

ENERGY MODELING FORUM

*Workshop on Climate Change Impacts and Integrated Assessment
(CCI/IA) Snowmass, Colorado*

July 27 – August 4, 2011

Agenda

July 27 | July 28 | July 29 | Aug 1 | Aug 2 | Aug 3 | Aug 4 |

Wednesday, July 27

- 8:30 AM Registration Continues
- 9:15 AM *Welcoming Remarks*
- John Weyant, Stanford University | **Weyant** (37.3KB)|
- 9:30 AM *The Ongoing IAMC and IPCC Socio-Economic Scenarios Processes*
- Jae Edmonds, PNNL | **Edmonds** (1.1KB)|
- 11:15 AM *NIES Socio-Economic Scenarios*
- Shinichiro Fujimori, NIES | **Fujimori** (2.8KB)|
- Energy Land and Water in the Context of a Changing Climate***
- Welcome & Introduction, John Weyant, Stanford University*
Integrated Assessment Modeling Panelists: Jae Edmonds (PNNL); Elmar Kriegler (PIK); Detlef van Vuuren (PBL); Shinichiro Fujimori (NIES); Kathy Hibbard (PNNL)
- Understanding the Energy, Land, Water Nexus***
- 1:00 PM *Insights from the climate modeling community with special attention to High Resolution Modeling*
- Noah Diffenbaugh, Stanford University | **Diffenbaugh7-27** (21.9KB)|
- 2:00 PM *Potential bio-energy futures envisioned by the Integrated Assessment Modeling community*
- Steve Rose, EPRI | **Rose7-27** (2.6KB)|
- 3:30 PM *Water scarcity in the context of growing food demands and climate change*
- Claudia Ringler IFPRI | **RinglerPresentation** (2.7KB)|
 - Jae Edmonds, PNNL | **Edmonds7-27** (2.1KB)|
- 4:30 PM *Integrated Assessment Panel & Discussion Key Challenges:*
- Elmar Kriegler, PIK | **Kriegler** (3.0KB)|

Thursday, July 28

EXPLORING COMPONENTS OF THE NEXUS

Future Climate: Implications for the Nexus

- 8:30 AM *The Food-Fuel-Environment Tri-lemma*
Tom Hertel, Purdue University
- 9:30 AM *Interactions between climate and ecosystems*
▪ David Kicklighter, Woods Hole | **Kicklighter** (5.1KB)|
- 11:00 AM *Implications of climate change for agriculture and commodity markets*
***David Lobell, Stanford University ***
- 1:00 PM *Climate impacts on future crop production*
▪ Jerry Nelson, IFPRI | **Nelson** (5.6KB)|
- 2:00 PM *Global Water Availability and Use*
The role of water constraints in determining the global land use impacts of biofuel expansion
Tom Hertel, Purdue University
- 3:30 PM *Embodied water in trade: Whither Virtual Water? **Richard Tol, ESRI***
- 4:30 PM *Hydrological modeling at the global scale: Limitations and Opportunities*
▪ Ximing Cai, University of Illinois | **XimingCai** (4.1KB)|
- 5:30 PM Adjourn and informal discussion

(Top)

Friday, July 29

- 8:30 AM *Global Water Availability and Use (Continues)*
Incorporating Water Resources Impacts into Integrated Assessment Models
Ken Strzepek, MIT and University of Colorado
- Intensification, land transition and Uncertainty**
Yield trajectories, yield responses, water constraints
- 9:30 AM ▪ Patricio Grassini, University of Nebraska | **Grassini** (8.8KB)|
- 11:00 AM *Understanding land transitions*

11:00 AM	<i>Understanding land transitions</i>
	George Hurtt, University of Maryland
1:00 PM	<i>Acknowledging local realities when evaluating regional water resources: innovation, challenges & uncertainties</i>
2:00 PM	<ul style="list-style-type: none"> Pat Reed: Pennsylvania State University Reed (10.9KB) Integrated Assessment Panel & Discussion (2-3 panelists, 10 minutes each, then group discussion) <i>National Climate Assessment specific effort on energy-water-land and its first meeting</i>
3:00 PM	**Bob Vallario, U.S. Department of Energy** **Tony Janetos, JGCRI/PNNL** **Kathy Hibbard**
4:00 PM	Adjourn and informal discussion

Monday, Aug. 1

UNCERTAINTY ANALYSIS IN INTEGRATED ASSESSMENT MODELS

9:00 AM	Bill Nordhaus and John Weyant describe the project history and tentative plans. <i>Initial thoughts on the project:</i> Questions and uncertainties to be addressed: <ul style="list-style-type: none"> Design of protocol Metrics for output Maximizing participation <i>Update on the National Climate Assessment</i>
1:00 PM	<ul style="list-style-type: none"> Kathy Jacobs, U.S. Office of Science Technology Policy JacobsKatharine (5.2KB)
2:00 PM	Recapitulation of key points from morning session research reports (I): Modelers are invited to make presentations of their current or earlier work on uncertainty analysis. Key questions to examine are: <ul style="list-style-type: none"> Which uncertainties to model Techniques for identifying and estimating key uncertainties Techniques for estimating impacts of uncertainties Metrics for measuring outputs Key variables for outputs Tools and approaches from other fields Earlier results of uncertainty modeling Protocol design for model comparison

- Doug Arent | **Arent8-1** (1.6KB)|
- Leon Clark | **Clarke8-1** (3.7KB)|
- Kristie Ebi | **Ebi8-1** (681.0KB)|
- Klaus Keller**
- Elmar Kriegler | **Kriegler8-1** (1.0KB)|
- David Montgomery | **Montgomery8-1** (124.7KB)|
- Nebojsa Nakicenovic | **Nakicenovic8-1** (6.9KB)|
- William Nordhaus | **Nordhaus8-1** (2.3KB)|
- Richard Tol | **Tol8-1** (1.7KB)|
- Detlef van Vuuren | **vanVuuren8-1** (5.2KB)|
- Stephanie Waldhoff | **Waldhoff8-1** (1.4KB)|
- Mort Webster (**Webster** (1.0KB))
- John Weyant | **Weyant8-1** (1.7KB)|
- Tom Wilbanks | **Wilbanks8-1** (4.1KB)|
- William Nordhaus | **Nordhaus8-1(2)** (2.1KB)
- Steve Rose | **Rose8-1** (137.7KB)

(Top)

Tuesday, Aug 2

9:00 AM

Review of key questions that arose in afternoon session
 Research reports (II): Continuation of research reports along
 the lines of Monday afternoon
 Next steps:

(1) Are there important research questions to be addressed?
 Is this important enough to be worth a major collaborative
 research program?

(2) If so, what are the key questions? Make a specific list of
 questions and uncertainties to be addressed.

1:30 PM

(3) Protocol development (need working group to develop
 this)

(4) Any major methodological questions that need to be
 addressed (tools for determining uncertainty, thin v. thick
 tails, model v. parameter uncertainty, and others)

(5) Model inclusion: how to get the widest model participation
 (open access), while ensuring that have adequate
 comparability

(6) Future meetings

5:00 PM

Adjourn and Informal Discussion

Wednesday, Aug 3

Institutions, Economic and Climate Policy in a Mosaic World (Day 1)

This session will consider the role of national and regional institutions in creating frameworks for policy choices and decisions. In particular, they affect the choice, design and implementation of real world (non-optimum) policies. But they are also likely to affect the pace and direction of economic development with implications for BAU economic growth and emissions trajectories. Accounting for the impacts of institutions may, therefore, affect the development and assessment of baselines and other scenarios.

Opening Comments--John P. Weyant

8:40AM

8:45 AM

The Mosaic World: Introduction and Overview

▪ Brian Flannery, Exxon Mobil | **BrianFlannery** (112.8KB)|

An Overview of NIE

9:00 AM

▪ Lee Alston, University of Colorado | **Alston8-3** (53.3KB)|

Institutions and economic growth: The rise, spread, and limits of sustained economic growth

9:30 AM

▪ John Wallis, University of Maryland/NBER | **Wallis8-3** (280.1KB)|

The new institutionalism: implications for climate policy analysis

10:00 AM

▪ Lee Lane, Hudson Institute | **LeeLane** (236.7KB)|

11:00 AM

Moderated Open discussion (Flannery)

The shaping of U.S. energy and climate policy

1:00 PM

▪ Barry Weingast, Stanford University | **Weingast8-3** (1.0KB)|

How do models represent policies that come out of real governments? What are implications for international action?

1:45 PM

Panel: Leon Clarke, Elmar Kreigler, David Montgomery -- | **LClarke8-3** (2.2KB)|, | **Kriegler8-3** (375.1KB)|, | **Montgomery8-3** (205.6KB)|

3:15 PM

Open discussion--**Incorporating institutional thinking**

into climate emissions and socio-economic scenarios

The role of scenarios in driving climate futures

4:15 PM

- Jae Edmonds, PNNL | **Edmonds8-3** (2.8KB)|

What information should socio-economic scenarios provide?

4:30 PM

- John Weyant, Stanford University | **Weyant8-3** (71.2KB)|

Can NIE research narrow the range of scenarios we are likely to see or identify inconsistent assumptions describing scenarios?

4:45 PM

- John Wallis, University of Maryland/NBER | **Wallis8-3** (30.8KB)|

Key Economic Sectors and Services

- Richard Tol, ESRI | **Tol8-3** (475.7KB)|

5:30 PM

Open discussion

Thursday, Aug 4

Institutions, Economic and Climate Policy (Day 2)

The Mosaic World: Introduction to Day 2

Introduction and Overview

8:15 AM

- David Montgomery, NERA | **Montgomery8-4** (233.8KB)|

Studies of economic development done in the NIE framework can increase understanding of how offset and adaptation programs may develop

Governance, and the feasibility of offset programs

8:30 AM

- Lee Alston, University of Colorado | **Alston8-4(1)** (94.0KB)|, | **Alston8-4(2)** (156.6KB)

Adaptation, aid & violence in Africa

9:30 AM

- Robert Bates, Harvard University | **Bates8-4** (43.1KB)|

10:00 AM

Open discussion

Panel discussion on how to bring NIE perspectives into scenario development and modeling of costs and benefits of climate policies

Implications for scenarios use in IPCC

- Chris Field, Carnegie Institution of Washington | **CField8-4** (355.7KB)|

11:00 AM

- Elmar Kriegler, Potsdam Institute for Climate Impact Research | **Kriegler8-4** (775.6KB)|

Incorporating regional differences in IA Models

11:00 AM

Implications for scenarios use in IPCC

- Chris Field, Carnegie Institution of Washington | **CField8-4** (355.7KB)|
- Elmar Kriegler, Potsdam Institute for Climate Impact Research | **Kriegler8-4** (775.6KB)|

Incorporating regional differences in IA Models

****John Weyant, Stanford University****

Engaging the NIE community in climate research and assessment ****Barry Weingast, Stanford University****

12:15 AM

Possible topics for next year ****Brian Flannery, David**