

Societal Dimensions Working Group

Co-Chairs: Allison Thomson, Bill Gutowski,
Brian O'Neill, Lawrence Buja

Agenda

8:30 – Introduction and Working Group Business

Research Talks

- ❖ 9:00 Ryan Sriver, Analyzing climate impacts using a low resolution CESM ensemble
- ❖ 9:20 Min-Hui Lo, Irrigation in California's Central Valley Strengthens the Southwestern U. S.
- ❖ 9:40 Dan Walker, Bridging the Gap Between Climate Science and Civil Engineering Practice: A Forthcoming White Paper from the American Society of Civil Engineers
- ❖ 10:00 Brian O'Neill, Linking Human and Earth System Models to Assess Regional Impacts and Adaption
- ❖ 10:15 Alan Di Vittorio, Implications of constant land unit boundaries for land use projection in a changing climate

10:30 Break

Special session on CMIP6: Future scenarios, Land use, and Aerosols

- ❖ 11:00 Brian O'Neill, Introduction
- ❖ 11:05 Claudia Tebaldi, Scenario MIP and Pattern Scaling
- ❖ 11:20 Dave Lawrence, Land use MIP
- ❖ 11:30 Jean-Francois Lamarque, Aerosol and Chemistry MIP
- ❖ 11:40 Discussion
- ❖ 12:00 Adjourn

Overview of SDWG

- **Mission:** Enhance CESM and its application to improve understanding of the interactions between human and earth systems
 - Climate change impacts, adaptation and mitigation
 - Interactions between the climate system and society, for example:
 - Energy-water-land interactions
 - Agriculture
 - Urban areas
 - Emissions of air pollutants and their consequences
 - Socio-ecological impacts of climate change
 - Geoengineering
 - Ocean acidification
 - Diagnosis of CESM performance from an applications perspective

Activities under the new SDWG Focus

- The mission statement was broadened after the Winter meeting from a focus on Integrated Assessment and Water Resources communities to a broader focus on interactions with all IAM and IAV research communities, as well as a focus on applications of CESM research for societal applications
- Fostering dialogue between the CESM community and other communities:
 - Identifying needs for CESM from IAM/IAV perspectives
 - Model simulations, improvements, diagnostics, evaluation
 - Output variables
 - Downscaling, bias correction
- Identifying needs of users in the scientific and applications communities for new developments in CESM
 - Communicate these needs and recommendations to the relevant CESM working groups;
- Carrying out CESM simulations of relevance to scientific and applications communities;
 - Produce prioritized list of CESM simulations, and carry them out with SDWG allocation (next proposal: August)
- Reviewing and approving new CESM code that provides linkages to human system models:
 - Gatekeeper for CESM/IAM linkage code
 - Repository of/guide to human system variables that appear in CESM

Recent co-chair activities

- Formal adoption of the new direction discussed at the February meeting and now documented on the WG web site
- Allocation of additional available computer resources to ongoing simulations
- Poster describing core related projects from the EASM and iESM projects is on display.
- Survey of WG input data: Objective is to develop a repository for CESM developers to use as a reference when considering including societal drivers or in scenario applications (CMIP6)
 - Responses so far from Chemistry-Climate, Land Ice and Polar Climate working groups
 - CCWG makes extensive use of anthropogenic emissions data and projections
 - LMWG discussion of development paths involves crops, urban lands, building energy, fires, and dynamic LUC

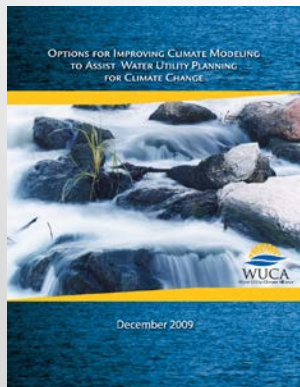
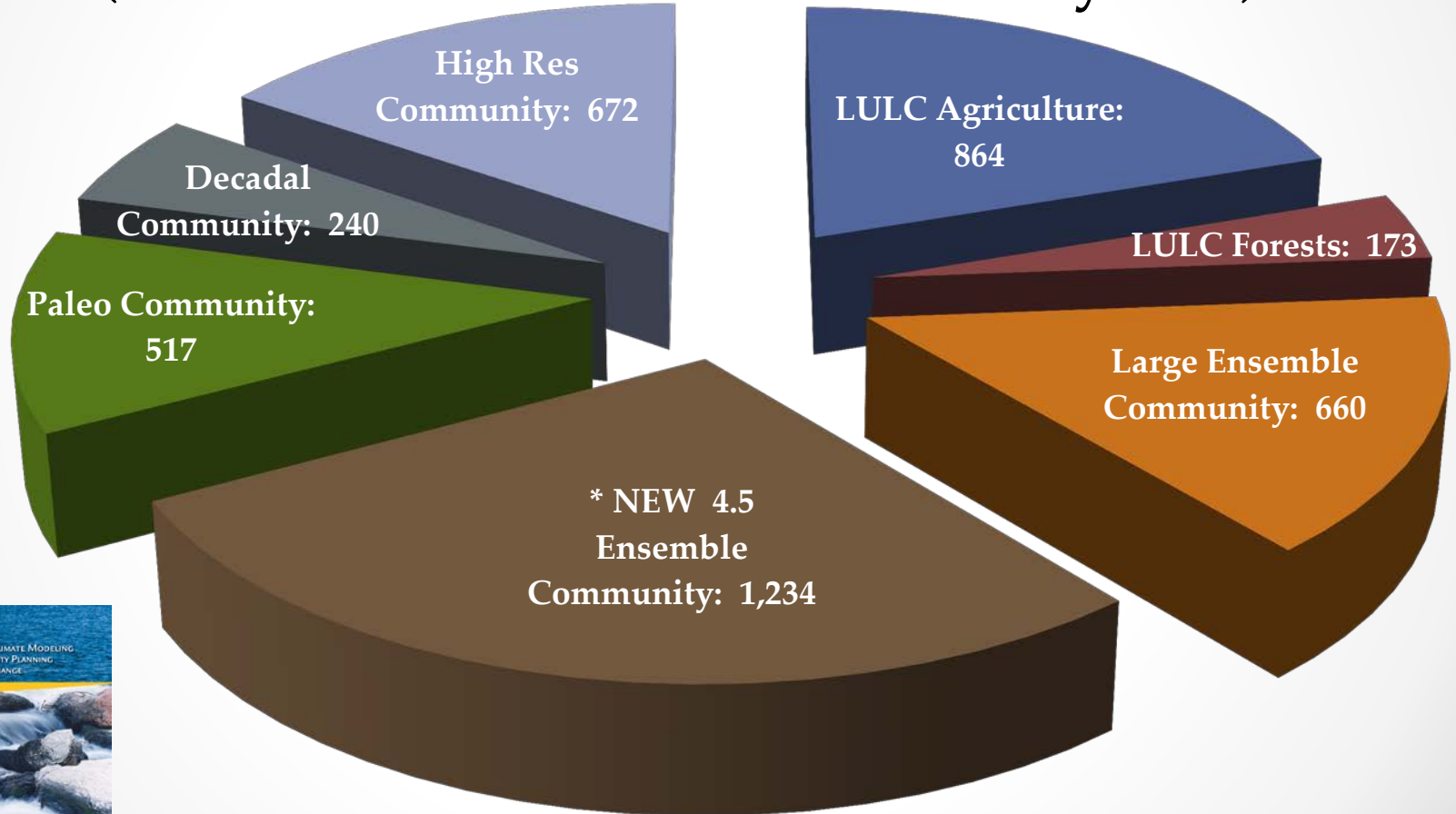
General Discussion of SDWG Directions and Activities

1. Ideas on research communities to reach out to?
2. Questions and suggestions on computing allocation proposals?
3. Comments and questions on anything other related topics?

Current CSL Allocation

SDWG Development: 4,360K Yhrs

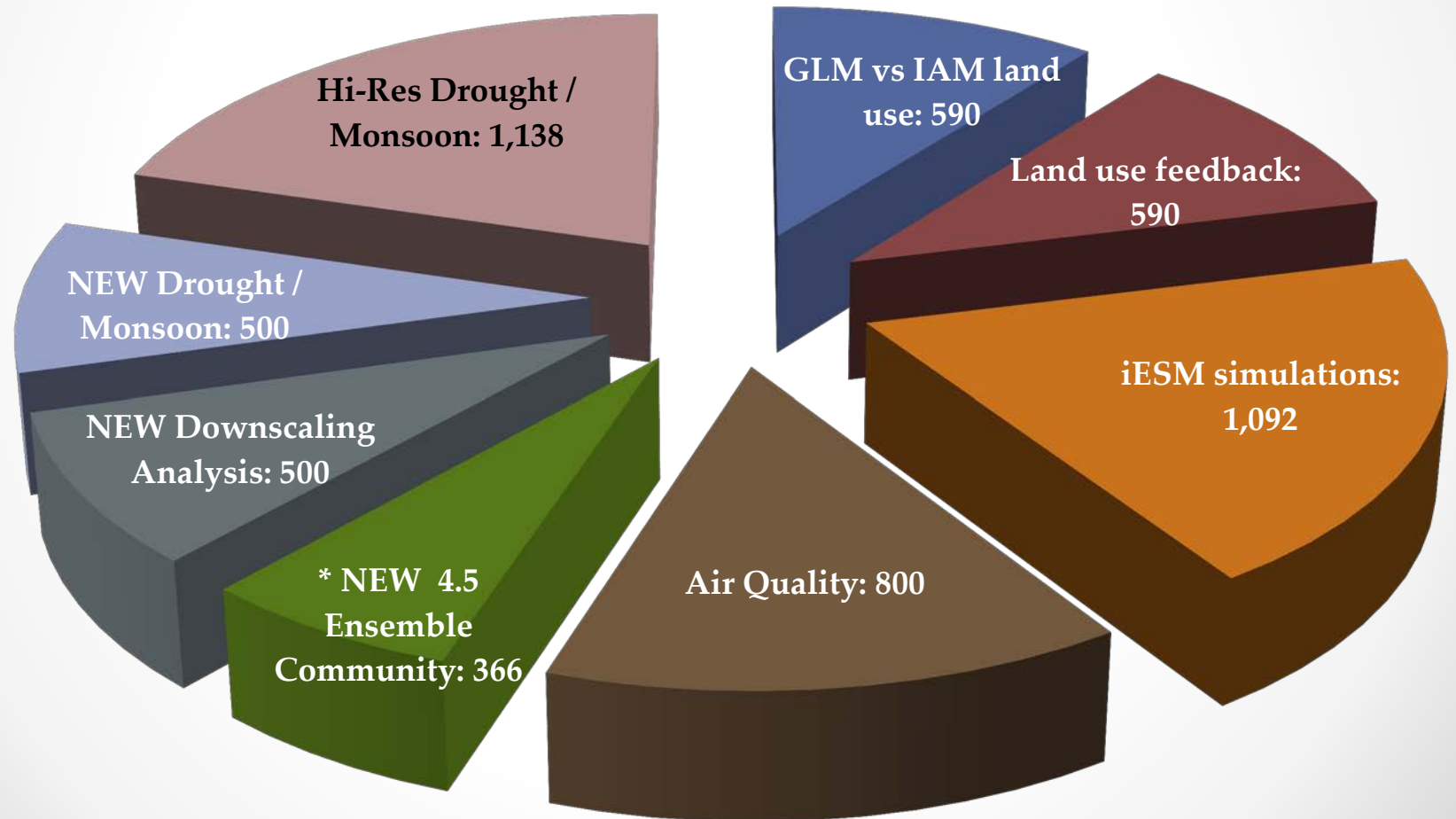
(100% used or allocated to community runs)



The 2012 SDWG-Water CSL request responded to recommendations in the Water Utility Climate Alliance (WUCA) study: “Options for Improving Climate Modeling to Assist Water Utility Planning for Climate Change”

Current CSL Allocation

SDWG Production: 5,576K Yhrs
(18% used or allocated to community runs)



Computer allocation requests

- CESM computing allocation proposal for the next two years is due in the fall.
- Proposals due to SDWG co-chairs by **July 25th** should contain:
 1. What is the scientific question to be addressed or broader purpose the runs would serve?
 2. How would this project address the goals of the SDWG (see mission statement on the website), including participation of and/or relevance to the broader research community?
 3. Which model version would be used (offline components, fully coupled, resolution, etc.)?
 4. How many runs would be carried out (different experiments and ensemble members)?
 5. What is the estimated computing time and data storage space required?
 6. Who will do the runs (note that the SDWG does not itself have resources to perform runs, except in special circumstances)?
 7. How will results be archived and made available to the community?
 8. Readiness to run: Will you start running the simulations immediately? If not, why not and when will the simulations start?

SDWG co-chairs will assess all the requests by Aug 8, in consultation with the proposal authors. The SDWG allocation request must be finalized for the CESM request by August 25.



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