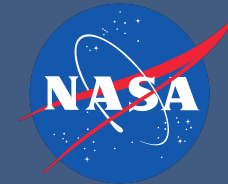


# AgMIP Coordinated Global and Regional Assessment of Climate Change and Food Security Workshop

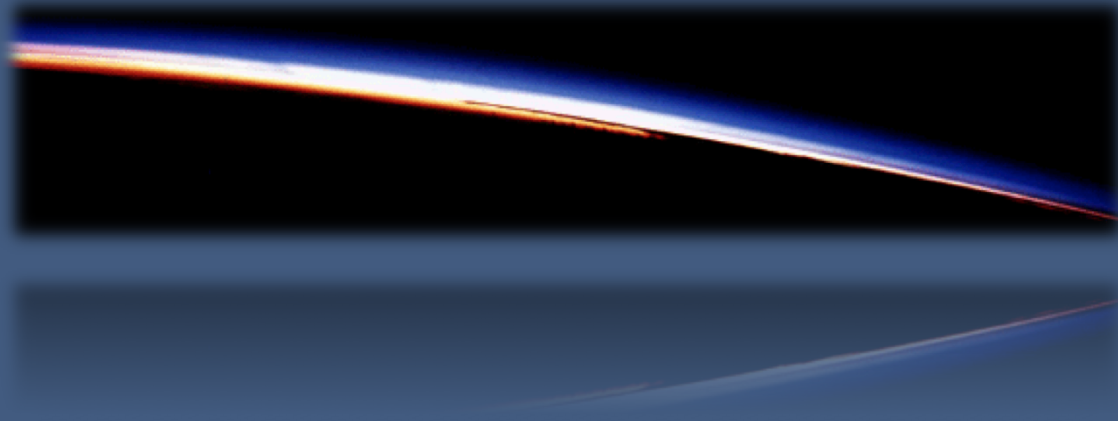


THE UNIVERSITY OF  
CHICAGO



# AGCI Program Overview





## **AGCI Mission**

*To further the understanding of Earth  
systems and global environmental  
change in the service of society*

# AGCI Program Areas



Interdisciplinary Science  
Workshops



Research & Consulting



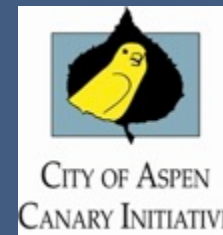
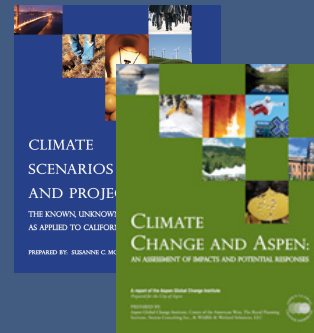
Education & Public Outreach



Sponsored Programs

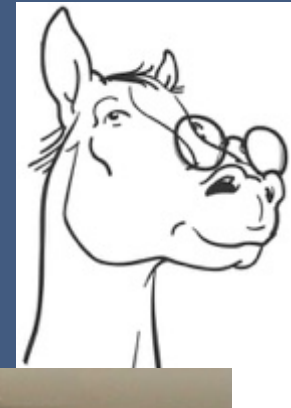
# Research & Consulting

- Local to regional decision support
  - Climate Impact Assessments
  - Forest Health Index
- Monitoring and analysis
  - Long term watershed scale soil moisture network
- Collaborations with research community & stakeholders



# Education & Public Outreach

- NASA & NSF grants for global change science curriculum development
- *From the Horse's Mouth*
  - Turning AGCI's 25 years of video into a virtual classroom resource
- Walter Orr Roberts Public Lectures online



# Climate Communication

- Susan Hassol, Director
- Communication workshops for scientists
  - Avoiding misleading jargon
- Connecting skilled science communicators to the media



[www.climatecommunication.org](http://www.climatecommunication.org)

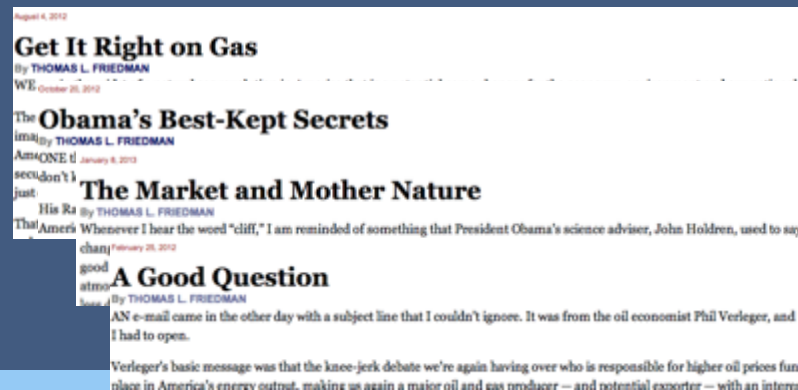


# Energy Project

- Hal Harvey, Director
- Identifying outsized policy levers
- Research
  - E.g. German renewables, Chinese cities, natural gas
- Informing key decision-makers and persons of influence



[www.energyinnovation.org](http://www.energyinnovation.org)





# Interdisciplinary workshops

- 1-2 week long meetings in Aspen
- 1200 scientists from 37 countries over 25 years
  - Leaders and emerging leaders
- Focused topics in global change



## 25 years of interdisciplinary global change science...

Physical, Biological, and Human Dimensions of Global Change • Remote Sensing, Environmental Change, & Human Health • Biogeochemical Cycles and Population Dynamics • Human Dimensions of Global Change • Biodiversity and Development • Fresh Water, Land and Biologic Interactions: Changes and Impacts • The Coupled Climate System and Climate Change • Food, Conservation and Environmental Change: Is Compromise Possible? • Human Social Metabolism • The Early Detection of Global Change • Radiation Feedbacks and the Credibility of Atmospheric Models • Anticipating Global Change Surprises • Biological Invasion as a Global Change • Changes in Global Vegetative Patterns & Their Relationships to Human Activity • Improving the Effectiveness of the Climate Convention • The Metro-Agro-Plex as a Geographical Unit of Analysis for Regional and Global Environmental Change" • Global Change and Natural Hazards • Ranking & Communicating Levels of Confidence to Policy & Media Audiences • Scaling from Site-Specific Observations to Global Model Grids • Planning for a US National Assessment • Innovative Energy Systems & CO<sub>2</sub> Stabilization • Climate Extremes: Changes, Impacts, and Projections • Integrating Human and Natural Systems to Understand Climate Change Impacts on Cities • Ecological and Agricultural Consequences of Climatic Extremes and Variability • Industrial Carbon Management: Crosscutting Scientific, Technical & Policy Implications • Atmospheric Composition, Biogeochemical Cycles, and Climate Change • Forest Management and Global Change: Near-Term Decisions and Long-Term Outcomes • Learning from Regions: A Comparative Appraisal of Climate, Water, and Human Interactions in the Columbia and Colorado River Systems • Energy Options and Paths to Climate Stabilization • Climate Scenarios and Projections: the Known, the Unknown, and the Unknowable as applied to California • Aerosols and the Hydrological Cycle • Abrupt Climate Change: Mechanisms, Early Warning Signs, Impacts, and Economic Analyses • North American Weather and Climate Extremes: Progress in Monitoring and Research • Biodiversity in a Changing Climate: Assessing Uncertainties • Earth Systems Models: The Next Generation • Exploring the Boundaries of Nature: A Reflective Dialogue on the Environment • Weather and Climate Extremes in a Changing Climate • Northern Eurasia Land surface Properties and Change and its Role in the Global Earth System • Climate Prediction to 2030: Is it possible, what are the scientific issues, and how would those predictions be used? • Managing the Cycles of Nitrogen and Phosphorus: Mitigation and Adaptation • Advanced Climate Modeling and Decision-Making Support of Climate Services • State of the Global Phosphorus Cycle • Global Change and the Solar-Terrestrial Environment • Making Sense of the multi-model decadal prediction experiments from CMIP5 • Informing a Forest Health Index and Bioclimatic Monitoring Network for the Roaring Fork Valley • Climate Sensitivity on Decadal to Century Timescales: Implications for Civilization • Science for Climate Change Adaptation: Enhancing Decision-Support Capability • Next generation climate change experiments needed to advance knowledge and for assessment of CMIP6 • Adaptation to climate change in mountain & coastal areas: a transatlantic dialogue • Pathways for Climate Solutions: Assessing Energy Technology and Policy Innovation • Experimental design for CMIP6: Aerosol, land use, and future scenarios • Frontiers of Global Change Science





# How we work - Funding

Interdisciplinary Science  
Workshops



Research & Consulting



Aspen Center for Environmental Studies



Education & Public  
Outreach



Sponsored Projects



+ Other Private  
Foundations

Additional support:

- New-Land Foundation
- Sopris Foundation
- Individual contributions



# Get involved...

- We want to hear from you on ideas for future workshops on Global Change Research
- Emphasis on recruiting early and mid-career to participate in and organize AGCI sessions
- Other collaborations focused on the integration and use of Global Change Research



# Future session proposal guide

- I. Preliminary title
- II. Possible co-chairs/  
organizers
- III. Disciplines needed
- IV. Short description (0.5  
– 2 pages)
- V. Possible funders (if  
known)



First AGCI Session 1990



Decadal Prediction Session 2011

To keep it going, we need you!



# THANK YOU!

## Recent workshop products:

- O'Neill, Lamarque, and Lawrence. 2014. Developing Climate Model Comparisons. **EOS** 95. [doi:10.1002/2014EO490008](https://doi.org/10.1002/2014EO490008)
- Meehl, Moss, Taylor, Eyring, Stouffer, Bony, and Stevens. 2014. "Climate Model Intercomparisons: Preparing for the Next Phase." **EOS** 95. [doi/10.1002/2014EO090001/abstract](https://doi.org/10.1002/2014EO090001/abstract).
- Moss et al. 2013. Hell and high water. Practice-relevant climate adaptation science. **Science** 342. [10.1126/science.1239569](https://doi.org/10.1126/science.1239569)