

University Corporation for Atmospheric Research FY 2005-06 Advocacy Priorities

Ongoing Priorities

Weather, climate, and solar variations are known to have a substantial impact on our Nation's economy, environment, national security, and citizen safety. To improve our understanding of these phenomena and how they impact society requires (1) observing, modeling, and understanding the related natural process and societal interactions; (2) educating and training the next generations of scientists and forecasters; (3) creating and supporting a broad range of research infrastructure and technologies, (4) and providing free and open access to relevant data as well as to the most advanced research tools such as supercomputers, computer models, satellites, radars, instrumented aircraft, and instruments capable of measuring infinitesimal quantities of important trace gases and particles in the atmosphere and oceans. In order to meet these requirements and advance the field of the atmospheric sciences, UCAR supports the atmospheric sciences research, education, training, and services programs and budgets of NSF, NOAA, NASA, DOE, FAA and the USGS, and monitors and contributes to a range of related policy and legislative initiatives. UCAR works with the broad community to ensure a strong voice in federal agencies, Congress, and the Administration by undertaking the following objectives:

- **Research and Education Support.** Ensuring that related programs and budgets within NSF, NOAA, NASA, DOE, and the FAA are adequate to advance atmospheric sciences understanding and train a diverse, next generation of researchers and forecasters.
- **Services and Training Support.** Ensuring that related service and training programs and budgets within key federal agencies are adequate to transfer the latest research and technology advances to operational use and maintain the highest quality operational infrastructure.
- **Policy Support.** Ensuring that national policies are favorable to improving atmospheric sciences research and services through Congressional and Executive Branch visits, letters, testimonies, educational briefings, and periodic reports.
- **Advocacy Support.** Promoting related research, education, training, and service collaborations among academia, industry, government, and with other nations. Keeping these partners informed on program, budget, and policy matters through alerts to take action, periodic reports, briefings, testimonies, and maintaining an informative advocacy web site.

Fiscal Year Priorities

With the FY04 budget, we saw the beginning of a downward trend in the availability of non-defense discretionary dollars. This trend is not likely to be brief and will have a considerable effect on R&D and science education and training budgets. Therefore, UCAR advocacy activities will focus on high impact approaches, utilize member university Congressional connections more effectively than ever and in a targeted manner, and limit advocacy activities to those that have highest priority for the community and reasonable potential for real influence. UCAR has spearheaded the organization of several academic institutions, private companies, and professional associations to form the Weather Coalition (for membership and activities, see http://www.ucar.edu/oga/wx_coalition/), the purpose of which is to advocate for improved weather prediction capabilities. Some of UCAR's weather-related advocacy activities for FY05 and FY06 are being carried out in concert with the Coalition.

Each year, UCAR's Board of Trustees reviews advocacy objectives and a detailed plan of activities and approves new priorities for the year. Some specific priorities for FY 2005 and FY 2006 (not yet completely formulated) include:

- **National Science Foundation (NSF).** The Congressional sentiments behind the 2002 NSF Authorization bill, calling for doubling the NSF budget, are alive and well, but implementation is not. FY05 is the second year of minimal (or possibly no) increases for NSF. In FY04, the 1.0 percent increase for the Atmospheric Sciences Division within the Geosciences Directorate (GEO) compared unfavorably with many other NSF-funded programs (NSF was up 5 percent overall) and with the 3.1 percent increase for GEO itself. ATM funding is critical to the success of the atmospheric sciences university community. The pressures of a shrinking research budget and the experience of the FY04 appropriations call for increased activity to make Appropriators aware of the importance of ATM to the country.

UCAR is supporting an increase for NSF's overall budget (UCAR's highest advocacy priority), continuing to support delayed Congressional efforts to double the NSF budget, and supporting in particular the Geosciences Directorate (GEO), GEO's Atmospheric Sciences Division (emphasis placed here), the advancement of computing capabilities, and atmospheric sciences education programs including digital libraries and programs that build a diverse workforce.

- **National Oceanic and Atmospheric Administration (NOAA).** The future of NOAA Research is in some flux as recommendations from the NOAA Research Review Team report are implemented, NOAA priorities within the Ocean Commission Report are recommended for funding, and a NOAA Organic Act is drafted by Congress. UCAR is supporting the implementation of recommendations that clearly strengthen NOAA's atmospheric sciences basic research and research applications capabilities and enhances the broad community's abilities to partner with NOAA. With the Weather Coalition, UCAR continues to advocate for a NOAA extramural grants program, the Collaborations Fund, that would expand greatly NOAA's ability to collaborate with the best researchers in academia and the private sector. Regarding NOAA Appropriations, UCAR supports the atmospheric sciences and education programs within the Office of Oceanic and Atmospheric Research (OAR) including the Office of Global Programs (OGP), the programs of the National Weather Service (NWS), and the National Environmental Satellite, Data and Information Service (NESDIS). Support for specific programs includes THORPEX, the U.S. Weather Research Program (USWRP) including development of the Weather Research and Forecasting Model (WRF) and the Developmental Testbed Center, and the enhancement of global observing systems.
- **National Aeronautics and Space Administration (NASA).** During FY04, the Administration merged the NASA Space and Earth Science programs in order to support the emerging Moon-Mars Mission. The reorganization seems to have taken place at the expense of science – earth systems science likely ending up as the biggest loser. NASA programs are critical to the study of the earth. If they are diminished in NASA, they must be picked up by another agency capable of managing them. UCAR is advocating for the maintenance and enhancement of earth systems science-related programs within NASA, and for specific programs such Sun-Earth Connections, the Earth Observing System Follow-On, the Living with A Star initiative, Solar-B, the Astronomical Search for Origins program, and GLOBE. UCAR will look for any opportunity for the Moon/Mars plans to intersect with the atmospheric sciences community's interests and will focus on developing those opportunities should they arise in addition to urging Appropriators *to not forget ongoing research programs of importance to the nation.*
- **Department of Energy (DOE).** When adjusted for inflation, funding for DOE's Office of Science has remained at the 1990 level as contrasted with inflation-adjusted increases for almost all other scientific enterprises in the federal government. Given societal needs for advancing research efforts on critical topics such as the environment, climate change, and renewable energy, this situation is finally getting attention in Congress. UCAR is supporting the atmospheric

sciences-related research and education programs associated with the Advanced Scientific Computing Research initiative and DOE's Biological and Environmental Research division (i.e., climate and global change and related impacts, carbon cycle, and the Atmospheric Radiation Measurement Program).

- **Federal Aviation Administration (FAA).** UCAR is supporting the FAA Weather Program's applied research in partnerships with the atmospheric sciences and user communities, and in transferring advanced weather detection and prediction algorithms into operational use.
- **U.S. Geological Survey (USGS).** While the USGS is not a major basic research agency of the federal government, its programs overlap those of NCAR and the community in a number of areas including collection of data on water resources, wildland fire research, development of decision support tools for hazardous situations including flooding and wildland fire, environmental observations, environmental health, and data assimilation for use in scientific research. In recent years, USGS has not fared particularly well in the President's budget requests and Congress has had to reinstate funding (rarely exceeding flat levels) to keep critical programs from being slashed. In order to support USGS efforts to provide scientific information and data of relevance to the atmospheric sciences, particularly work concerning the nation's hydrologic systems, UCAR has joined the USGS Coalition a group of over 40 institutions supporting the USGS.

Climate Change. In 2002, the Bush Administration established the U.S. Climate Change Science Program (CCSP) that incorporates and integrates the U.S. Global Change Research Program (USGCRP) with the Administration's U.S. Climate Change Research Initiative (CCRI). The CCSP strategic plan was released in 2003 following input from the community. Funding requests are not adequate to accomplish all of the goals. UCAR's leadership role in the development of the Community Climate System Model (CCSM) makes it a world leader in climate research issues. UCAR is advocating for:

- effective management and Congressional oversight of the Administration's climate change initiatives and the role of the federal agencies,
- enhanced funding for the resources necessary to develop the most advanced climate models and observing systems possible, and
- broad and effective community participation in the country's climate research program.

Interagency and Policy Initiatives. UCAR is supporting interagency research, education, and policy initiatives, including the U.S. Weather Research Program, the National Space Weather Program, the U.S. Climate Change Science Program, efforts to build a diverse workforce, the creation of digital libraries and other innovative science education programs and support services, supercomputing needs, the free and open exchange of data issues, reasonable visa policies for foreign students and scientists, and private sector participation in weather research and operations areas that does not undermine Federal core observation and forecasting services that are critical to public welfare.

Congressional Outreach. UCAR is continuing its activities to raise the profile of both UCAR and the atmospheric sciences generally through continuation of our Congressional briefing program, participation with peer organizations in national coalitions, and Congressional advocacy. The impact of this effort over the last few years has continued to grow, and UCAR's reputation on Capitol Hill has continued to rise. UCAR is now seen as a vital source of scientific and policy information by key congressional staff and administration officials. Our efforts have contributed to improved policies and improved budgetary outlooks for the federal science agencies.