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Mr. Bob Vallario is Program Manager for the Integrated Assessment Research Program (IARP) in the Climate Change Research Division, Office of Science, U.S. Department of Energy. His 27 years experience in managing and conducting research in environmental and energy-related science and technology and in science strategic planning has been gained through senior research management and oversight positions held at a U.S. National Laboratory, a leading private sector science consulting firm, and most recently, at the U.S. DOE where he has been employed for the last 17 years.

Prior to his current role as the IARP Program Manager, Mr. Vallario distinguished himself as DOE's Office of Science lead planner for nearly nine years, and in prior positions including his tenure as deputy director for both the Technology Policy and the Strategic Planning Offices within Policy and International Affairs at DOE. Mr. Vallario is particularly interested in the connections between science and technology in support of new and improved clean energy systems and recently served as the Planning Chair for an International Energy Agency committee addressing this issue. He holds a Masters degree from Northwestern University in Environmental Sciences and an Undergraduate Degree from the University of Florida in Environmental Engineering.

Symposium title: Transforming Our Ability to Predict Climate Change and Its Effects: http://www.pnl.gov/aaas/track_climate.stm

Abstract
"Integrated Assessment: The Decision-Maker's Conundrum"

The dictionary defines conundrum as a: "paradoxical, insoluble, or difficult problem; a dilemma." For decision-makers in climate change, this term is well applied, as the need and urgency for scientific information is juxtaposed with the complexity and challenges of the science and the ability of current science to address answers to pressing questions in a credible manner. Many questions regarding the natural processes that govern climate change are finding answers after decades of research and billions of dollars of investments.

Even here, the nation's most powerful supercomputers are taxed by the complexity of the current models. More importantly, and within the natural sciences, critical uncertainties remain. Exploring the human dimensions of climate change and the interactions with natural systems, both in terms of driving and responding to climate change, the complexities are significantly greater. Understanding these interactions may, perhaps, be the greatest modeling and predictive challenge of this decade and, ironically, it is the most needed and relevant to policymakers.

Integrated assessment (IA) models have been a front line scientific tool used to explore and represent these interactions, serving the broader climate science community as well as policymakers for many years. Because of the inherent complexity, many simplifying approaches are taken in these models and no two are identical in methods or strengths. That being said, these IA models have been chiefly focused on simulating and revealing insights to the drivers of climate change, not the responses to climate change. There is a rapid shift afoot in research priorities to address the truly challenging task of modeling impacts and adaptations within these integrated assessment models. Over the last year, considerable effort has been spent exploring priorities and preparing ideas to move forward.