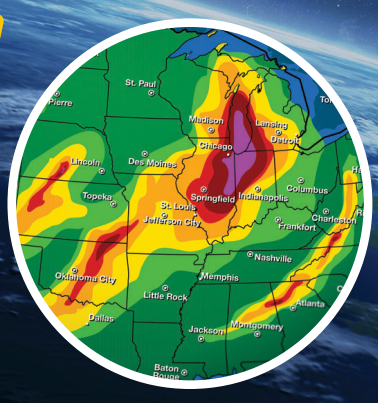
The Importance of Earth Information

Earth-observing satellites provide critical information about our planet. This information supports a broad range of societal needs and enables the scientific discovery required to meet those needs, making us all healthier, safer, and more efficient.

Helping Plan Our Day

300 billion

weather forecasts used by Americans every year



100+ million

American adults use internet-based mapping services

Americans rely on sophisticated Earth information throughout their everyday lives, from weather forecasts to navigation applications in their cars. Satellites are the original sources of much of the data.

Protecting Our Health

6.5 million

premature deaths from air pollution around the world every year

Earth-observing satellites track the concentration of harmful pollutants across the country, providing air quality data for rural areas without ground-based monitoring systems and measuring the effects of air quality regulations.

50% ***of the world's population is at risk from malaria.***

Satellite observations of temperature, vegetation, and rainfall help predict the spread of mosquito-borne illnesses like malaria, Zika, and West Nile Virus.

Keeping Us Secure

The estimated value of NASA and NOAA information services to the U.S. Navy's operational effectiveness is

$2 billion ***per year.***

The U.S. Navy and other U.S. defense agencies partner with NASA and NOAA to use satellite data, to access operational services, and to leverage their scientific progress.

Mitigating Natural Disasters

Extreme weather and fires have cost the federal government more than $350 billion over the past decade.

Satellite measurements play a critical role in tracking the paths of hurricanes and wildfires so that we can warn populations at risk, assess the damages, and avoid future costs.

Ensuring Resource Availability

Advanced technology, including many types of Earth information, will unlock up to $1.6 trillion in economic savings for energy generation and use by 2035.

Satellite observations can also help ensure water availability, which is particularly important to the 20% of the world now living in areas of water scarcity.

ABOUT THE REPORT: *Thriving on Our Changing Planet: A Decadal Strategy for Earth Observation from Space,* highlights the ways in which Earth science and applications are a key part of the nation's information infrastructure and calls for a U.S. program of Earth observations from space that is robust, resilient, and appropriately balanced. Download the full report at **http://nap.edu**.

The National Academies of SCIENCES ENGINEERING MEDICINE

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