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EDITORIAL

Budgetary Foul Weather

Time and again the atmospheric science community has been urged to speak out and lobby Congress in support of its programs. But the vast majority of our community are government employees who are precluded from lobbying, and our professional society—the American Meteorological Society—is also limited in this respect. As one of the few who are not so inhibited, I raise my voice in the hope of avoiding an environmental public policy disaster.

The across-the-board cuts in funding for most agencies, many beginning in the current fiscal year, are creating especially stormy weather for the National Weather Service (NWS). The NWS is about two-thirds of the way through a 12-year, \$4.5-billion modernization program authorized and funded by a bipartisan Congress. This program has given birth to a national network of 164 Doppler radars, which have already demonstrated their value to public safety by increasing the warning time for tornadoes to an average of 11 minutes—enough to save the lives of hundreds to thousands of people each year. It has also created a new generation of geosynchronous satellites, which provide more frequent and improved data that increase the accuracy of warnings of severe thunderstorms and hurricanes, not to mention the immense contributions to aviation safety.

The modernization program has produced other benefits. Improvements in the polar orbiting satellites and in methods of incorporating their measurements into numerical prediction models developed by the National Centers for Environmental Prediction (NCEP) (arguably the foremost prediction center of its kind in the world), as well as greatly improved computer models, have increased the accuracy of mid-range forecasts. Five-day forecasts are now made with the same accuracy that characterized 3-day forecasts 20 years ago. Last year, in its 24-hour forecasts of hurricane tracks, NCEP reduced the 10-year average error of 95 miles by 24%. This winter, NCEP showed increased accuracy in predicting the location and amount of precipitation in the flood-prone areas of the northwest. And after many years of research on long-range prediction, NCEP and its academic colleagues have attained modest but significant improvements in 6- to 12-month forecasts, based on understanding of El Niño and the Southern Oscillation. Further improvements in accuracy and in the weather products furnished to the weather-sensitive industries will come from completion of the modernization program and from additional advances in observation and modeling.

To realize the benefits of these new observations and models, the NWS must have a robust information-processing and display system that is capable of rapidly and efficiently digesting the unprecedented quantity of data and imagery now available. This is supposed to be accomplished by AWIPS, the Automated Weather Information Processing System. However, to date only 15 prototype AWIPS systems have been delivered. Twenty-one more are authorized, but budget cuts threaten the remaining 112. In addition, NCEP has been ordered to make immediate reductions in force that threaten its services to the public and its very existence. If these cuts are made, we may anticipate resignations of the top scientists and managers at NCEP and throughout the NWS. Morale at the NWS is at a very low ebb.

These advances the NWS has made are not pie in the sky—they are real. And they are as critical to the health and welfare of the public, to aviation safety, and to the national economy (because of their effect on the weather-vulnerable agricultural and industrial communities) as are the impressive actual and potential advances made in medicine in recent years. One need not conduct a cost-benefit analysis to demonstrate the value of the NWS and its modernization program.

With the enthusiastic support of Congress and several administrations of both parties, plus the incredible creativity and dedication of hundreds of scientists, engineers, and managers in government, industry, and academe, the NWS has nearly reached its goal. What a waste it would be to jeopardize the completion of this impressive program for want of a relatively modest continuation of the funds that are needed. Our community does not seek immunity from the national belt-tightening; all we ask is that it be done in a way that does not waste the vast investments in time and money that have brought us this far and does not endanger the infrastructure that has made it all possible.

David Atlas

The author is an independent consultant and Distinguished Visiting Scientist at NASA Goddard Space Flight Center. He is also past president of the American Meteorological Society. E-mail: datlas@trmm.gsfc.nasa.gov