

# Coupled Global Modeling Committee

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Prepared by:

National ESPC Project Staff

## 1. SCOPE

The Coupled Global Modeling Committee is established to discuss ongoing research and development work associated with coupled air-ocean-land-sea ice global prediction systems and to enumerate and prioritize key scientific and technical issues and identify pathways to their resolution. Specifically, the committee will address issues associated with predictions from synoptic to seasonal time scales, sources of improved forecast skill and underlying predictability at those time scales, and optimum configurations of a multi-model/multi-organization operational system.

Examples of issues to be addressed are:

- a. The science behind explicit coupling at synoptic to seasonal scales
- b. Optimum coupling configurations of systems to meet mission needs/requirements such as frequency of data passing, frequency of model runs, ensemble or deterministic execution of specific models, etc.
- c. Identification of current benchmark skill metrics integrating ocean and atmospheric measures, assessment of these metrics at extended lead times, and establishment of obtainable forecast skill goals associated with mission/user needs at various time scales.

## 2. PURPOSE

Explicit coupling of air-ocean-land-sea ice and near space domains in predictive models is being pursued to address operational requirements in two week to inter-annual time frames. While global coupled models are routinely used for climate assessment, adjustments are made to model projections (flux corrections, etc.) in order to force the model climate to replicate the true climate, and only for specific mean parameters. A predictive model for the earth system operating on two weeks up to inter-annual time scales requires a more rigorous approach and addressing a number of significant science and technical issues. Additionally, current and emerging mission needs require a better understanding of predictive skill beyond domestic mean parameters such as continental scale temperature or precipitation anomalies.

## 3. PARTICIPANTS

The CGM is a joint effort of the Department of Commerce/ NOAA National Weather Service (NCEP), and the Department of Defense, U.S. Air Force (AFWA) and U.S. Navy (Naval Meteorology and Oceanography Command) with participation of the primary research organizations at NOAA/OAR, U.S. Navy/ONR/NRL, NSF/NCAR, DOE, and NASA

## 4. AUTHORITIES

NOAA has authority to participate in the CGM project under 15 U.S.C. Section 1525. The authority for the U.S. Navy falls under the OPNAV Instruction 5430.48E (OPNAV SORM). Authority for the U.S. Air Force falls under DODI 4000.19 Interservice and Intergovernmental Support, 9 August 1995.

## 5. ROLES AND RESPONSIBILITIES

### a. Executive Steering Group (ESG)

The National ESPC ESG oversees and supports the activities of the CGM.

### c. CGM Committee

### d. National ESPC

The National ESPC staff is responsible for scheduling and recording CGM committee meetings; publicizing and championing prioritized research issues developed by the committee; and reporting committee findings to the ESG.

## 6. FUNDING

There is no dedicated funding associated with the inter-agency committee. Individual Agencies under the ESPC and NUOPC MOU's may make arrangements for participation in the committee work under separate arrangement.

## 7. PERIOD OF AGREEMENT AND MODIFICATION/TERMINATION

a. This Agreement shall become effective on the date of the last approval signature. The National ESPC Staff will review this annex every two years to determine whether it should be revised, renewed, or cancelled. Additional reviews may be conducted as directed by the National ESPC ESG. This agreement may be amended at any time by the mutual written consent of the ESG. The latest date of review or amendment constitutes the new effective date unless some later date is specified.

b. Any Party may terminate this agreement by providing at least six months written notice to the other Parties. In the event this agreement is terminated, each Party shall be solely responsible for the payment of any expenses it has incurred. Should any one Party decide to withdraw from this agreement, the remaining two Parties may, at their discretion, decide to maintain the agreement under appropriately revised terms and conditions and funding strategies.