

## Observations and Monitoring: The Challenge of Science to Services

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NOAA's proposed new Climate Service has an important challenge related to delivering information on the state and changing state of the climate system. The NOAA Climate Service must address the observations needed to adequately monitor the climate, infuse the best science available into its monitoring, and yet have the operational mindset to deliver information on time, every time, that is understandable and useful to a diverse set of stakeholders from scientists to policy makers and the general public. NOAA's Annual State of the Climate Report will be used to identify and draw out several issues and opportunities related to this challenge.



**Figure 1.** Thomas Karl currently serves as director of NOAA's National Climatic Data Center in Asheville, N.C., and interim director of NOAA's Climate Service. Karl is a fellow of the American Meteorological Society and has recently completed his term as President. He is also a fellow of the American Geophysical Union and has published more than 150 peer-reviewed articles and several books as editor and contributor. He has received many awards and recognition for his work in services and scientific contributions in climate-related work including: two Presidential Rank Awards, five Gold Medals from the Department of Commerce and two Bronze Medals; the American Meteorological Society's Suomi Award; National Associate of the National Academy of Sciences; the NOAA Administrator's Award, and several others. He has served as Editor of the *Journal of Climate* (1997-2000) and has been the Convening and Lead Author and Review Editor of all the major Intergovernmental Panel on Climate Change assessments since 1990, which were recently awarded the Nobel Peace Prize. He was Co-Chair of the U.S. National Assessment and the recent Global Climate Change Impacts in the U.S. State of Knowledge Report and a number of other assessments produced by the U.S. Climate Change Science Program. He has received a B.S. in Meteorology from Northern Illinois University, a M.S. in Meteorology from the University of Wisconsin, and a Doctorate of Humane Letters (honoris causa) from North Carolina State University.