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Impacts on human health, agriculture to round out most comprehensive assessment of climate change on state

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An assessment of the impact of climate change on the state, being launched this week by the University of Washington's Climate Impacts Group for the Washington Department of Community, Trade and Economic Development, is the most comprehensive ever.

Along with updating the Climate Impacts Group's 10 years of work on natural resources, the study will include the first statewide look at how climate change may affect the health of Washington residents -- for example, by potentially increasing the incidence of West Nile virus or Lyme disease. The project also marries the UW's climate tools and modeling know-how with Washington State University's agricultural expertise to create the most-detailed examination ever of how climate change might change the productivity and sustainability of agriculture here.

The study, paid for with \$1.5 million appropriated by the last Legislature, will describe climate change possibilities for the next century as identified from assessments by the international Intergovernmental Panel on Climate Change. Then options will be identified for mitigating those effects over 10 to 25 years and 25 to 50 years. An interim report is expected Dec. 15 and the final report is to be drafted by November 2008.

"The chance to study the potential effects of climate change on human health and to couple our climate capabilities with WSU's agricultural expertise are two big additions that help make this effort unlike any before," says Edward Miles, UW professor of marine affairs and director of the Climate Impacts Group. Identifying aspects of the state's infrastructure that could be most vulnerable to effects of climate change -- for example, pipes that carry storm water runoff and wastewater -- is another new aspect of the endeavor.

Miles and Dennis Lettenmaier, UW professor of civil and environmental engineering, are the co-principal investigators of the study.

The study builds on previous work by the Climate Impacts Group concerning such things as how rising sea levels and ocean temperatures may affect state coasts and harbors, how the state hydropower resources and energy demand might change, whether forests will face greater threats from insects and wildfire, and what the state's waterways and salmon may face in the future.

"This information will be very valuable in helping us understand the potential impact of climate change on the state's infrastructure and environment, and ties directly to the work CTED and the Department of Ecology are doing as part of Gov. Gregoire's Climate Change Challenge," said Tony Usibelli, energy policy director for the Department of Community, Trade and Economic Development.

Partners on various aspects of the study are WSU, Pacific Northwest National Laboratory, the private firm Stillwater Sciences, and the UW's School of Public Health and Department of Civil and Environmental Engineering.

Miles says members of the Climate Impacts Group will use powerful new tools for modeling and scenarios that will allow them to calculate the effects on a much finer scale than before. In the past, climate change effects could be determined for areas of 50 square miles. The new tools make it possible to calculate the effects down to areas of about 12.5 square miles.

"We'll be able to look at effects at the watershed level," Miles says. "One can image details of projected changes in instream temperatures, soil erosion and precipitation that can now be considered at scales as small as 10 square miles, so we can now project, for instance, the implications of climate change on the Cedar and Tolt River watersheds, from which 1.3 million residents of Seattle get their water."

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