

LIVE WEBCAST

Understanding the Grand Challenges in Socio-Environmental Systems (SES) Modeling

WEDS. 14 APRIL 2021, 15:00-16:30 (EDT UTC -4)

WEDS. 14 APRIL 2021, 21:00 – 22:30 (CEST UTC +2)

THUR. 15 APRIL 2021, 05:00 - 06:30 (AEST UTC +10)

Hosted by:

The Integrated Assessment Society
The National Socio-Environmental Synthesis Center
And the journal, *Socio-Environmental Systems Modeling*



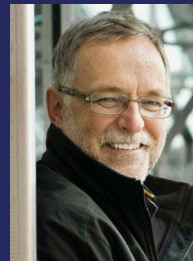
Sondoss El Sawah
Presenter & Moderator



Detlef van Vuuren



Jill Jäger



John Robinson

Panelists



Jan Bakkes
Introduction

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Expanding the development and use of socio-environmental system (SES) models is critical to solving urgent problems situated at the human-nature interface. Substantial progress is being made, but modeling challenges associated with a range of diverse issues remain. For example, these include how to best represent the human dimension in SES models, account for temporal and spatial scale mismatches, and cope with deep uncertainty.

Based on the 2020 article "[Eight grand challenges in socio-environmental systems modeling](#)," this webcast explores the present status and future of SES modeling, while highlighting current challenges and paths forward. It is intended for practitioners and scholars who commission, sponsor, or use SES models. It will begin with a pre-recorded presentation by its lead author, Sondoss El Ssawah, briefly describing the major challenges, followed by comments from each panelists will follow and an open discussion. Viewers may post questions and comments.

PROGRAM

Welcome and Introduction: **Jan Bakkes**, Vice President, The Integrated Assessment Society and PBL-Netherlands Environmental Assessment Agency

Pre-Recorded Presentation: "Understanding the Grand Challenges in Socio-Environmental Systems Modeling"
Sondoss El Sawah, Associate Professor, Engineering Management, University of New South Wales, Canberra (20 mins.)

Q&A: Presenter responds to questions from the participants (10 mins.)

Panel Session: (Responses 10 mins. per panelist)

Detlef van Vuuren, Netherlands Environmental Assessment Agency; Professor of Integrated Assessment of Global Environmental Change, Utrecht University

Jill Jäger, Independent scholar, Vienna, Austria

John B. Robinson, Professor, Munk School of Global Affairs, University of Toronto, CA

Questions to the Panelists: (10 mins.)

Open Discussion: (20 mins.)

PRESENTER & PANELISTS BIOS

Jan Bakkes specializes in assessing and processing environmental information for decision-making. He is vice president of The Integrated Assessment Society and past senior project leader for PBL, Netherlands Environmental Assessment Agency. Since 2010, he has been assisting the China Council for International Collaboration on Environment and Development as a member of high-level Task Forces and Policy Studies. He has worked with the OECD and the World Bank and was associated with UNEP (Nairobi) for a long period. He has helped these organizations kick-start broad-based assessments and future outlooks, such as the OECD Environmental Outlook. He fulfilled key roles in a range of science-policy interface projects for the European Commission and other EU organizations, such as Cost of Policy Inaction; Beyond GDP; and EU Resource Efficiency in a Global Context.

Dr. Sondoss El Sawah is an Associate Professor in the School of Engineering and Information Technology at the University of New South Wales and leads the modeling and simulation effort in the Capability Systems Centre. Her research focuses on the behavior of large complex problems and systemic risks arising from interactions between social, ecological, and technological systems. She is Editor of the journal **Environmental Modeling and Software** and has published over 90 journal articles, three of which are Web of Science high-impact papers. Her research and leadership have been recognized with eight awards and fellowships, including the Early Career Research Award by the International Environmental Modelling & Software Society and election as Fellow of the Modelling & Simulation Society of Australia and New Zealand.

Dr. Jill Jäger is an independent scholar based in Vienna. Her past accomplishments and positions include: Project Leader at the Stockholm Environment Institute; Director of the Climate Policy Division of the Wuppertal Institute for Climate, Environment and Energy; Deputy Director of the International Institute for Applied Systems Analysis; and Executive Director of the Human Dimensions Programme on Global Environmental Change. In addition to contributing numerous scientific publications in books and scientific journals, she has participated in a range of research projects focusing on integrated sustainability assessment, climate vulnerability, and sustainability science.

Dr. John Robinson is a Professor at the Munk School of Global Affairs & Public Policy, and the School of the Environment, at the University of Toronto; Honorary Professor with the Institute for Resources, Environment & Sustainability at The University of British Columbia; and Adjunct Professor with the Copenhagen Business School. At the University of Toronto, he is also Presidential Advisor on the Environment, Climate Change & Sustainability. His work focuses on the intersection of climate change mitigation, adaptation, & sustainability; the use of visualization, modelling, and citizen engagement to explore sustainable futures, building, and urban design; creating partnerships for sustainability with non-academic partners; and the intersection of sustainability, social and technological change, behavior change, and community engagement processes.

Dr. Detlef van Vuuren is a Professor in Integrated Assessment of Global Environmental Change at Utrecht University and senior researcher at PBL Netherlands Environmental Assessment Agency. His work focuses on response strategies to global environmental problems using integrated assessment models and other tools. As such, he participates on the IMAGE integrated assessment modelling team. He has published more than 360 articles in refereed journals including high-profile journals like *Nature* and *Science*. He is among the few people worldwide that are listed as most highly cited researchers in three different disciplines.

