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 practical applications.

Selected MAPP Achievements

2013:
- MAPP's first Drought Task Force explains the origins of the 2012 Central Great Plains drought

2014:
- CMIP5 Task Force report provides basis for the 2017 Climate Science Special Report
- National Land Data Assimilation System (NLDAS) transitions into NWS operations and is applied to drought monitoring

2015:
- MAPP-organized report on NOAA climate and Earth system model strategy
- The North American Multi-Model Ensemble (NMME) seasonal prediction system is awarded DOC Silver Medal Award

2016:
- Synthesis of drought research accomplishments and needs in support of NIDIS
- The NMME system becomes dual purpose operations-research platform

2017:
- MAPP contributes to NOAA Unified Modeling Strategy
- Experimental subseasonal prediction data from SubX is publicly available and informs future plans

2018:
- Climate Test Bed project transitions into NWS operations

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.

MAPP MISSION

The MAPPING, 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 these missions, 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
- Projections of long-term future climate conditions

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For more information, visit CPO.NOAA.GOV/MAPP

MAPP is a NOAA Research program in the NOAA Climate Program Office (CPO)
cpo.noaa.gov
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. MAPP enables NOAA to engage the external research community on high-priority research areas. This extends NOAA’s internal research capability and sustains scientific advancements in the broad community in coordination with partner agencies and institutions.

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
df
Since 2011, the Drought Task Force (DTF) has focused on advancing the goals of the National Drought Information System (NIDIS) program by improving understanding of the causes of North American droughts, improving drought monitoring and prediction systems used by NOAA and its partners.

**S2S Prediction Task Force**
cpo.noaa.gov/mapp/s2stf
The Subseasonal to Seasonal Prediction Task Force investigates ways to better model key sources of S2S predictability with the aim of improving predictions of climate anomalies and extremes such as heat waves and atmospheric rivers.

**Model Diagnostics Task Force**
cpo.noaa.gov/mapp/mdtf
The Model Diagnostics Task Force helps to build a framework for model evaluation that accelerates climate model development. The Task Force fosters community interest in moving beyond performance-oriented metrics for model evaluation providing new tools for a process-level evaluation. The Task Force has contributed to linking model development and evaluation efforts across modeling centers.

**Marine Prediction Task Force**
cpo.noaa.gov/mapp/mpf
The Marine Prediction Task Force coordinates projects to explore predictions of coastal high water levels and changing living marine resources, jointly supported by MAPP and the National Marine Fisheries Service (NMFS) Office of Science and Technology (S&T). The goal is to help U.S. coastal communities and economies anticipate the threat of climate-related hazards.

ENHANCING SCIENTIFIC INTERACTIONS

MAPP supports modeling coordination and communication, optimizing research outcomes and impacts. Over the past few years the MAPP Program has organized numerous scientific workshops and written several technical reports. These complement the monthly MAPP webinars and MAPP task force telecons. MAPP also has a quarterly newsletter and a comprehensive webpage as community communication tools. To subscribe to the MAPP newsletter, visit:
cpo.noaa.gov/mapp/newsletters

MAPP Webinars
cpo.noaa.gov/mapp/webinar
Since 2011, MAPP has hosted a webinar series, as a public platform for MAPP-funded research and for presentations on MAPP relevant areas from the broader community. To date, the webinar series has attracted more than 3,500 attendees. Recordings and presentations are available on the webinar website and on YouTube at:
bit.ly/MAPPyoutube.