

FACETs Paradigm: Leveraging Research, Experimentation and Collaboration to Execute the Expansion of FACETs to Multiple Environmental Threats and Timescales

Forecasting a Continuum of Environmental Threats (FACETs) is a proposed next-generation framework that is modern, flexible, and designed to communicate clear and simple hazardous weather information to serve the public. FACETs explores the concepts of environmental threats, observations and guidance, forecaster decisions, threat grid tools, useful output, effective response, and verification to support a Weather-Ready Nation. With its roots in the National Severe Storms Lab (NSSL), the effort began with the exploration of severe weather hazards.

The FACETs Paradigm Working Group (FPWG) was established within the NOAA Office of Atmospheric Research (OAR) Policy, Planning, and Evaluation (PPE) group, specifically the Weather Portfolio, to work across NOAA research labs and line offices to develop and enhance the use of probabilistic hazard information (PHI) by employing physical, social, behavioral, and economic sciences. The resulting PHI informed by reliable, calibrated data and wrapped with innovative social science applications allows for improved decision making by the communities which we serve. It is the goal of the FPWG to expand the FACETs framework beyond severe weather and the watch and warning timescale to support evolving societal needs.

In keeping with the FPWG charge to develop opportunities of engagement through research and discussion related to FACETs across multiple hazard areas that support NOAA's mission, the OAR PPE has invested in targeted research to be conducted by a Postdoctoral cohort comprised of four researchers. These Postdocs will embark on 2-year missions designed to make technical, physical and social science discoveries that will contribute to the expansion of the FACETs Paradigm to include all hazards and timescales.

The FPWG members are collaborating closely with National Weather Service (NWS) partners to identify research gaps, deepen understanding and applicability of the FACETs concepts, create tangible FACETs expansion mission goals for the labs and hazard areas, and strengthen relationships with the NWS operational partners invested in the FACETs program. This talk will serve to broaden the understanding of the applications of the FACETs Paradigm and seek community engagement.