

GCAM Community Modeling Workshop Agenda

Nov 5 - 7, 2019

Agenda Updated October 28, 2019

Tuesday, Nov 5th

College Park Marriott Hotel and Conference Center - 3501 University Blvd East

8:30 9:00 Meeting Check-in/Registration

Welcome and Introduction

9:00	9:05	Welcome and Introduction	Ian Kraucunas (PNNL)
9:05	9:15	DOE BER/CESD and USGCRP Perspective	Gary Geernaert (DOE/BER/CESD)
9:15	9:30	DOE Complex Systems Research	Bob Vallario (DOE/BER/CESD)
9:30	9:45	Recent Advances and Future Directions of GCAM	Mohamad Hejazi (PNNL/JGCRI/UMD)

MultiSector Dynamics across Scales

Moderator: Stephanie Waldhoff (JGCRI/PNNL)

9:45	10:00	The inherent costs and uncertainties of water scarcity in a changing world	Robert Link (JGCRI/PNNL)
10:00	10:15	Separating planting and harvesting decisions in GCAM	Xin Zhao (PNNL/JGCRI)
10:15	10:30	US electric sector separating investment and dispatch	Zarrar Khan (PNNL/JGCRI)
10:30	10:45	Discussion	

10:45 11:05 Open Discussion - future research directions

11:05	11:20	New methods for modeling international trade in GCAM	Marshall Wise (PNNL/JGCRI)
11:20	11:35	Weather impacts on irrigated vs rainfed agriculture in the US	Abigail Snyder (PNNL/JGCRI)
11:35	11:50	Future changes in the trading of virtual water	Neal Graham (PNNL/JGCRI)
11:50	12:05	Discussion	

12:05 14:00 Poster Session - GCAM Research (Working Lunch)

Earth System Emulation

Moderator: Corinne Hartin (JGCRI/PNNL)

14:00	14:15	Calibrating Hector, a simple climate model	Kalyn Dorheim (PNNL/JGCRI)
14:15	14:30	High latitude climate feedbacks and impacts in Hector	Alexey Shiklomanov (PNNL/JGCRI)
14:30	14:45	Global to local sea-level rise uncertainty using Hector-Brick	Ben Vega-Westhoff (UIUC)
14:45	15:00	Identifying and emulating hazard metrics	Claudia Tebaldi (PNNL/JGCRI)
15:00	15:20	Discussion	

15:20 15:40 Open Discussion - future research directions

GCAM-USA and Other Regional Modeling

Moderator: Gokul Iyer (JGCRI/PNNL)

15:40	15:45	GCAM-USA and Regional Modeling: What's new and where we're headed	Gokul Iyer
15:45	16:00	Applications of GCAM-USA in the Integrated Multi-sector Multi-Scale Modeling (IM3) Project	Casey Burleyson
16:00	16:15	GCAM modeling of endogenous hydropower capacity expansion in Canada	Matthew Binsted
16:15	16:30	Examining regional differences in the air pollutant emission impacts of electric vehicles using GCAM-USA	Dan Loughlin (EPA)
16:30	16:45	Sub-national modeling and scenario development	Sha Yu and Leon Clarke
16:45	17:05	Discussion	
17:05	17:10	Closing remarks	Steve Smith (PNNL/JGCRI)

17:10 17:10 END OF DAY

Wednesday, Nov 6th

College Park Marriott Hotel and Conference Center - 3501 University Blvd East

8:30 9:00 Meeting Check-in/Registration

What's New in GCAM v5.2

**Moderator: Kate Calvin
(PNNL/JGCRI)**

9:00 9:05 Introduction To Day 2: GCAM and The GCAM Ecosystem

Kate Calvin (PNNL/JGCRI)

9:05 9:10 Overview of GCAM 5.2

Kate Calvin (PNNL/JGCRI)

9:10 9:25 Regional Ag Markets

Marshall Wise (PNNL/JGCRI)

9:25 9:32 Resource-reserve

Pralit Patel (PNNL/JGCRI)

9:32 9:39 Water markets

Sonny Kim (PNNL/JGCRI)

9:39 9:47 Updated GCAM-USA

Gokul Iyer (PNNL/JGCRI)

9:47 9:55 bug fixes

Pralit Patel (PNNL/JGCRI)

9:55 10:10

10:10 10:30 Questions and Discussion

10:30 10:45 **Open Discussion** on the GCAM 5 release

The GCAM Ecosystem

**Moderator: Chris Vernon
(PNNL/JGCRI)**

10:45 11:05 The GCAM Ecosystem - Status and Future Directions

Chris Vernon (PNNL/JGCRI)

11:05 11:17 Advancements: Fldgen

Robert Link (PNNL/JGCRI)

11:17 11:29 Advancements: Demeter

Min Chen (PNNL/JGCRI)

11:29 11:42 Advancements: Xanthos

Chris Vernon (PNNL/JGCRI)

11:42 11:55 New Development: Metis

Zarrar Khan (PNNL/JGCRI)

11:55 12:00 Overview of the Afternoon Sessions

Steve Smith (PNNL/JGCRI)

12:00 13:00 Open Discussion on GCAM 5 release (Working Lunch)

Afternoon Parallel Sessions Overview

	Track I: GCAM Training	Track II: Breakout	Track III: Breakout
	General Vessey Ballroom Salon I	Room 1105	Room 0105 (one floor down)
13:00 14:30	GCAM Introduction and Overview	GCAM-USA	GCAM Ecosystem
14:30 14:50	GCAM Tutorial - setting up & running		
14:50 15:05	Open Discussion on GCAM		
15:05 17:00	GCAM Tutorial - data queries, running a new scenario	Climate (hector, fldgen, etc.)	Water/Land

17:00 17:00 END OF DAY

Wednesday, November 6th (cont)

Afternoon Parallel Session Detail

Track I: GCAM Training

Track I: GCAM Training: Overview

General Vessey Ballroom Salon I

13:00 13:10 GCAM Introduction and Overview
13:10 13:20 Economy
13:20 13:30 Energy
13:30 13:40 Land
13:40 13:50 Water
13:50 14:00 Emissions
14:00 14:10 Earth System
14:10 14:20 Trade
14:20 14:30 Policies

Kate Calvin and Pralit Patel
Kate Calvin and Pralit Patel
Page Kyle and Marshall Wise
Abigail Snyder
Page Kyle and Sonny Kim
Steve Smith
Corinne Hartin
Pralit Patel
Haewon McJeon

Track I: GCAM Training: Tutorial

General Vessey Ballroom Salon I

14:30 14:50 GCAM Tutorial - setting up and running GCAM
14:50 15:05 Open Discussion on GCAM

GCAM Team

Track I: GCAM Training: Tutorial (cont)

General Vessey Ballroom Salon I

15:05 17:00 GCAM Tutorial - GCAM data queries, running a new scenario

GCAM Team

Breakouts Track II and III: 13:00 - 14:50

Session Title

Location

0.542 0.62 Track II: GCAM-USA Breakout Session

Room 1105

GCAM-USA: implimentation details, future plans, and applications

Chairs: Gokul Iyer (PNNL/JGCRI), Matthew Binsted (PNNL/JGCRI)

0.542 0.62 Track III: GCAM Ecosystem Breakout Session

Room 0105 (one floor down)

Discussion of advancements in the GCAM Ecosystem of models and tools focused on reproducibility in multi-model integration

Chairs: Chris Vernon (JGCRI/PNNL), Robert Link (PNNL/JGCRI)

14:50 15:05 Open Discussion on GCAM

Breakouts Track II and III: 15:05 - 17:00

0.628 0.71 Track II: Earth System Emulation

Room 1105

From global to regional Earth system emulation

Chairs: Corinne Hartin (JGCRI/PNNL), Alexey Shiklomanov (JGCRI/PNNL)

15:05 17:00 Track III: Water/Land

Room 0105 (one floor down)

Discussion of advancements in GCAM land and water modeling, future plans, and applications

Chairs: Mohamad Hejazi and Stephanie Walldhoff (JGCRI/PNNL)

17:00 17:00 END OF DAY

Thursday November 7th

Joint Global Change Research Institute - 5825 University Research Court #3500

GCAM Training (cont.)

JGCRI 3'd floor conf room

9:30 12:00 GCAM Hands on Assistance

GCAM Team

The GCAM hands on assistance session will provide individual assistance with GCAM. This can include model set-up and operation questions (e.g., how to access model output data) , interpretation of GCAM data (e.g. how to determine investment from power plant generation), and how to create new scenarios (modifying service demand growth, add new technologies not present in the base-year, applying constraints).

12:00 13:00 Discussion of Questions and Issues Raised During Morning Session (Working Lunch)

13:00 15:30 Continue GCAM Hands on Assistance

GCAM Team

15:30 15:30 END OF DAY