

# PERSPECTIVES FROM THE IAV COMMUNITY

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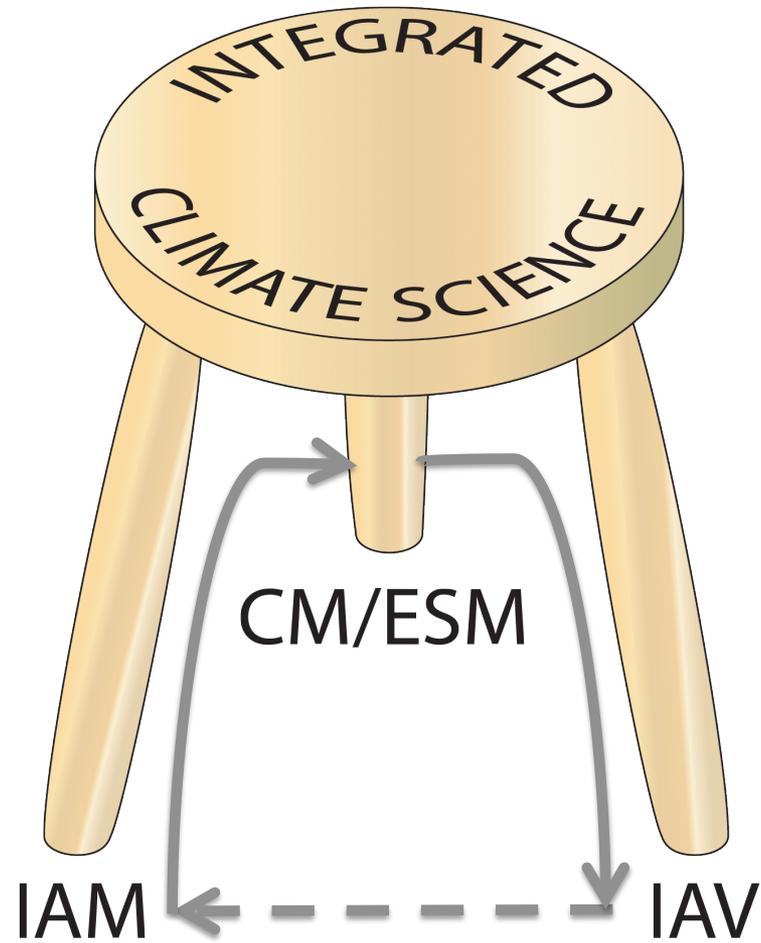
**Oak Ridge National Laboratory, USA**

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and Use**

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# Uses of CMIP 5 Data by the IAV Community Face Some Challenges:

- **Some parts of the IAV community are actively interested in CMIP 5 applications, e.g., agriculture, ecology/forestry, and water – although timeliness is an issue...**
- **Other parts of the community use climate change scenarios for issue framing (e.g., moderate vs. severe change) and communication but usually not directly as inputs for analysis**
- **Widespread interest and use are very often constrained by the fact that IAV capacities to use CMIP 5 depend on other kinds of scientific advances besides CMIP 5 alone (R. Moss yesterday), related to:**
  - **The nature of much of the IAV research community**
  - **Current priorities for IAV science advancement**
  - **The emerging context for much of IAV research and use**

# The Nature of the IAV Research Community:

- **Enormously diverse and context-specific in its work**
- **Most researchers not utilizing large quantitative models in their research, in part because time series data for many important human dimensions are lacking (which tends to point them toward empirical case studies rather than modeling)**
- **Historically, many working alone or in small groups with limited funding and limited capacities to learn new areas of climate science (e.g., how to access and use CMIP 5 data) – partly a function of a history of limited funding for sustained IAV work by teams**
- **Most concerned with projecting *socioeconomic futures*, not just with projecting *climate futures*:**
  - **Affects analyses of impacts of climate change (multiple drivers)**
  - **Affects analyses of adaptive responses to vulnerabilities and impacts (human system sensitivities, coping capacities)**

# Current Priorities for IAV Science Advancement:

- **In most areas of IAV research, the critical path for impact assessment is improving knowledge about system *sensitivities* to changes in climate parameters – considered a prerequisite for effective use of climate scenarios (...less of a problem for, say, agriculture; more of a problem for, say, urban areas...) – some progress is being made (e.g., RIAM, IAM/CIP)**
- **IAV research requires combining climate futures with *socioeconomic* futures – needs advances on the socioeconomic side as well as well as the climate side -- again, some progress (e.g., SSPs)**
- **In these senses, at least, full utilization of CMIP 5 (or its successors) by the IAV community will have to await other scientific advances in parallel (+ integration) – but we're getting there**

# Meanwhile, the Emerging Context for IAV Research and Use Tends to Reduce the Importance of Quantitative Climate Change Scenarios and Associated Reductions in Uncertainty:

- **A growing focus on observational data: attention shifting from model projections of impacts toward observations of focal events: reality, not speculation**
- **A growing acceptance that climate change futures will always be surrounded by uncertainties: frameworks for analysis and action shifting from (a) reducing uncertainties in projections of future impacts and costs toward (b) robust risk management strategies and actions that can be applied now in the face of unavoidable uncertainties (emphasizing co-benefits)**
- **As a result, CMIP 5 will be a part of the arsenal of IAV tools and data, but it is not likely to be the dominant driver of IAV research – and it is not very likely to be widely utilized in IAV research unless/until other scientific advances also occur**