

Goal 1: Improve understanding of the processes of climate variability and change in the past, present and future

Initial discussion focused on the nature of subgoals: should they be elaborations on the goals or actions that will help achieve the goals? (Jay noted that SSC considered calling subgoals “elements”.) This became a long discussion...

The “what’s”: What are the “big” process-related issues?

- Try to separate natural and anthropogenic influences on climate variability?
- How will “modes” of variability change, vary, or interact under a changing climate? This includes the response/variations/interactions of teleconnections.
- How predictable are the processes/modes of climate variability? Is a process a dynamical interaction (e.g., coupled ocean-atmosphere mode) or just a stochastic red-noise process? This is related to attribution of causality.
- Clouds and mixing and stirring/dispersion

Goal 1: Improve understanding of the processes of climate variability and change in the past, present and future

SUBGOAL 1: Identification

- Provide a synthesis/consensus view of important mechanisms in the climate system (1)
- Identify processes and their importance to climate through theory, modeling, and observations (2)

SUBGOAL 2: New modeling capabilities

- Develop new modeling capabilities to address outstanding process questions (1)
- Develop high resolution modeling of key climate processes (2)

SUBGOAL 3: Sustained observations

- Support sustained observations; connect modern and historical/paleo records—continuity of observations (1)
- Develop targeted new observations, guided by science needs, to address poorly understood physical processes (1)
- Use knowledge of processes to design sustained climate observing systems (2)
- Develop sustained observing systems to measure variability of key climate processes (2)

SUBGOAL 4: Integration

- Integrate diagnostics, process models, obs, and theory to study processes that are important in climate but are not adequately understood or represented in climate models (1)
- Translate physical process understanding into climate model improvement (2)

Other issues

- Suggest rewording of Goal 1 to “Improve understanding of the processes **controlling** climate variability and change in the past, present and future”
- For goal 4, it is not just strengthening connections *between* communities that is important, but also fostering interactions *within* the US climate community
- Concern that “predictability” is not mentioned in any of the goals