Understanding Our Changing Climate

The science is settled. Earth’s climate is changing. But how will society adapt to these changes? That’s the next big challenge.

Climate Research at Scripps Institution of Oceanography

Scripps Institution of Oceanography at UC San Diego has been at the forefront of climate change research for more than 50 years, beginning with the discovery by Charles Keeling of rising levels of carbon dioxide in the atmosphere.

Keeling, who spent his entire career at Scripps, discovered that human activities are changing the chemical composition of the global atmosphere. His ground-breaking findings resulted in the iconic global warming data set known as the Keeling Curve. They also sounded the alarm that climate changes could affect every aspect of life on Earth.

The science is settled. Early warnings have become reality.

“There’s a limit on how much gas you can put in before Mother Nature shows you what the climate system will do. And Mother Nature bats last.”

–Richard Somerville, Scripps climate scientist

The new era of climate change is upon us, and the question remains: how will society adapt?

Today’s Scripps scientists continue to lead the advancement of climate research to help our world face the environmental and societal challenges ahead.

Scripps scientists monitor not only the oceans and atmosphere to forecast climate changes and their impacts; they also provide decision makers with the information they need to create climate policy.

As new global climate challenges inevitably become more widespread, Scripps science will lead the way toward effective solutions.
Adapting to Climate Change

In the historic building where Keeling’s research began, in new labs across the Scripps campus, and through fieldwork being conducted on every continent and in every ocean, Scripps climate scientists are leading efforts to:

• Document potential immediate threats to the water supply of Southern California and other western states

• Improve quantification of regional greenhouse gas emissions and trace them back to their sources

• Measure changes in ocean chemistry that threaten marine organisms

• Implement clean technology to cut greenhouse gas emissions

• Provide local, state, federal, and international governments with the information they need to create climate policy

The broad focus of Scripps science fosters collaboration among a full range of researchers who bring their expertise to bear on the problem of climate change. A host of expert biologists, chemists, climatologists, and engineers are working together to develop effective modeling systems and field studies to collect accurate, useful data. Such an international and multidisciplinary approach promotes innovation and inspires solutions for how to grapple with the urgent climate challenges facing our society.

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