

NOAA Research: Science Priorities

CONFRONTING THE CHALLENGES OF A CHANGING PLANET

PROTECTING AGAINST WEATHER & ENVIRONMENTAL HAZARDS



Severe Weather

Increase forecast lead times and equip local emergency managers with the most up-to-date information.



Hurricanes

Enhance NOAA's hurricane forecast accuracy to save lives and decrease economic impact.



Heat

Protect the American people and economy against the dangers of extreme heat through enhanced community engagement.



Wildfires

Accelerate the development and operationalization of wildfire prediction models and decision support tools.

MANAGING TOO MUCH & TOO LITTLE WATER



Precipitation

Empower Americans with information on rain, snow, and flood risk in order to save lives and reduce damage.



Drought

Improve nationwide drought forecasts for agriculture, water resource planning, and fire preparedness.

SUSTAINING A HEALTHY ENVIRONMENT & ECONOMY



Seafood Competitiveness & Aquaculture

Support the aquaculture industry and enable fisheries to respond to changing ocean conditions.



Deep Sea Minerals

Assess the resources of the deep sea through mapping and exploration.



Ocean and Great Lakes Ecosystems

Understand ocean circulation and predict maritime hazards to enable safer transportation and improve resource management.



Atmospheric Composition

Observe and predict air quality and composition changes in support of public health and the economy.

OAR Foundational Capabilities

Integrating Emerging Technologies



Develop, improve, and adopt new innovative tools, including uncrewed systems and AI-driven applications.

Sustaining Environmental Observations



Modernize observing systems to lead the world in global measurements that enable accurate forecasting and preparedness against environmental threats.

Improving Approaches to Modeling the Planet



Advance predictive capabilities by integrating the behavior of the atmosphere and ocean as a single system.

Transitioning Research into Operations and Applications



Conduct requirements-driven research and leverage partnerships to deliver innovative solutions to address major societal challenges.



NOAA
RESEARCH

Advancing scientific discovery to empower all Americans with the latest tools, services, and data to protect life and property.

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