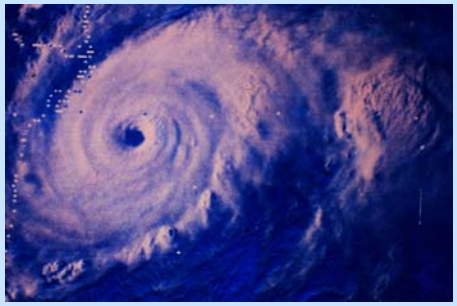


The National Academies:

Review of the GAPP Science and Implementation Plan

Pre-Release Briefing to the
National Oceanic and Atmospheric Administration and the
National Aeronautics and Space Administration

June 17, 2005

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

Statement of Task

This study will provide a review of the GAPP Science and Implementation Plan.

- Does the GAPP SIP meet the GAPP scientific goals for:
  - i) predicting precipitation and land-surface hydrologic variables on monthly-to-seasonal timescales, and,
  - ii) demonstrating their usefulness for water resource applications?




Statement of Task (cont.)

- Does the GAPP SIP support the CCSP goals for the hydrologic cycle?
- Does the GAPP SIP support the goals of the CPPA?
- Does the GAPP SIP support the GEWEX phase II scientific questions?
- What relationship does GAPP have to other programs with similar goals?
- Are there any gaps in the GAPP SIP?




The Study Committee

Katharine L. Jacobs, University of Arizona

Ana P. Barros, Duke University

Paul A. Dirmeyer, Center for Ocean-Land-Atmosphere Studies

Aris P. Georgakakos, Georgia Institute of Technology

Chester F. Ropelewski, International Research Institute

Guido D. Salvucci, Boston University

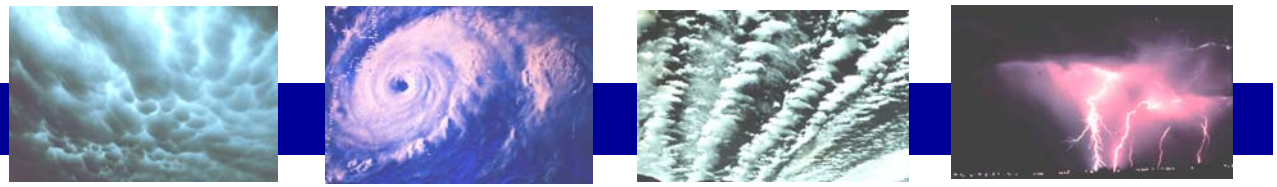
Soroosh Sorooshian, University of California, Irvine

Hassan Virji, International START Secretariat




Committee Strategy

- Committee received and read the SIP in advance of the meeting
- Committee met in Washington, DC, March 30 – April 1, 2005
- Open Session Speakers:
  - SIP chapter authors
  - representatives from NOAA OGP, GEWEX, CCSP, EPA
- Committee met in closed session and by email and conference call to prepare its report



Organization of the Report

- Chapter 1: Introduction
- Chapter 2: General Comments and Recommendations
- Chapter 3: Chapter Comments and Recommendations
- Chapter 4: GAPP and Related Programs
- References and Appendixes




General Recommendations

- Need for more significant interagency program support; Coordination of GAPP within a U.S. project office
- Broaden Science Advisory Group to include decision support experts
- The need for an ongoing strategic prioritization process that iteratively evaluates progress of GAPP




General Recommendations (cont.)

- Gaps in the GAPP SIP:
  - A description of the mechanisms used to assess achievements and metrics for evaluation of products relative to the mission
  - Adequate documentation so that the key information needed for external review is included:
    - listing of funded projects, accomplishments to date including publications and application products, relationship to other research and applications efforts,
    - state of the science, and
    - key outstanding science and decision support issues



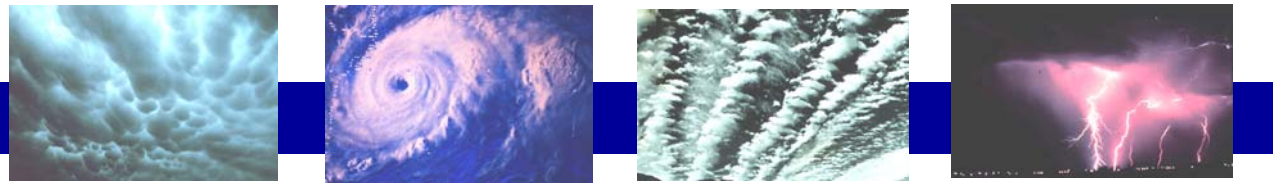

General Recommendations (cont.)

- Gaps in the GAPP SIP (cont.):
  - Budget information so that the extent of commitment to the various elements can be evaluated, with particular attention to articulating the commitment to and expectations of the Core Project.
  - An up-to-date program description and specific implementation plans that include timelines and responsible agencies or investigators.




General Recommendations (cont.)

- Decision Support:
  - Investments in decision support should be viewed as bolstering the relevance of scientific activities rather than detracting from inquiry driven research.
  - GAPP should either invest more meaningfully in decision science, stakeholder engagement, and capacity building, or amend the decision support objective to be more achievable. The committee strongly endorses the former approach, but recognizes that building decision support systems is a challenge that is much broader than the GAPP program.



General Recommendations (cont.)

- Decision Support (cont.):
  - Investment in establishing reliable two-way information flows between the GAPP research community and the end-users.
  - GAPP should initiate more demonstration projects to illustrate the potential of an “end-to-end”, integrated, climate-hydrologic-water resources information system.
  - GAPP should partner with other agencies (e.g., the U.S. Geological Survey, the U.S. Army Corps of Engineers, the Department of Agriculture, and the Bureau of Reclamation) that work with a broad array of end-users.




General Recommendations (cont.)

- Decision Support (cont.):
  - GAPP program managers should work with RISA programs to identify appropriate projects and funding sources to enhance the decision support component of both activities.
  - Program managers should increase efforts to assess user needs and build multi-agency and/or public-private partnerships to support specific applications and climate prediction tools.




Recommendations for Individual SIP Chapters

- More specific recommendations are provided for improving the individual chapters of the SIP—
  SIP chapters 2 through 10




GAPP and Related Programs

Does the GAPP SIP support CCSP goals for the hydrologic cycle?

- Direct connection between GAPP and water cycle research element
- GAPP also supports multiple parts of the CCSP climate variability research element
- GAPP's decision support goal is squarely focused on the CCSP decision support program




GAPP and Related Programs (cont.)

Does the GAPP SIP support the goals of CPPA?

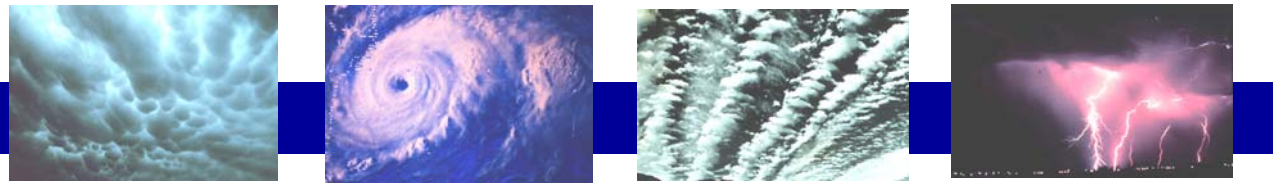
- GAPP supports CPPA through atmosphere and land processes, not ocean processes

Does GAPP support GEWEX Phase II Science Objectives?

- GAPP's scientific and implementation plans are closely tied to GEWEX Phase II

Relationship of GAPP to Other Programs with Similar Goals

- Key related program connections are WRAP, COPES, IRI, and RISAs



Public Release of the GAPP Report

- Public release: 9:00 AM EDT,
  Monday, June 20, 2005
- Available for free download on the internet:
  - www.nap.edu

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Review of the GAPP SIP

The GAPP program is the main climate-related research program addressing land hydrology issues, affecting every community and every economic sector that depends on long term reliable sources of water. Because of its close relationship to the CCSP, GAPP deserves far more significant support than it has received in the recent past.

Questions?