

Greetings from GTAP-Central!

Message from the Director



Dominique van der Mensbrugghe
Research Professor
Director of GTAP

Despite the headline news of political changes in some important countries, 2024 will most likely be perceived as a year of transition as the global economy continued to witness slow adjustments in global value chains and an uneven transition to green technologies. National security arguments and re-shoring are driving factors for both transitions. These factors are likely to intensify as we enter 2025. Our community of researchers continues to play a key role in assessing these evolutions – both ex ante and ex post, and facilitating science-based global analysis and dialogue.

This past year was also a period of transition for the Center after the major release of the GTAP 11 Data Base in 2023.

The following are some of the Center's highlights over the last 12 months:

- Updated releases of v11 that include minor corrections to the initial release based on observations from users. The current official release is version 11c.
- A number of complementary datasets for v11 have been released including GDyn, land use and land cover (GTAP-AEZ) and nutrition (GTAP-FBS). The GTAP-Power Data Base has also seen significant revisions, which are documented in the [Journal of Global Economic Analysis](#). These extensions include consistent green-house gas (GHG) emissions accounting. The Center has also been revising the labor splits using new data from the International Labour Organization. In addition, there is a new version of the [TASTE](#) software and data permitting tariff line analysis of trade policies (with thanks to Janine Pelikan and the Thünen Institute).
- The Center has produced a so-called 'Circular Economy' version of the GTAP Data Base, referred to as GTAP-CE, which is compatible with v10, and are currently preparing a version consistent with v11. GTAP-CE highlights material balances for key minerals that includes a partial breakout of the mining sector (OXT), a split of key industries (e.g., blast

and electric arc furnace technologies in steel), and re-cycling. The database was used for two World Bank reports ([Squaring the Circle](#) and [Building Green](#)).

- The GTAP Advisory Board members received pre-release 1 of v12, which has a 2019 reference year, and incorporates several new input-output tables and a number of updated tables. The next pre-release is scheduled for the first half of 2025.
- Work is continuing on other data modules, including: (1) incorporation of so-called ‘critical’ minerals (e.g., lithium) and their downstream uses (e.g., batteries) – an important area of research as we transition towards a ‘net-zero emission’ economy; (2) biofuels; (3) a non-tariff measure (NTM) database in collaboration with UNCTAD and the NTM Consortium; (4) a forward-looking tariff database of free trade agreements in collaboration with the UN-ITC; (5) GTAP-MRIO which splits import and tariff flows by end-users; and (6) a more complete rendering of the balance of payments accounts and domestic savings.
- The Integrated Assessment Modeling (IAM) community has posted an update to the Shared Socio-Economic Pathways (SSPs), [version 3.1.0](#). The Center has prepared a GTAP-compatible version, which is available upon request.
- Our close collaborators from the [Centre of Policy Studies](#) (CoPS) are preparing a new version of the GTAPAgg utility, as well as a new release of the GEMPACK software suite, which is widely used by many members of the GTAP community.
- The Center has published two more issues of the highly ranked, peer-reviewed [Journal of Global Economic Analysis](#) (JGEA) and has also continued its quarterly [virtual seminar series](#), to highlight a number of these publications, as well as other areas of interest.

In 2024, the Center worked on a number of research projects. Our collaborative work on the AgMIP-based multi-model comparison project quantifying the economic and environmental impacts of a transition to more sustainable diets for the *EAT-Lancet Commission on Food, Planet, Health* is nearing completion and will be published in 2025. We are also continuing work on food waste and nutrition, improving the livestock component of the database, adding new energy technologies and their interactions with the agricultural sector, as well as sub-regional modeling with the GTAP Model. The [GLASSNET](#) project spearheaded by [Tom Hertel](#), with a focus on multi-disciplinarity and global-to-local-to-global linkages, has published a book on the gridded version of the SIMPLE model: [SIMPLE-G: A Gridded Economic Approach to Sustainability Analysis of the Earth’s Land and Water Resources](#), edited by Iman Haqiqi and Tom Hertel, with contributions from the GLASSNET team. A SIMPLE-G Short Course was delivered on Purdue’s campus in early 2024, and the team will be delivering a series of presentations on SIMPLE-G during the upcoming [GTAP Virtual Seminar Series](#) on December 17 (register by December 15).

[GTAP-U](#) has continued to offer its standard suite of courses. The standard [GTAP Short Course](#) (the 31st annual offering) was held on Purdue’s campus, attracting a large contingent of 26 students. The [GTAP 101 Course](#) was held twice – in its standard online format. The [GTAP Preferential Trade Agreements \(PTA\) Course](#) was taught in the Fall, after a curriculum update to align the materials with the GTAP Model, version 7. Work has also commenced on new courses for the energy/power version of the GTAP Model, as well as a course to introduce GTAP for non-economists. All members of the GTAP community can use a web-based application to develop new courses for GTAP-University. Those interested in proposing a new course are encouraged to complete the [new course proposal form online](#). For specifics on our 2025 course offerings, please review the GTAP-U section below. Potential students should monitor the [GTAP website](#), [GTAP-L Mailing List](#), and [GTAP social media](#) for additional information.

The [2024 Annual Conference on Global Economic Analysis](#) was held at Colorado State University in Fort Collins, Colorado, co-chaired by [Amanda Countryman](#). We had two fantastic plenary talks – by [Fran Moore](#) from UC, Davis and [Sam Kortum](#) from Yale University – and a strong program of presentations interspersed with a variety of social events combined with spectacular weather. During the 2024 conference, the Center was very pleased to award the [2024 Alan A. Powell Award](#) to [Eddy Bekkers](#), Counsellor at the World Trade Organization. Eddy's contributions to the GTAP community are too long to list here, but include implementation of the Eaton-Kortum model in the GTAP framework, work on a database of foreign direct investment and foreign affiliate sales, dynamic baselines and other outstanding research on pressing global economic challenges. Also at the conference, [Joseph Francois](#) was inducted into the [GTAP Hall of Fame](#). Joe's contributions to GTAP date from the very first days with seminal contributions in the [GTAP Technical Paper Series](#) dating back to 1996. Subsequent to a career at the U.S. International Trade Commission and the World Trade Organization, Joe has been in academia, bridging the interface of policy analysis and economic theory, and is currently Director of the World Trade Institute at the University of Bern. In service to the GTAP community, he has been a long-time at-large Board Member, and is now chairing the newly-formed [GTAP Scientific Council](#), which is designed to provide advice and counsel for the GTAP Advisory Board. Five well-known members of the GTAP Network were named [GTAP Research Fellows](#) for the June 2024-May 2027 period: [Edward J. Balistreri](#) (University of Nebraska-Lincoln), [Christoph Böhringer](#) (University of Oldenburg), [Kirsten Boysen-Urban](#) (University of Hohenheim), [Simon Mevel](#) (United Nations Economic Commission for Africa), and [Sebnem Sahin](#) (United Nations Development Programme). The [Wallace E. Tyner Award](#), created in Wally's name to honor his legacy doing interdisciplinary research, was awarded to [Wei Xiang](#) (Yale University). The [Ken Pearson Award](#) was given to [Rayan Wolf](#) (formerly of Universidade Estadual de Mato Grosso do Sul), and the [Alex Meeraus / Thomas Rutherford](#) Award was given to [Debbora Leip](#) (Potsdam Institute for Climate Impact Research). We were also pleased to welcome a new set of at-large members to represent the GTAP Community on the GTAP Advisory Board: [Ruth Delzeit](#) (University of Basel), [Michael Jerie](#) (Victoria University), and [Anna Strutt](#) (University of Waikato). We extend our profuse thanks to the departing at-large members: [Joe Francois](#), [Mark Horridge](#), and [Brian O'Neill](#) who provided invaluable service in their at-large roles for a number of years.

Looking ahead, the [2025 GTAP Conference](#) will be held June 25-27, 2025 in Kigali, Rwanda, in partnership with the [United Nations Economic Commission for Africa](#). Please remember to [submit](#) your abstracts, organized session proposals, GTAP Scholars Program and travel funding applications by January 15, and note that [registration](#) will be open from January 6 - April 15, 2025. The Center urges those interested in attending to promptly check the formalities for [entering Rwanda](#). You can also mark your calendar for the 2026 and 2027 GTAP Conferences, which will be held in Kyoto, Japan, co-hosted with the University of Kyoto, June 17-19, 2026, and to mark the 30th anniversary of the conference, at Purdue University in West Lafayette, Indiana USA from June 30 - July 2, 2017. We look forward to seeing many of you at these events!

As the [GTAP Network](#) continues to grow, with over 30,000 members in 179 countries, we encourage you to follow GTAP on [social media](#) and to visit the [GTAP website](#), which contains news about the network, upcoming events and courses, and an ever-increasing number of papers and references of critical importance to our research and work. In addition, there is an introductory video on GTAP on YouTube, available in [English](#), [French](#), and [Spanish](#). We also encourage you to [log in](#) to update your profile and submit your papers, programs, and tips for exploiting the database and enhancing our models.

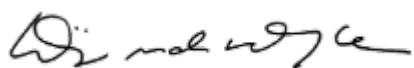
In keeping with the theme of transition, there are some transitions at the Center. We are very pleased with the appointment of [Erwin Corong](#) as Associate Director, and the promotion of [Maksym Chepeliev](#) to Assistant Research Professor. [Thiago Simonato](#) is now a senior research economist with the Center, having previously worked in a post-doctoral position with the GTAP-in-R project. [Rayan Wolf](#) has joined the [Department of Agricultural Economics](#) as a post-doctoral research associate,

working closely with [Farzad Taheripour](#). The last transition to mention is that the Center will have a new Director starting January 1, 2025, and we are delighted to have [Channing Arndt](#) return to [Purdue University](#) to take over these critical responsibilities. Channing needs no introduction as he has been an active member of the network for decades.

I can't begin to say what an honor and pleasure it has been to serve as Director over the last decade. My goal, indeed *our collective goal*, is to provide sound advice, quality data and models, and to be at the leading edge of applied economic analysis, while at the same time creating a collegial and open environment. I believe that tradition has continued these past 10 years and will be maintained under the Center's new leadership. This is a massive challenge and those of us in the [Center for Global Trade Analysis](#) appreciate the collective efforts of the incredible GTAP community. I will continue to be part of the Center for the foreseeable future and look forward to continuing to work with many of you.

Best wishes for a healthy, happy, and productive 2025 from the Center for Global Trade Analysis at Purdue University.

Warm regards,



Dominique van der Mensbrugghe, Ph.D.
Research Professor and Director of GTAP
Center for Global Trade Analysis
Department of Agricultural Economics, Purdue University
vandermd@purdue.edu

GTAP Data Base

The centerpiece of the Global Trade Analysis Project is the [GTAP Data Base](#), a fully documented, publicly available global database containing complete bilateral trade information, transport and protection linkages. The GTAP Data Base represents the world economy and is utilized by thousands worldwide as a key input into most applied general equilibrium (AGE) analysis of global economic issues.



The graphic is a promotional poster for the GTAP 11 Data Base. It features the GTAP logo (Global Trade Analysis Project) in the top left. The top right section highlights '5 Reference YEARS' with a grid showing the years 2004, 2007, 2011, 2014, and 2017. The main body is divided into three colored boxes: a blue box for 'Geographic Coverage' listing 141 countries, 19 aggregate regions, 20 new I-O tables, and 39 updated I-O tables; a yellow box for 'Sectoral Coverage' listing 65 sectors; and a green box for 'Other Updates' listing Agricultural Factor Shares, Domestic Support, Labor Splits, and Import Tariffs. A grey box on the right lists 'Methodological Improvements' including energy data, CO2 emissions, and merchandise trade data. The bottom right corner contains the website URL www.gtap.org/databases/v11/.

GTAP Global Trade Analysis Project

GTAP 11 Data Base
New & Updated Features

5 Reference YEARS

2004	2007
2011	2014
2017	

Geographic Coverage

- 141 countries representing 99.1% of world GDP and 96.4% of world population
- 19 aggregate regions
- 20 new I-O tables
- 39 updated I-O tables
- Increased Coverage: Central Africa

Sectoral Coverage

- Distinguishes 65 sectors in each country and aggregate region
- 65 Sectors**

Other Updates

- Agricultural Factor Shares
- Domestic Support
- Labor Splits
- Import Tariffs

Methodological Improvements

- Energy data including bilateral energy flows
- CO₂ emissions updated to 2006 IPCC guidelines Tier 1
- Merchandise trade data on refined HS-GTAP concordances
- Services trade data based on Balanced Trade in Services (BaTS)

www.gtap.org/databases/v11/

This year, the Center for Global Trade Analysis released the following satellite data and extensions to GTAP 11c (released in June 2024):

- GTAP-E
- GTAP-Power
- Land Use and Land Cover (GTAP-AEZ)
- GDyn (Dynamic)

The following releases are expected in 2025.

- International Migration (GMIG2)
- Bilateral time-series trade data
- Circular Economy (GTAP-CE)
- GTAP-MRIO

The aforementioned Circular Economy Data Base (GTAP-CE) disaggregates 6 sectors of the GTAP-Power extension for a total of 99 sectors. The disaggregated sectors improve material flow accounting of mineral mining, metals, plastics, recycling, cement, and fertilizers.

It is worth noting that for the above extensions, the Center reports consistent CO₂ and non-CO₂ emissions, including CO₂ emissions from non-combustion energy use.

Further details and documentation on GTAP 11 are provided on the [GTAP website](#) and its summary was published in the December 2022 issue of the [Journal of Global Economic Analysis](#) (JGEA), please use the latter to reference your use of GTAP data.

When available, notification about the public release of satellite data and extensions will be emailed to all subscribers, as well as the [GTAP-L Mailing List](#), and posted on GTAP's [social media](#).

GTAP Research

The GTAP [Working Paper](#) and [Research Memoranda](#) Series report research in progress by Center for Global Trade Analysis staff which is of potential relevance to the broader GTAP community. The following pieces were added in the past year.

[Building and Sustaining Successful Complex Research, Education, and Engagement Collaborations](#)

by Akridge, Jay T. and Thomas Hertel
GTAP Working Paper No. 96



The [Journal of Global Economic Analysis](#) provides an open access, peer-reviewed platform for publication and dissemination of innovations in applied general equilibrium (AGE) modeling,

publishes developments in theory, data, statistical analysis, methods, and teaching, enhances the credibility of AGE modeling by requiring replication of results during the peer-review process and, when possible, publication of new model code and data on the journal's website, and builds on and extends the high-impact, peer-reviewed GTAP Technical Paper Series.

Vol. 9 No. 1 (2024)

Advances in Methods and Theory

[Introducing municipal solid waste streams in a CGE framework: A step in the direction of circular economy analysis](#)

Heleen Bartelings, Monika van den Bos-Verma, Hans van Meijl

Advances in Pedagogy

[SMART Handout: An Innovative Tool to Empower Applied General Equilibrium Teaching](#)

Zhan Wang, Thomas Hertel

Updates and Comments

[Comments on "Estimation of the Value-Added/Intermediate Input Substitution Consistent with the GTAP Data"](#)

Alexandre Gohin, Obafemi Koutchade

Vol. 9 No. 2 (2024)

Coming soon!

Select Center for Global Trade Analysis Presentations (2024)

Hertel, T.W., "Economic Analysis of Global and Local Policies for Respecting Planetary Boundaries", Elmhirst Lecture given at the triennial meetings of the International Association of Agricultural Economists, New Delhi, India, August 3, 2024.

Hertel, T.W. and Iman Haqiqi, "Economic Analysis of Planetary Boundaries: Six Lessons", presentation at the 27th Conference on Global Economic Analysis, Fort Collins, Colorado.

Hertel, T.W. "Integrated Policies for the Triple Planetary Crisis", presentation to Rabobank, Utrecht, The Netherlands, March 14, 2024.

Hertel, T.W. "Global and Local Policies for Respecting Planetary Boundaries: Tradeoffs and Synergies", presentation to Environmental Sciences Workshop, Wageningen University, Wageningen, The Netherlands, March 13, 2024.

Hertel, T.W. "Global and Local Policies for Respecting Planetary Boundaries: Tradeoffs and Synergies", presentation to Agricultural Economics Seminar, Wageningen University, Wageningen, The Netherlands, March 13, 2024.

Hertel, T.W. "Global and Local Policies for Respecting Planetary Boundaries: Tradeoffs and Synergies", presentation to the MAGNET Research Group, Wageningen University Research, Wageningen, The Netherlands, March 12, 2024.

Hertel, T.W. "Global and Local Policies for Respecting Planetary Boundaries: Tradeoffs and Synergies", presentation to the Dutch Environmental Research Institute (PBL), The Hague, March 11, 2024.

Hertel, T.W. “Global-to-Local-to-Global Analysis of Sustainability”, presentation to the 11th Annual Forestry and Agriculture GHG Modeling Forum, Raleigh, NC, March 6, 2024.

Hertel, T.W. “Integrated Policies for the Triple Planetary Crisis”, presentation to the OECD workshop on Modelling the Triple Planetary Crisis, Paris, February 16, 2024.

Select Center for Global Trade Analysis Publications (2024)

Wang, Zhan, and Thomas Hertel. 2024. “SMART Handout: An Innovative Tool to Empower Applied General Equilibrium Teaching.” *Journal of Global Economic Analysis* 9 (1): 45-61.
<https://doi.org/10.21642/JGEA.090102AF>.

Fuglie, K.O., T. W. Hertel, D. B. Lobell, and N. B. Villoria. (2024). “Agricultural Productivity and Climate Mitigation.” *Annual Review of Resource Economics* 16.

Martinez, Juan Diego, Navin Ramankutty, Zia Mehrabi, and Tom W. Hertel. 2024. “A Modelled Estimate of Food Access within Countries Shows That Inequality within Countries Has Increased despite Rising Equality between Countries.” *Global Food Security* 41 (June):100774.
<https://doi.org/10.1016/j.gfs.2024.100774>.

Steinbuks, Jevgenijs, Yongyang Cai, Jonas Jaegermeyr, and Thomas W. Hertel. 2024. “Assessing Effects of Climate and Technology Uncertainties in Large Natural Resource Allocation Problems.” *Geoscientific Model Development* 17 (12): 4791-4819.
<https://doi.org/10.5194/gmd-17-4791-2024>.

Chaudhary, Abhishek, and Thomas Hertel. 2024. “Recent Developments and Challenges in Projecting the Impact of Crop Productivity Growth on Biodiversity Considering Market-Mediated Effects.” *Environmental Science & Technology*, January.
<https://doi.org/10.1021/acs.est.3c05137>

Haqiqi, Iman and Thomas W. Hertel (eds.) SIMPLE-G: A Gridded Economic Approach to Analysis of Sustainability of the Earth’s Land and Water Resources, Springer International Publishing Switzerland, 2025. <https://doi.org/10.1007/978-3-031-68054-0>

GTAP-U Educational Offerings

[GTAP-University \(GTAP-U\)](#) is the formal education initiative of the Global Trade Analysis Project and builds on the Center for Global Trade Analysis' decades of teaching experience in the field of global economic analysis. The goal of GTAP-U is to expand access and improve educational and career opportunities for students and professionals, worldwide.

2025 Course Schedule

[2025 Short Course in Dynamic Global Trade Analysis](#)

“Applied General Equilibrium Analysis using a Dynamic Multi-Region Model”

Hybrid Course (Online + Residential phase at Purdue University)

January 20 - March 14, 2025 (Applications closed)

[2025-1 GTAP 101 Course](#)

“Introduction to Computable General Equilibrium Modeling in the GTAP Framework”

Online Course

March 17 - May 4, 2025 (Apply by December 29)

32nd Annual Short Course in Global Trade Analysis

"Theory and Applications of Computable General Equilibrium Analysis with the GTAP Model"

Hybrid Course (Online + Residential phase at Purdue University)

June 2 - August 8, 2025 (Apply by January 5)

2025-2 GTAP 101 Course

"Introduction to Computable General Equilibrium Modeling in the GTAP Framework"

Online Course

September 1 - October 19, 2025 (Apply from March 10 - June 15)



Calling all esteemed academicians and professionals in the field of economics!

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Are you interested in partnering with GTAP-U to develop and offer a course?

The Center for Global Trade Analysis is thrilled to invite you to become part of GTAP's online course platform, dedicated to fostering excellence in teaching global economic analysis and computable general equilibrium (CGE) models. We understand the unique challenges instructors face when developing and delivering online courses, which is why we have streamlined the course development and delivery process to offer comprehensive support at every step of the way. From initial concept to polished delivery, the GTAP-U platform provides you with the tools and guidance you need to create an engaging and impactful learning experience that reflects your unique teaching style. As a GTAP-U instructor, you will be part of a vibrant community of like-minded professionals, engage in meaningful discussions, share insights, and collaborate with peers from around the globe. For more information, please visit: www.gtap.org/events/gtap-u/.

GTAP Events

Many participants remark that a highlight of GTAP events is the opportunity to get to know other members of the GTAP research community and form collaborative research relationships.

2025 Event Schedule

GTAP Advisory Board Meeting

In-person Meeting (Kigali, Rwanda)

June 23-24, 2025

28th Annual Conference on Global Economic Analysis

"Accelerating Economic Transformation, Resilience, Diversification, and Job Creation"

In-person Conference (Kigali, Rwanda)

June 25-27, 2025 (Submissions due January 15)

[GTAP Virtual Seminar Series](#)

Online Seminars (check website for the quarterly schedule)

Follow GTAP on social media!



This email was sent by: **Global Trade Analysis Project**
Department of Agricultural Economics
403 West State Street
West Lafayette, IN 47907-2056

