax data for 183 countries are sourced from the Government Finance Statistics (GFS) published by the International Monetary Fund (IMF) and the Global Revenue Statistics data published by the Organisation for Economic Cooperation and Development (OECD). Erwin ended his presentation by mentioning that constant wage bill shares across industries and data on employment (volumes) by industries will be addressed in GTAP 13 Data Base.

- **Energy and Emissions**

Maksym Chepeliev (Center for Global Trade Analysis) presented an overview of the key data inputs and features of the GTAP energy and emissions database version 12. The latter included the updated bilateral energy trade data, where COMTRADE flows are complemented by the BP and Eurostat data, in particular, for the case of natural gas, which is substantially underreported in the COMTRADE database. Fossil fuel consumption subsidies in GTAP 12 are sourced from two data sources – the IMF (for the pre-2010 period) and the IEA (for the post-2010 period). GTAP 12 emissions accounting methodology follows GTAP 11, while including updates for selected data sources, such as the latest version of the EDGAR (v8.1) database for the case of air pollutants, as well as more up-to-date EDGAR and FAO data for the case of complementary GHG accounts. Finally, Maksym discussed some of the ongoing work on improving the representation of energy use and emissions from international transportation activities conducted within the EU HORIZON project “ENTICE”. During the discussion part, one of the points raised concerned the choice of the energy subsidies data for GTAP and Maksym explained that the IMF data, while being more detailed, appears not to be properly updated for recent years and therefore, a priority is given to the IEA data. At the same time, since IEA data includes subsidy reporting only for the post-2010 period, to cover the earlier GTAP reference years, the IMF data is used.

- **Mainstream Land Use and Cover**

Uris Baldos (Center for Global Trade Analysis) presented the GTAP-AEZ Data Base for version 12 which has been integrated in the standard GTAP Data Base build to allow for quick creation of the LULC database. Uris also presented updated AEZ map definition based on the recent GAEZ v.5 release by FAO as well as next steps including updating land use and land cover maps using latest satellite land cover data and crop production maps from FAO as well as integrating biodiversity metrics and updating land use change emissions. In addition to these, the Board recommended to develop and release a version of the GTAP AEZ model which preserves physical land cover (additive CET).

- **Build Stream**

In collaboration with Thiago Simonato and Angel Aguiar, Erwin Corong (Center for Global Trade Analysis) reported on ongoing work to update the GTAP Data Base “build” routine designed and created by Rob McDougall. Erwin shared that Thiago Simonato is carrying out much of the work, and has implemented parallel processing to reduce “build” runtime. Thiago also wrote new codes/scripts for compatibility with

GNU Make and Windows Subsystem for Linux (WSL), thereby eliminating previous dependencies on legacy software such as OPUS Make and Cygwin. Erwin concluded his presentation by sharing that the implemented updates reduced “build” runtime for GTAP 12 Data Base by 70%. Moreover, further updates are underway for GTAP 13 Data Base “build” particularly streamlining the data generation codes and introducing Python routines for visualization purposes.

- **MRIO**

Erwin Corong (Center for Global Trade Analysis) presented the GTAP-MRIO 11 Data Base which was distributed to Advisory Board Members and data contributors in June. Erwin shared that a new GTAP-MRIO data workflow has been created for ease of processing and faster data generation. For consistency, the new GTAP-MRIO workflow shares the same tariff data routine used in the standard GTAP Data Base, and is based on HS2017 (Harmonized System) trade classification and Broad Economic Classification (BEC) 5 concordances. Erwin also confirmed that a new GTAPAgg package has been developed to generate aggregated data for the GTAP-MRIO model. In addition, a new 2-dimensional GTAP World Input Output Table (GTAPWIOT) data format is also being created upon data aggregation. Finally, Erwin shared the the GTAP-MRIO 11 Data Base will be released to all GTAP data subscribers in September.

- **Circular Economy**

Maksym Chepeliev (Center for Global Trade Analysis) presented recent developments of the GTAP Circular Economy (GTAP-CE) Data Base and ongoing efforts on the disaggregation of the critical minerals supply chain in GTAP. GTAP-CE v11 Data Base disaggregates a number of sectors in the GTAP-Power Data Base, including mining, metals and plastic production, cement and fertilizers, increasing the total number of sectors to 99. It was publicly released to the GTAP community earlier this year and this was the first public release of this type of database. Following the feedback provided by users, a revision of the database with selected refinements is expected later this year.

Together with colleagues from WTO, the Center staff has been working on the disaggregation of the critical minerals supply chains in the GTAP Data Base. This includes disaggregation of mining, mineral processing/refining, intermediate use and final use sectors. Overall, 7 GTAP-CE parent sectors are being disaggregated into 41 activities. Selected downstream uses include magnets, nacelles, solar panels, various types of batteries and electric vehicles.

In another set of activities (within the EU HORIZON “ENTICE” project) in collaboration with the team Politecnico di Milano a new data disaggregation routine coded in Python is being developed. The latter extends the existing data disaggregation routine (MARIO package) by introducing data re-balancing algorithms and make the package compatible with GTAP Data Base format (which in many cases is more detailed than other MRIOs). A stocktaking of information for the disaggregation of additional sectors (e.g. new energy technologies) is also ongoing.

During the discussion part, several Board members indicated their interest in the development of the GTAP critical minerals database and there was a discussion of organizing a working group to support this activity. In addition, following up on the overall framework for representing critical minerals supply chains introduced by Maksym in his presentation, there was a discussion of developing an investment matrix (highlighted as one of the key elements of the framework), relying on the experience of developing such matrix for Europe.

- **GTAP Models**

Erwin Corong (Center for Global Trade Analysis) presented on the philosophy behind the GTAP suite of models. Erwin stated that one of the key roles of the standard GTAP model is to provide the foundation upon which GTAP model extensions are built. With the guiding philosophy that there will never be one global CGE model to rule them all, the standard GTAP model has been designed to be relatively generic and can be readily modified such that a menu of models can be created to analyze either a different policy issue or a different economic and/or biophysical dimension of the global economy. Erwin ended his presentation by

showing the the GTAP webpage where the GTAP suite of models can be downloaded, and advised that the GTAP-RD (recursive dynamic) models will also be posted on the same webpage.

GTAP-U Updates and GTAP Research Fellows

- [GTAP-U](#)

Ginger Batta (Center for Global Trade Analysis) presented an update on GTAP-U including enrollment numbers since the 2024 board meeting, an overview of curriculum updates to existing GTAP-U courses, new courses being added to the catalog, and covered the mentoring program being delivered through the GTAP Conference Scholars Program.

In terms of enrollment, six courses have been held, or are currently underway, since the 2024 GTAP Advisory Board Meeting: two GTAP 101 Courses (53 enrolled, 48 graduates), two GTAP Short Courses (52 enrolled, 22-49 graduates depending on the graduate total from the course currently underway), one GTAP PTA Course (9 enrolled, 8 graduates), one GTAP Dynamic Short Course (20 enrolled, 16 graduates).

Over the past year, two existing GTAP-U courses (GTAP PTA and the GTAP Dyanmic Short Course) underwent curriculum updates to align their content with updated models and/or refining learning materials and assessments. Based on feedback received from participants following each of these courses, additional updates will be implemented before their next offerings.

Four new courses are currently in varying stages of development. At the introductory level, a course on GTAP for Policymakers/Non-Economists is in the works, which will provide an introduction to CGE to those enrolled. This course will be fully online and self-paced, and is expected to be comprised of three modules covering an introduction to CGE and GTAP, core elements of CGE Models, and will culminate in a case study. The curriculum for this course is currently being developed and it anticipated for launch in 2026.

The next two new courses introduced, fall under the specialized tier in the course catalog. The first is on GTAP-E-Power and will serve as an introduction to climate change applications with the GTAP-E-Power Model. This course will be fully online and instructor lead, and will be comprised of six modules covering an overview of the course, theoretical structure of the GTAP-E-Power Model, database for the model, case studies, and will culminate in a group project. Development of this course has yet to begin, but it is anticipated for launch in 2026.

The next specialized course is on GTAPinR, which will focus on using R as an open-source alternative for working with the GTAP Model and data. This course will be fully online and self-paced, and is expected to have four modules covering an overview of GTAPinR, introductions to data structures in R, the HARr, and tabloToR packages. The curriculum for this course is currently being developed and it anticipated for launch in 2026.

The final new course presented falls under the interdisciplinary category and focusses on the SIMPLE model and applications. The SIMPLE Course will be fully online, instructor lead, and will be comprised of six modules covering an overview of the course, an introduction to RunGEM, data, model and population and income growth, supply-side, nutrition, and total factor productivity, scarcity in global food systems, and will culminate in a group project. The curriculum for this course is currently being developed and it anticipated for launch in 2026.

Ginger concluded the presentation with an overview of the GTAP Scholars Program which gives first-time student presenters at the GTAP Conference an opportunity to rehearse their presentations virtually ahead of the conference, receive feedback, and incorporate any suggested changes ahead of their conference presentation. Ginger encouraged everyone to attend one of more of the sessions in which the scholars program participants were presenting in, to lend them support and to keep an eye on up-and-coming members of the GTAP Network.

Following Ginger's presentation, the following discussions took place.

- Channing Arndt (Center for Global Trade Analysis)
 - Asked Ginger to mention the Young Scholars Initiative (YSI) funding that was being offered during this year's conference. Ginger explained that the YSI group approached us about funding days before the conference abstract submission deadline, offering the potential to fund some participants to attend the conference. Since their communication came so late, we weren't able to run this opportunity through our normal process for travel funding (e.g., CoPS, GAMS, Tyner, PANAP), and instead Ginger provided them names of students who had abstracts accepted for presentation. YSI then created an application form on their end that was provided to those students and they were asked to apply if they were interested in being considered for funding. YSI selected their recipients and worked directly with them to administer the funding. Ginger will be in communication with YSI following the conference to see if this is a collaboration they would like to carry forth into future conferences and courses, and if so, work with them to establish processes.
- Aikaterini Kavallari (Food and Agriculture Organization of the United Nations)
 - Who is the target audience of the GTAP for Policymakers/Non-Economists Course?
 - Ginger responded that the initial target was policymakers, lawyers, etc., essentially anyone in institutions who may be given CGE/GTAP-based results and analysis, but would need help deciphering and understanding it.
 - Dominique van der Mensbrugghe (Center for Global Trade Analysis) added that initially, the thought was to have two tracks for this course: 1) policymakers/lawyers and 2) interdisciplinary, but current focus appears to be on the policymaker side.
 - Aikaterini commented that three weeks is too long for this course and that no one from her organization that this course would be targeted to, would be able to get approval to take it. She suggested we consider shortening it, or break it from a collective course into standalone 2-3 hour modules that people can enroll in individually.
 - Ginger and Anna Strutt (University of Waikato) both commented that three modules doesn't necessarily equate to three full weeks-worth of dedicated learning time, it's just the number of modules. Depending on the learner's time spent on the course, they could finish earlier or later, since it is self-paced. Plus, since it is targeted for open-enrollment, access to the course wouldn't be limited to three weeks for three modules. Instead, once the content is developed, we would take a look at how much time we think would be a sufficient amount for completion, and add on some additional time to accommodate those that may not be able to see the course through from start to finish in one setting. For example, if the course has three modules, we may end up allowing six weeks for completion. Ginger informed that we would discuss Aikaterini's comments internally as the course is developed and decide on a course of action.
 - Aikaterini also suggested that the Center offer short, 1 day or less trainings targeted to the technical audience on satellite accounts, MIRO, etc., though there could be potential licensing issues that would have to be explored.
 - Ginger and Angel Aguiar (Center for Global Trade Analysis) responded that they, along with Zeynep Akgul have had recent discussions on this topic and would explore it further.
 - Dominique van der Mensbrugghe (Center for Global Trade Analysis) responded to the suggestion of MIRO training and added that there might be potential for training with Wolfgang Britz (CGE Box) and the World Bank.

- Maryla Maliszewska (World Bank) said she would have to contact her colleagues about this.
 - Hugo Rojas-Romagosa (International Monetary Fund) suggested that the World Bank currently offers MANAGE training, as well as some at the country-level.
- Aikaterini lastly suggested that perhaps future trainings could focus more broadly on CGE, not just GTAP.
 - Ginger offered to pass this suggestion along to Zeynep Akgul for consideration within GTAP-U.
- Mohamed Abdelbasset Chemingui (United Nations Economic and Social Commission for Western Asia)
 - Echoed Aikaterini's point on course duration and suggested that courses should be short and that more than one week is too long for a training.
- Shenjie Chen (Office of the Chief Economist, Global Affairs Canada)
 - Suggested that the emphasis of the policymakers/non-economists course could change to focus on how CGE modelers can package their results and analysis so they can present it to the policymakers more clearly and efficiently, so that policymakers accept and readily understand the results, thus putting the onus of better communication on the modeler, not the policymaker.
- **GTAP Research Fellows**

Janine Pelikan (Thünen Institute of Market Analysis) and chair of the GTAP Research Fellows Committee, presented the committee's recommendations for fellows for the June 2025 – May 2028 term. The Board approved all proposed nominees.

 - Jayson Beckman
 - Ole Boysen
 - Emanuele Ferrari
 - Luca Salvatici (*posthumous*)
 - Karen Thierfelder

The research fellows committee serves three year terms, with a new committee formed for 2026-2029.

- Bill Powers (chair)
- Maryla Maliszewska (board representative)
- Erwin Corong (Center for Global Trade Analysis representative)

- **Parking Lot (Day 1)**

Channing Arndt (Center for Global Trade Analysis) summarized that in line with ongoing discussions about the need for a 2023 dataset (called 2023 synthetic at the meeting), the possibility of a GTAP flagship report looking at the new trade landscape was mooted. The idea was positively received. The logic of a report following a special effort to produce an updated data set to enable trade analysis was noted.

Vision - Lowering barriers

- **Future Modeling Infrastructure**

Erwin Corong (Center for Global Trade Analysis) presented on GTAP's future modeling infrastructure which is grounded on an Integrated Assessment Network (IAN). Within this IAN framework, the GTAP model

serves as the foundational model upon which more sophisticated analyses can be undertaken. This is made possible by soft- or hard-linking the GTAP model with other specialized models focused on a different economic, demographic, energy and/or biophysical dimension. Moreover, the IAN framework is flexible such that each model within it can be run independently or together based on research objectives. Erwin concluded his presentation by stating that the IAN framework provides benefits to the GTAP network since it can facilitate collaboration with experts in other fields and can pave the way for cutting-edge and holistic analyses, thereby resulting in increased research and policy contribution.

- **Data Strategy**

Angel Aguiar (Center for Global Trade Analysis) presented a possible future of the GTAP Data Base construction. This vision sees the Center becoming a service provider. The transition requires that the Center internalize the processing of all data inputs, which is the case of all satellite extensions, which rely on what other institutions post publicly. For the standard database construction, the Center still relies on important contributions of merchandise trade and protection data (i.e., tariffs, EU domestic support and agricultural export subsidies).

Four major initiatives would also help the Center transition to a service provider. The first initiative is something the Center has already begun, is lead by Thiago Simonato, and involves updating the build stream, which was presented by Erwin Corong during day one of the meeting. These updates have increased the speed of the build and improves the accesibility of the build by relying on more recent technology. The second initiative derives from the first and focuses on adding flexibility to the build, which will allow the Center to bring new information, or to adjust the emphasis depending on the objective. For example, the balancing of trade data could be different if not following the reliability index that the contributor, Mark Gehlhar, uses. The third initiative consists on opening the source code to board members, beginning with the satellite offerings, so that others could participate in the construction process. The Center could develop courses for those interested in become “data builders”. Finally, the fourth initiative consists in finding alternative sources of funding that permits the Center to not to charge for GTAP Data Base access. These initiatives merit careful consideration as data base sales is an important source of funding for the Center.

- **Training**

Channing Arndt (Center for Global Trade Analysis) presented a comprehensive vision for training. The presentation elicited substantial discussion. There was broad support for the idea, though more detail is required. This will be forthcoming in the Vision document.

Comments were:

Michael Jerie

Need to consider software and perhaps software design.
Highlighted problem of personnel retention.
Importance of a career path.

Hans von Meijl

Question on the aim of the Integrated Assessment Network.
Answer: Not an IAM but a modular framework.

Neil Foster-McGregor

Interest in using GTAP more at ADB. Course could be a vehicle.

Janine Pelikan

Advised on investigating how participants might collect credits from a GTAP comprehensive course.

Pointed out that the presentation of the comprehensive had emphasized non-academic (but still analytically oriented) career paths, an academic career path could follow the course and that this should be recognized.

Stephen Karingi

Noted that, in Africa, the training pipeline to support policy expertise is not present. Highlighted the importance of a functional business model.

Rob Delink

Appreciated the proposed young scholars program following the comprehensive course. Suggested the possibility of a career fair around the GTAP conference.

Fousseini Traore

What is different compared with PEP?

Main answer: Longer and more comprehensive.

Maryla Maliszewska

Credits for students in graduate programs (similar to Janine).

The discussion was greatly appreciated. Some of it has been brought into the Vision document that will be circulated. The issue of credit will be addressed as the course is developed.

Visions – Conducting research and serving as a platform

- **Introduction and Research Comparative Advantage**

Erwin Corong (Center for Global Trade Analysis) opened the session on conducting research and serving as a platform by focusing on the research comparative advantage of researchers within the Center for Global Trade Analysis. To begin with, Erwin enumerated three core GTAP products, namely: (i) constructing harmonized global datasets with publicly-available models for conducting global economywide analysis; (ii) carrying out evidence-based research using both GTAP data and models; and (iii) training on GTAP models through GTAP-U. Erwin then highlighted the Center's research comparative advantage: (a) remains trade focused, but extended by either a specific policy issue or a different economic and/or biophysical dimension of the global economy; (b) GTAP model development (in-house and through consortium funded projects); (c) through GLASSNET, grid-scale modeling of food, agriculture, and the environment using the SIMPLE-G modeling framework and InVEST model for Ecosystem and biodiversity; and (d) GTAP-SIMPLEG framework for global-local-global analyses. Erwin ended his presentation by introducing the next four presentations: Trade and Welfare (Dominique van der Mensbrugghe), Mitigation and Circular Economy (Maksym Chepeliev); Agriculture, food and natural resources (Alla Golub) and GTAP as a platform (Channing Arndt).

- **Trade and Welfare**

Dominique van der Mensbrugghe (Center for Global Trade Analysis) emphasized that trade has been at the core of the Center's data and research activities from the start and described the immense improvements the Center has made to the GTAP Data Base and model over the last three decades—with increasing heterogeneity a major theme (more sectors, countries, instruments (e.g., TRQs, NTMs), and trade specifications for extending the standard GTAP model (e.g., GTAP-HS, GTAP-IRTS, GTAP-HET, GTAP-MRIO, GTAP-POV, GTAP-SR). Looking ahead, some of the main challenges include: (1) model validation; (2) developing data and modeling the digital economy; and (3) dealing with the substantial uncertainty about the new technologies relevant for the 'green' transition—both in terms of which technologies will emerge and which countries will emerge as leaders in the new technologies. There was a follow-up discussion on model validation. Tom Hertel (Center for Global Trade Analysis) mentioned that the Center had organized an internal

workshop on model validation and the potential for organizing a special issue of the Journal of Global Economic Analysis (JGEA) on this theme.

- **Mitigation and Circular Economy**

Maksym Chepeliev (Center for Global Trade Analysis) presented featured applications in the areas of climate mitigation and circular economy policies. Examples from four studies have been highlighted in the presentation: (1) “Implications of the Net Zero Transition Scenarios on SDG Indicators: Linking Global Energy System, CGE and Atmospheric Source-Receptor Models”; (2) “US climate policy yields water quality cobenefits in the Mississippi Basin and Gulf of Mexico”; (3) “Carbon Pricing Policies under the Paris Agreement Can Lead to Progressive Income Distribution”; (4) “Circular Economy Transition in Europe Requires Ambitious Policies Beyond Climate Mitigation”.

Presented studies included applications of various modeling frameworks, many of which have been linked for assessment purposes. For instance, study (2) included a linking of four different models spanning from a global economic model to detailed agro-economic and biophysical models. Maksym closed his presentation with an overview of some of the ongoing research projects in this area, including the development of a health module for assessing health implications of dietary policies; processing of Luxembourg income surveys for their linking to the microsimulation modeling framework and further coupling to GTAP; use of industrial ecology methods for refining commodity/sectoral level analysis provided by the CGE models; and development of the harmonized model-linking protocols to facilitate coupling of selected typical models (e.g. CGE and energy system models).

During the discussion part, questions regarding the specifics of the developed health module have been raised and Maksym responded that the anticipated features are similar to those used within the EAT-Lancet assessment framework and he has been in touch with the developers of the corresponding module. Availability of the household survey data used in the GIDD global microsimulation model has also been discussed and Maksym suggested reaching out to the World Bank colleagues in this regard, though noted that indeed there could be some limitation of accessing corresponding dataset and that one of the motivations behind processing Luxembourg income surveys is to make a wider use of the publicly available data

- **Agriculture, Food, and Natural Resources**

GTAP is specialized methodologically in simulation with global CGE, but very diverse topically because GTAP-based data and models are successfully applied across a variety of key topics. Modelers in the GTAP network are increasingly relying on approaches where a CGE model interacts with other models. In the agriculture, food, and natural resources research domain, GTAP-based models, for example, can be linked with climate models, water models, crop models, and gridded partial equilibrium (PE) models. Alla Golub (Center for Global Trade Analysis) presented three GTAP-based studies in that research domain and discussed different approaches to linking GTAP with other models. Research topics covered in the presentation included water scarcity and cooperation in transboundary water management among riparian countries, carbon leakage from unilateral afforestation, and local implications of the trade war. Examples included in the presentations demonstrated soft-link, iterative procedure, and full integration with the GTAP Model.

Discussion was focused around specifics of the three studies. How to develop common aggregation between the GTAP and PE models? Can payments for environmental services be incorporated in the analysis of afforestation policies? Can we use special version of GTAP with explicit representation of water as a production input in analysis of virtual water trade? What are other data and approaches available for virtual water trade modeling?

Overall, presentations in this session highlighted three key GTAP’s roles. The first role is to ensure high-quality global economy-wide GTAP data and models. Second, to develop and maintain partnerships and linkages with other research groups that develop high-quality frameworks that surround our research domains.

Third, to facilitate linkages across modeling frameworks to make it easy to conduct focused multi-model studies.

In conclusion, GTAP's comparative advantage relies on specialized skills to flexibly draw together suites of models that rigorously address an issue.

- **Serving as a Platform – Policy Seminars**

This was a quick session led by Channing Arndt (Center for Global Trade Analysis) because earlier sessions had run over time; however, it was also straightforward and easy to run through quickly. GTAP's current efforts (Annual Conference, JGEA, Technical Seminars, and Social Media presence) were summarized and supported. New ideas included a Policy Seminar Series and ad hoc events. Both received broad support.

There are updates for both. We are pleased to announce that Ngozi Okonjo-Iweala, DG of the WTO, has tentatively agreed to speak at the inaugural policy seminar on the new trade landscape. More details will come as we work out timing and mode with her office. In addition, an informal seminar on modeling the recent set of tariff increases took place in early July. The interest level was very high for both Americas and Asia sessions (European based individuals had a choice of early or late in the day) and feedback has been broadly positive. For future sessions, there is a need to work out kinks in terms of sharing screens and audio. It may be that a dry run session with presenters would be beneficial in light of the high level of interest.

Center Priorities

- **Forthcoming Year Priorities**

Channing Arndt (Center for Global Trade Analysis) reported that a series of priorities had been developed. These merit reproducing here.

1. Financial stabilization
 - a. Come to agreement on consortium fee
 - b. Increase data base cost for non-members starting with v.12 release
 - c. Other elements
2. Data
 - a. Release of GTAP V12 to public
 - b. 2023 or 2024 Synthetic Data Version (likely tied to version 12)
 - c. Services sector disaggregation
 - d. Critical minerals
 - e. Open source and/or open access
3. Models
 - a. Facilitate linkages to other models/communities
4. Training
 - a. Address comments on existing GTAP-U coursework (see responses above)
 - b. Advance comprehensive course idea
5. Conducting research
 - a. High profile new trade environment paper
 - b. Follow comparative advantage of GTAP as presented/discussed
 - c. Kick-start validation activity within the network (using JGEA as a vehicle)
6. Serving as a platform (new items)

- a. Policy seminars
 - b. Ad hoc events
 - c. Influence calls for research by major funders
7. Form working groups on priorities comprised of
- a. Center staff
 - b. Staff from interested consortium members (completely voluntary)
 - c. Others as required

Key dates were also identified.

1. By July 31, 2025
 - a. Board meeting report
 - b. Plan for 2023 or 2024 synthetic data discussed/developed
 - c. Draft of Vision for GTAP for 2035 and Beyond
 - d. Name top priority working groups
2. August 2025
 - a. Virtual follow to board meeting discussion
 - i. Loop-in consortium members who were unable to attend in-person
 - ii. Update on 2023 synthetic data
 - iii. Vision document discussion
 - iv. Update on consultations with funders (BEF, Gates, etc)
 - v. Explicit asks for endorsement of Vision Document by willing consortium members
 - b. Establish working groups
3. January 2026
 - a. Mid-year virtual check-in
 - b. Progress on financial stabilization etc.
 - c. Working groups report
4. June 2026
 - a. Annual board meeting in Kyoto
 - b. Annual conference

These items were agreed and are on track.

Current suggestions for working groups are the following (GTAP contact in parentheses):

- Trade landscape and the 2023 data (Channing Arndt and Dominique van der Mensbrugghe)
- Services sector disaggregation (Angel Aguiar)
- Critical minerals (Maksym Chepeliev)
- European Domestic Support (Dominique van der Mensbrugghe – tentative)
- Tariffs utilization rates (Thiago Simonato)

Center for Global Trade Analysis: Forthcoming Year Priorities



Data Goal

To improve the quality of data products through improving the quality of contributed I-O data, adding and improving other datasets, monitoring data quality using comparison programs, and versioning control and documentation

Tasks	Responsibility
Primary Priorities	
Maintain GTAP release schedule	Aguiar
Work with IO table contributors	Aguiar
GTAP-Migration for version 12	Aguiar
GTAP-MRIO and WIOD like format	Corong
Forward looking tariffs and NTMs	Corong
GDyn for version 12	Golub
GTAP-POWER for version 12	Chepeliev
GTAP-Circular Economy for version 12	Chepeliev
Data-program separation	Simonato
Improve disaggregation module	Simonato
GTAP New build system development	Simonato
Secondary Priorities	
Prepare plan for GTAP 13 development	Aguiar
Domestic Margins	Corong
Labor data by Education	Corong
Nutritional Accounts	Chepeliev
Complementary GHG emissions (includes air pollution)	Chepeliev
IO multipliers or Emission factors	Chepeliev
GTAP-SSP integration tools (R package)	Simonato
Development of the GTAP Data Base with disaggregated livestock sectors	Chepeliev, Golub, van der Mensbrugghe
Finalize and test the updated 'FIT' procedure, which is at the core of the database 'build' workflow	van der Mensbrugghe
Development of the GTAP Critical Minerals Data Base	Chepeliev



Research Goal

To actively participate in quantitative economic analysis of pressing global concern in the areas of trade and development and global environmental issues

Tasks	Responsibility
Primary Priorities	
<i>Journal of Global Economic Analysis</i>	Hertel, Winchester
Sustainable transition of the livestock sector: climate change mitigation, healthy diets and policies promoting circularity.	Chepeliev, Golub, van der Mensbrugghe
Exploration of Brazil-US land use scenarios focusing on multi-cropping activities	Baldos, Corong, Golub, van der Mensbrugghe, Wang
Impacts of climate change on forest and agricultural systems, and role of adaptation in the supply of forest carbon sequestration	Golub
Assess the nexus of trade and climate change—climate impacts, mitigation policies, and factors facilitating the green transition. This work is being funded by a European Commission Horizon project and includes multiple partners in Europe.	Chepeliev, van der Mensbrugghe
Assessment of the global and US dietary transition and policies	Chepeliev, van der Mensbrugghe
GTAP-SIMPLE-G model - facilitate analyses of land use, multi-cropping activities	Corong, Wang
Alternative land use specification in the GTAP-AEZ model	Corong, Baldos
Secondary Priorities	
Assess economic impacts of climate change under NCEE/US EPA project	Chepeliev, van der Mensbrugghe, Vandyck
Participate in “Green Macroeconomic Modeling Initiative” (GMMI)	Chepeliev, van der Mensbrugghe, Vandyck
Analysis of the global food loss and waste historical trends and future scenarios	Chepeliev
Analyzing Domestic Resource Mobilization issues	Arndt, Corong



Model Goal

To promote further development of GTAP-based models

Tasks	Responsibility
Primary Priorities	
GTAP-Migration (GMig) version 7 model	Corong, Aguiar
GTAP-AEZ version 7 model with alternative land use specification	Corong, Baldos
Secondary Priorities	
Assess different investment specifications in the GTAP-RD Model	van der Mensbrugghe
GTAP version 7 model with segmented labor	Corong
GTAP version 7 model with flexible nesting specification	Corong, van der Mensbrugghe



Education Goal

To expand and improve education for global economic analysis worldwide

Tasks	Responsibility
Primary Priorities	
Course Delivery: <ul style="list-style-type: none"> GTAP Short Course (June 2 - August 8, 2025) GTAP 101 Course (September 1 - October 19, 2025) SIMPLE Course (dates tbd) GTAP-E-Power Course (dates tbd) GTAP 101 Course (early 2026 - tbd) SIMPLE-G Short Course (early 2026 - tbd) GTAPinR Course (open enrollment) GTAP for Non-Economists Course (open enrollment) 	Batta, Akgul, Instructors Keeney, Et al. Countryman Baldos/Liu (tbd) Golub Countryman Liu, Et al. Baldos, Simonato Akgul, Et al.
Curriculum Updates: <ul style="list-style-type: none"> identify materials that require updates propose new course materials to fill any possible gaps in the course develop/review new and updated course materials 	Akgul, Batta
Complete/Launch: <ul style="list-style-type: none"> module repository system <ul style="list-style-type: none"> develop instructor guidelines for usage and access new common module content developed (e.g., RunGTAP, FAQ data base, etc.) systematic documentation of GTAP model extensions (two tracks – for instructors and for non-staff users) 	Akgul
New Course Development: <ul style="list-style-type: none"> Meet with instructors, board members, course participants and colleagues in the network to identify demand for core and specialized training in CGE modeling 	Akgul, Batta, course instructors
Quality Assessments: <ul style="list-style-type: none"> Regular review of course content and technical quality Carry out post-mortem meetings with lead course instructors Report the status of courses at staff meetings 	Akgul, course instructors
Report on the status and future directions of GTAP-U	Akgul



Staffing Goal

To actively seek and encourage talented staff and graduate students

Tasks	Responsibility
Primary Priorities	
GTAP European Office	Arndt, Hertel, van der Mensbrugghe



Collaboration Goal

To actively seek opportunities for fostering collaboration with institutions around the world

Tasks	Responsibility
Primary Priorities	
2026 GTAP Conference (Kyoto, Japan)	Batta
2027 GTAP Conference (West Lafayette, Indiana, USA)	Batta
2028 GTAP Conference (Target: United Arab Emirates)	Batta
GTAP Virtual Seminar Series	Batta
GTAP Policy Seminar Series	Arndt, Batta



Communication Goal

To facilitate communication amongst members of the network as well as between the Center and key stakeholders

Tasks	Responsibility
Primary Priorities	
Website updates: design, security, functionality, etc.	Douglas