RESEARCH AND OUTREACH PARTNERSHIPS

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The College of the Environment strives to build a highly collaborative culture that crosses conventional boundaries, driving innovative approaches to scientific research and environmental problem solving.

Earthquake Early Warning System

Pacific Northwest towns and cities are sited in a dynamic landscape that's full of natural beauty and hidden hazards. Earthquakes are among those hazards and scientists expect there's a 25-40 percent chance of a magnitude 8.0 earthquake striking our region in the next 50 years. Thanks to early seed funding from the **Gordon and Betty Moore Foundation**, a team of scientists at the UW's Pacific Northwest Seismic Network—led by Earth and Space Sciences Professor John Vidale—is leveraging expertise across the region to better prepare communities for the next "big one" through development of an earthquake early warning system. Their goal: to alert residents, businesses, and government agencies seconds to minutes ahead of imminent shaking, giving them a better chance to protect lives and property from serious harm.

Doris Duke Conservation Scholars

The most effective conservation strategies are inclusive, involving a diverse group of voices that represent differing values, viewpoints, and experiences. And yet, the conservation community is not diverse. The Doris Duke Conservation Scholars Program is changing that through a multi-summer, undergraduate experiential-learning program focused on the themes of biodiversity, food, climate, and water across urban and wild spaces. Spearheaded by College of the Environment faculty and staff, and with early funding from the **Doris Duke Charitable Foundation**, as well as the **Wilburforce** and **National Fish and Wildlife Foundations**, the program places conservation practice at the intersection of individual identities, community culture and values, and the opportunities and limits the environment provides.

Fisheries Ecosystem Planning Task Force

Scientists have long supported the idea that fisheries should not be managed in isolation. Rather, recognizing their relationship to the larger marine environment is critical to maintaining healthy ecosystems. Led by aquatic and fishery scientist Tim Essington and NOAA scientist Phil Levin, and through funding from the **Lenfest Oceans Program**, a team of experts is developing a blueprint to catalyze ecosystem-based fisheries management, taking into account the complicated interactions between fisheries and food webs. The bottom line: by maintaining the health of our oceans as a whole, we ensure our ability to continue delivering safe and abundant seafood to the world's table, and advance economic prosperity in some of the world's most impoverished regions.

Unlocking Marine Microbes' Role in Ocean Health

Marine microbes are the unseen majority of organisms in the ocean, and oceanography scientists Ginger Armbrust, Anitra Ingalls, and Curtis Deutsch are among a cadre of leading researchers at the UW working to broaden our understanding of how these plants and animals sustain the health of our planet. Through significant support from the **Gordon and Betty Moore** and **Simons Foundations**, our scientists—along with their colleagues from around the world—are combining the newest environmental DNA sequencing methods and innovative ocean observation technology with new approaches in ecological theory and modeling to unlock the mysteries of how microbial ecosystems function in the open oceans.

With our partners, we create significant changes to the way the world understands environmental problems and the way those problems are solved.

Food Security in a Changing Climate

Summertime climate variability impacts weather conditions, and that has a huge impact on agriculture in the U.S. and elsewhere, most especially in sub-Saharan Africa. Through support from the **Tamaki Foundation**, atmospheric scientist David Battisti is leading an effort, in partnership with agricultural economists from Stanford University, to advance our understanding of this relationship in order to help farmers, land managers, and others predict and plan for near- and long-term growing season fluctuations. Raised on a farm in upstate New York, David is no stranger to the shifting pressures on the agricultural sector. His insights are gaining attention globally, leading many to rethink their policy choices and business decisions to better ensure food security well into the future.

The Northwest Environmental Forum

The Pacific Northwest is one of the fastest growing regions in the nation. This growth poses a host of challenges for the sustainable management of our diverse landscapes, from mountain wilderness and managed forests to rural and urban communities. This diversity is part of what makes the region such a sought-after place to live and work. The Northwest Environmental Forum has become one of the region's most regarded public forums for bringing together government, NGOs, industry and other stakeholders to explore these challenges, identify critical projects, and provide support for stakeholder partnerships to take action. With support from partners such as the **Bullitt Foundation**, the Forum will leverage the expertise of faculty and students at the UW and beyond to continue tackling urgent, emerging priorities related to the region's environmental sustainability.

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