



# International Capacity Building Program on Computable General Equilibrium (CGE) Modelling for Economic Policy Analysis

Organized by IFPRI, SANEM, ICAR-IARI and ICAR-NIAP

## CONCEPT

Many policy questions need to be addressed within an economywide framework that captures impacts on the overall economy, and at sector and household levels. Computable General Equilibrium (CGE) models are especially designed to evaluate the direct and indirect impacts of policies and shocks at both macroeconomic and microeconomic scales. Given demand for economywide analysis, the International Food Policy Research Institute (IFPRI) and the South Asian Network on Economic Modeling (SANEM), together with the Indian Council of Agricultural Research-Indian Agricultural Research Institute (ICAR-IARI) and ICAR-National Institute of Agricultural Economics and Policy Research (NIAP), are offering an introductory training program on CGE modeling.

The course is aimed at researchers and policy analysts who have some economics background but would like to learn more about economywide models and how to use them. The course will introduce participants to CGE modelling, providing them with a practical grounding in IFPRI's Standard CGE model that can be used to investigate a range of policy issues. It will also provide a launch pad for those wishing to take their modelling capabilities to more advanced levels.

The program includes two main activities: (1) a weeklong in-person training course; and (2) a post-training hands-on research assignment. While the assignment does not carry a direct financial incentive to the participants, it plays a crucial role in reinforcing the training course. Participants will have the opportunity to choose a topic of their own interest for the assignment and will receive ongoing guidance from researchers at SANEM and IFPRI.

Course participants should have a background in economics, be quantitatively oriented, and be competent users of Microsoft Excel. Experience with programming languages is an advantage.

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To cater to the rising demand for economy-wide modelling techniques, IFPRI in collaboration with its national-level partners has been offering several training programs since 2001 via in-person and hybrid formats. More than thirty in-person training courses have been organized, with over 500 participants from nearly 30 countries. In 2022, IFPRI organized a comprehensive training program on CGE modeling with participants<sup>1</sup> from South Asia. It facilitated early career researchers to analyze contemporary policy issues for the agriculture sector which was evident from their recent publications<sup>2</sup>. Further, the importance of economy-wide modeling techniques is rising among policy makers in the region as is the need for modeling skills among researchers in South Asia. Therefore, as a part of IFPRI's commitments towards South Asia policy research, it proposes to organize this course in India with select participants from Bangladesh, India, Sri Lanka, and Nepal as well.



<sup>1</sup> [https://capacity.ifpri.info/2022/09/22/capacity-building-training-program-on-computable-general-equilibrium-cge-modeling-for-policy-](https://capacity.ifpri.info/2022/09/22/capacity-building-training-program-on-computable-general-equilibrium-cge-modeling-for-policy-analysis/#:~:text=An%20international%20capacity%2Dbuilding%20training,with%20the%20Indian%20Council%20of)

[analysis/#:~:text=An%20international%20capacity%2Dbuilding%20training,with%20the%20Indian%20Council%20of](https://capacity.ifpri.info/2022/09/22/capacity-building-training-program-on-computable-general-equilibrium-cge-modeling-for-policy-analysis/#:~:text=An%20international%20capacity%2Dbuilding%20training,with%20the%20Indian%20Council%20of)

<sup>2</sup> NIAP-Policy Briefs (icar.gov.in); <https://doi.org/10.2499/p15738coll2.136691>

## COURSE RESOURCE PERSONS



**Dr James Thurlow** is the Director of Foresight and Policy Modeling at IFPRI, where he oversees a research program on the drivers of inclusive and sustainable development, including the links between climate change, natural resources, and food security. His own research uses CGE and microsimulation models to study the interactions between public policy, structural transformation, and social inclusion. Prior to IFPRI, James worked with the United Nation's University – World Institute for Development Economics.



**Dr Barun Deb Pal** is a Research Coordinator at IFPRI, where he works on agricultural development in South Asia, including issues of climate change, economic growth, and climate smart agriculture. Barun has extensive expertise in CGE modelling, input-output and social accounting analysis, and linear and nonlinear land use planning models. Prior to IFPRI, Barun worked with India's National Council of Applied Economic Research (NCAER).



**Dr Selim Raihan** is a Professor at the Department of Economics, University of Dhaka, Bangladesh and the Executive Director of the South Asian Network on Economic Modeling (SANEM). He is a member of the Board of Directors, Global Development Network (GDN). He is the Honorary Senior Research Fellow at the University of Manchester, UK. His area of expertise include international trade, economic growth, poverty, labour market, macroeconomic policies, political economy, and climate change issues.

## AGENDA FOR INAUGURAL SESSION

April 29, 2024 | Monday

0900 – 1000	<i>Registration and tea/coffee</i>
<b>1000 – 1130</b>	<b>INAUGURAL SESSION</b>
1000 – 1010	<b>Welcome Address</b> Alka Singh, Head and Professor, ICAR-IARI
1010 - 1020	<b>Remarks</b> James Thurlow, Unit Director, Foresight and Policy Modeling
1020 - 1030	<b>Remarks</b> Pratap S. Birthal, Director, ICAR-NIAP
1030 - 1040	<b>Remarks by Special Guest</b> R.C. Agrawal, Deputy Director General (Agricultural Education)
1040 - 1055	<b>Remarks by Chief Guest</b> Ramesh Chand, Member, NITI Aayog
1055 – 1105	<b>Vote of thanks</b> Anjani Kumar, Senior Research Fellow, IFPRI
1105 - 1130	Group Photo & High Tea

## COURSE AGENDA

<b>Day 1: Monday, 29 April</b>		
	09:00 – 11:30	Inaugural session
	11:30 – 12:30	Introduction to Social Accounting Matrices (Lecture)
	12:00 – 13:00	Social Accounting Matrices (Exercises)
	13:00 – 13:30	Lunch
	13:30 – 15:00	SAM multiplier analysis (Lecture)
	15:00 – 15:30	Refreshment break
	15:30 – 17:30	SAM multiplier analysis (Exercises)
<b>Day 2: Tuesday, 30 April</b>		
	09:00 – 10:30	Introduction to CGE models (Lecture)
	10:30 – 11:00	Refreshment break
	11:00 – 12:30	Overview of IFPRI's Standard Model (Lecture)
	12:30 – 13:30	Lunch
	13:30 – 15:00	Installing and running the Excel-Interface CGE Model (Demonstration)
	15:00 – 15:30	Refreshment break
	15:30 – 17:30	Running the Excel-Interface CGE Model (Exercises)
<b>Day 3: Wednesday, 1 May</b>		
	09:00 – 10:30	Running simulations in the Excel-interface CGE model (Exercises)
	10:30 – 11:00	Refreshment break
	11:00 – 12:30	Running simulations continued (Exercises)
	12:30 – 13:30	Lunch
	13:30 – 15:00	Running simulations continued (Exercises)
	15:00 – 15:30	Refreshment break
	15:30 – 17:30	Running simulations continued (Exercises)
<b>Day 4: Thursday, 2 May</b>		
	09:00 – 10:30	Running simulations in the Excel-interface CGE model (Exercises)
	10:30 – 11:00	Refreshment break
	11:00 – 12:30	Group modeling project – running simulations (Exercise)
	12:30 – 13:30	Lunch
	13:30 – 15:00	Group modeling project continued
	15:00 – 15:30	<i>Refreshment break</i>
	15:30 – 17:30	Group modeling project continued
<b>Day 5: Friday, 3 May</b>		
	09:00 – 10:30	Group modeling project continued
	10:30 – 11:00	Refreshment break
	11:00 – 12:30	Group presentations
	12:30 – 13:30	Lunch
	13:30 – 15:00	Extending the Standard Static Model
	15:00 – 15:30	Refreshment break
	15:30 – 16:30	Post-course assignments (selecting topics and way forward)
	16:30 – 17:30	Course closing (IFPRI, SANEM, ICAR)



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