

US Earth observations, science and services are critical to society but are at risk

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Earth observations, science, and services (Earth OSS) inform and guide the activities of virtually all economic sectors and innumerable institutions underlying modern civilization, according to a new study by the American Meteorological Society (AMS) Policy Program. The report also found that Earth OSS in the United States face considerable challenges because economic downturns and Federal budget deficits put efforts to build and maintain Earth OSS capabilities at serious risk.

The findings stem from an AMS Policy Program workshop, Earth Observations, Science and Services for the 21st Century, held in Washington, DC. Experts from academia, government and the private sector convened to examine challenges and opportunities facing Earth OSS, which support agriculture, energy, transportation, water resource management, public health, emergency response, insurance, national security and other foundations of society.

Earth observations reveal a wide range of characteristics and functions of our planet. We observe [weather events](#), surface conditions, ecosystems, agriculture, the built environment, and urban areas, all of which underpin U.S. social and economic well-being. Earth sciences consist of basic and applied analysis and experiments, in the lab, in the field, or in physical models, that increase our knowledge and understanding of the [Earth system](#). Earth services include [weather forecasts](#), [natural hazard](#) preparedness and response, and decision support across key economic sectors.

The report concludes Earth OSS are a fundamental component of efforts to meet basic human needs such as providing food, shelter, energy, health and safety. At the same time, the opportunities for societal benefit from Earth OSS are ever-increasing.

"Earth observations, science, and services comprise one of this country's critical infrastructures," Bill Hooke, director of the AMS Policy Program, says. "Agribusiness, the energy industry, water resource managers, [public health officials](#), financial markets, emergency managers, military commands, diplomats, and leaders of the world's nations all rely on Earth OSS. However, the benefits of Earth OSS are obscure to most, and many of the beneficiaries are unaware of their reliance on OSS."

Taken together, Earth OSS comprise a national asset that, if lost or degraded, will not meet future societal needs that span the whole of the national agenda.

"Given the nation's growing reliance on weather and climate information, efforts to expand our Earth OSS capability are virtually certain to broadly benefit the U.S. economy," says Paul Higgins, associate director of the AMS Policy Program. "We need strong and effective Earth OSS in the years ahead. That will require thoughtful national policies, improved collaboration among the public, private, and academic sectors, and robust funding for key [Earth](#) OSS resources."

More information: The full report is available at the American Meteorological Society Policy Program Web site at www.ametsoc.org/oss

Provided by American Meteorological Society

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