National Climate Predictions and Projections Platform (NCPP)

Introduction and saying something about CFS

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**Mission**: Supports state-of-the-art approaches to develop and deliver comprehensive regional climate information and facilitate its use in decision making and adaptation planning.

**Strategy**: A community enterprise where climate information users, infrastructure developers, and scientists come together in a collaborative problem solving environment.
NCPP is an emergent community

- Focused on the synthesis of existing climate capabilities spread across federal agencies, regional and local governments, universities, professional societies, nonprofits, and commercial activities
- Community participation in development of capabilities and problem solving
  - Evolving governance structure → based on open-source, open-innovation principles
What is different in the past decade?

• Emergence of open-source, open innovation communities for software development and complex problem solving.

• Evolution of governance practices and management approaches that lead to functioning, sustainable organizations.

• Development and deployment of tools to build and support communities.

• Structured, co-developed problem solving with multiple constituencies.
NCPP Status  
(Current and Interim)

• Organization
  – Technical team
    • 40+ members from federal agencies, universities, and other organizations
      – NOAA, DOI/(USGS, Reclamation), NCAR, NASA, DOE, universities
  – Core organizing team (responsible for NCPP)
    • 9 full time and part time people + 2 in NOAA Management
  – Interim Climate Science Applications Team
    • Current focus, downscaled data sets

• Work through use cases and pilot projects that support
  – Development of IT infrastructure
  – Provision of quality-assessed, digital climate data
  – Evaluation of models and analysis of credibility
  – Provision of guidance and advisory narratives
NCPP Status
(Current and Interim)

• Extend capabilities through engagement of existing networks
  – *e.g.*, NOAA RISA, USGS CSC, ...
  – *e.g.*, Professional Societies, ICLEI, American Planning Association,
  – *e.g.*, Local consortia, University, Private
Thinking about CFS

- Multi-scale physics and scale interaction
  - The initialization problem
  - Robustness of ensemble methods / design
  - Reconciliation of physical processes
  - Internal variability / persistence
  - Seasonal forecast skill scores aid long-term climate projections

- Multi-scale services and applications
  - Seasonal experience strongly informs usability of climate information (Lemos and Rood, 2010)
  - Operational climate indices, products for long-term climate projections, embedding services in simulations

- Infrastructure to support scientific investigation, interchange of ideas, interoperability of code
  - NCAR CESM Software Infrastructure Improvements
  - Research to Operations
Temporary URLs for more info

- NCPP Mission and Strategy
- NCPP Initial Use Cases
- NCPP Meeting Minutes
- NCPP Core Team Capability Summaries
- Initial ESGF Portal (installed only)