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For more than a century, Scripps Oceanography has explored the intricate dynamics of Earth and its environment. Now, scientific discovery at Scripps has taken on new urgency. New challenges to the health of the planet require urgent solutions across many disciplines at an unprecedented scale.

Human Health and the Oceans

Modern societies face unique threats to our health from our environment. Infection and antibiotic resistance are on the rise, with land-based resources for new drugs showing little new potential. Modern medicine looks to the sea. Scripps Oceanography researchers are especially well-positioned to study human health, from bio-prospecting at the molecular level to analyzing threats from marine and atmospheric pollutants and climate change. Collaborators across campus include UC San Diego’s School of Medicine and Skaggs School of Pharmacy and Pharmaceutical Sciences, and the nearby J. Craig Venter Institute, among others.

Innovative Technologies to Observe the Planet

Tracking processes and changes unfolding on our planet is intrinsic to Scripps Oceanography’s leadership in understanding global phenomena. The Keeling Curve set the stage for modern climate change research. Scripps Oceanography’s autonomous Argo ocean floats now form a global network that relays key parameters to define the changing state of the ocean. Satellite data enable scientists to detect vital planetary changes, including transformations in polar ice, ocean circulation, and new facets of the global ocean seafloor. Scripps Oceanography scientists are now developing new sensors, platforms, and systems to measure the planet and address threats to its health, from ocean acidification to declining biodiversity, from wildfires to regional drought.

Solving Environmental Problems of Tomorrow Today

Across the seas to the solid earth and into space, Scripps Oceanography researchers use natural environmental records and novel instruments to study natural hazards and the threats they pose. Scripps Oceanography scientists study faults and seismic data to investigate earthquake ruptures and potential future risks. Along the coast, scientists leverage decades of wave and tide studies to help understand threats posed by tsunamis and coastal flooding. A new understanding of the processes leading to floods and drought allows us to increase the resilience of communities.