

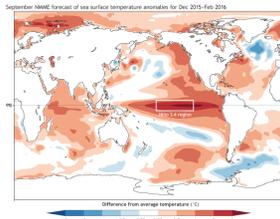
## TRANSITION OF MAPP RESEARCH INTO APPLICATIONS

NOAA provides a wide array of valuable products and services to the American public. MAPP ensures that funded research projects inform these products and services by developing and supporting the transition of research into applications of that research.

The MAPP Program shares responsibility for the NOAA Climate Test Bed (CTB) with the National Weather Service's National Centers for Environmental Prediction. CTB projects transfer research into NOAA operational activities, enabling the external community to improve NOAA products. This partnership emphasizes testing and evaluating advances in modeling and prediction for operations.

MAPP supports the North American Multi-Model Ensemble (NMME), a seasonal prediction system that combines forecasts from the leading climate models. By producing more skillful and reliable seasonal predictions on average than other available prediction systems, the NMME bolsters NOAA's mission of societal resilience.

MAPP partners with the National Integrated Drought Information System (NIDIS) Program to support research aimed at advancing understanding, monitoring, and prediction of droughts.



## ENHANCING SOCIETAL CLIMATE RESILIENCE

NOAA supports research to improve products and services that enhance societal resilience to climate anomalies such as varying water resources and high-impact Earth system conditions. For example the MAPP Program contributes to NOAA's efforts to improve the monitoring, prediction, and understanding of drought as part of the National Drought Information System, as well as improve the understanding and prediction of heat extremes. Resilience directly depends upon our improved capability to model and predict aspects of the climate system.

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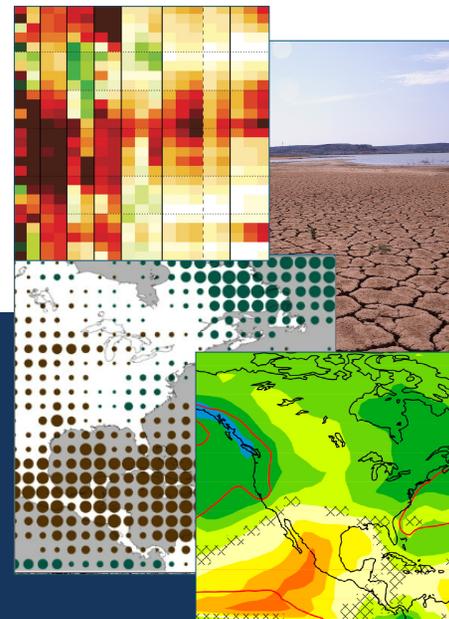
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**CPO.NOAA.GOV/MAPP**



The MAPP Program supports research and transition to advance models, analysis, predictions, and projections of the climate system.



MAPP is a competitive research program in the NOAA Climate Program Office (CPO)

[cpo.noaa.gov](http://cpo.noaa.gov)

## MAPP MISSION

The Modeling, Analysis, Predictions, and Projections (MAPP) Program's mission is to enhance the Nation's and NOAA's capability to understand, predict, and project variability and long-term changes in Earth's climate system. MAPP, a program within the NOAA Office of Atmospheric and Oceanic Research's Climate Program Office, provides foundational support for improving understanding of the climate system, assessing climate impacts for decision-making, and improving NOAA products used in climate mitigation and adaptation efforts. To achieve its mission, the MAPP Program supports research, transition to applications and engagement activities focused on the coupling, integration, and application of Earth system models and analyses across NOAA, among partner agencies, and with the external research community. The MAPP Program plays a crucial role in enabling the nation to meet the societal challenges created by impacts of climate variability, such as year-to-year changes in the occurrence of extremes or droughts, and longer-term climate changes.

The MAPP Program aims to advance:

Climate and Earth system modeling to improve the simulation of climate variability

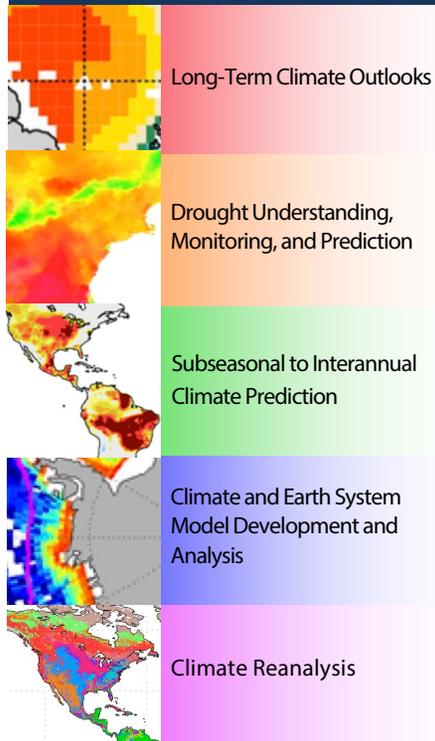
Predictions of future climate and Earth system variations from weeks to decades

Projections of long-term future climate conditions

## EXTENDING NOAA'S RESEARCH CAPABILITY

The MAPP Program is primarily a competitive funding program with annual calls for proposals and investigators' task forces organized around major programmatic research thrusts. These core MAPP efforts enable NOAA to engage the external research community on high-priority research areas, extending NOAA's internal research capability and sustaining scientific advancements in the broad community in coordination with other agencies and institutions through organizations such as USGCRP, WCRP, US CLIVAR, and IARPC.

### MAPP'S MAJOR RESEARCH AREAS:

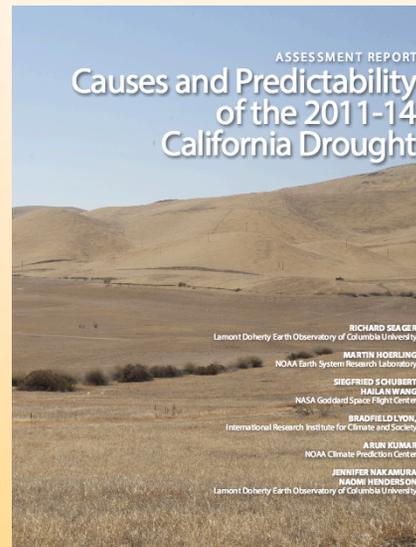


The MAPP Program organizes investigators' task forces to support its mission and programmatic research goals. The task forces include scientists funded by MAPP and provide a platform for funded researchers to coordinate and to translate research findings into advances in national and NOAA climate-related activities. MAPP currently has four task forces.

### Drought Task Force

[cpo.noaa.gov/mapp/df](http://cpo.noaa.gov/mapp/df)

The Drought Task Force (DTF) focuses on improving understanding of the causes and geophysical impacts of North American droughts, producing narrative assessments of ongoing droughts, and transitioning research to operations. A new phase of this Task Force was initiated in 2014.



### Climate Reanalysis Task Force

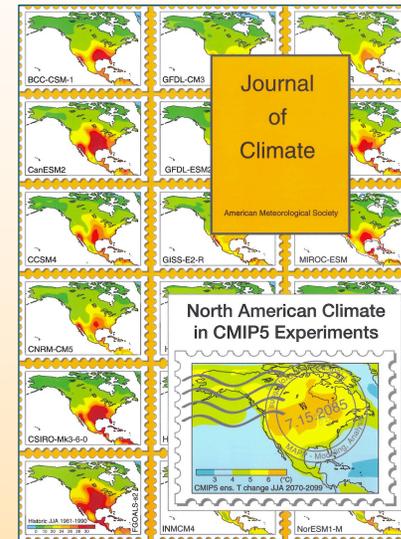
[cpo.noaa.gov/mapp/crtf](http://cpo.noaa.gov/mapp/crtf)

Formed in 2013, the Climate Reanalysis Task Force is laying the groundwork for future NOAA Reanalysis products through research to test new approaches and improve methodologies for reanalysis production.

### Process-Oriented Metrics Task Force

[cpo.noaa.gov/mapp/metricstf](http://cpo.noaa.gov/mapp/metricstf)

Starting in 2015, the Process-Oriented Metrics Task Force is helping to build a framework for model evaluation based on evaluation of processes in the models to serve NOAA and other modeling centers. The Task Force fosters community interest in moving beyond performance-oriented metrics for model evaluation and will contribute to ongoing model development efforts, evolving plans for CMIP, and a need to link model development and evaluation efforts across modeling centers.



### Climate Model Development Task Force

[cpo.noaa.gov/mapp/cmdtf](http://cpo.noaa.gov/mapp/cmdtf)

Formed in 2014, the Climate Model Development Task Force is engaged with next-generation climate development at NOAA, and is particularly focused on plans for a third Climate Forecast System at NCEP (CFSv3). This Task Force engages the external community and NOAA model developers to improve next-generation prediction systems. The Task Force brings together scientists from universities, research laboratories, and NOAA's centers and labs and builds-on MAPP funded research activities.

## ENHANCING SCIENTIFIC INTERACTIONS



Coordination and communication are key to optimizing return on research investments as well as enhancing research outcomes and impacts. The MAPP Program leads an array of activities that enhance communication and coordination within the community of program-funded researchers and beyond. Over the past few years the MAPP Program has organized several scientific workshops. These complement the monthly MAPP webinars and MAPP task forces telecons. MAPP also has a quarterly newsletter and a comprehensive webpage as community communication tools.

### MAPP WEBINARS

[cpo.noaa.gov/mapp/webinar](http://cpo.noaa.gov/mapp/webinar)



Since 2011, MAPP has hosted a monthly webinar series, which provides a public platform for MAPP-funded researchers to present their research to the larger community and to foster climate literacy in the public. Participants include MAPP-funded investigators, NOAA laboratory and operational center staff, researchers from other federal agency laboratories, and individuals in the private sector. To date, the webinar series has attracted more than 2,500 attendees. Recordings and presentations are available on the webinar website and on YouTube at: [bit.ly/MAPPyoutube](http://bit.ly/MAPPyoutube).