Researchers Map Impacts of Sea Level Rise in Oregon: Find That “Economically Reasonable” Policies To Reduce Global Warming Emissions Are Sound Investments

Portland and Eugene OR: Researchers from Lewis and Clark College and the University of Oregon today released a report and maps describing the impacts of a potential catastrophic sea level rise in Oregon. The researchers found that a number of climate protection policies would be good investments to protect against the potential large scale impacts of sea level rise and other increasing risks posed by global warming.

Scientists are increasingly concerned that a warming planet will trigger the melting of the West Antarctic and Greenland Ice sheets, events that would gradually raise sea level by up to 48 feet. GIS analyses show that most coastal towns in Oregon would be inundated by moderate sea level rise. Under the worst-case scenario, the shoreline of the Pacific Ocean would swamp the Columbia and Willamette Rivers, to 14th avenue in downtown Portland. Total acreage inundated would be between 276,000 and 378,000 acres, with 10-15% of that total being urban land. Between 50,000 and 92,000 people currently live in these areas, and the economic impacts would also include damage to agricultural, commercial and industrial sites.

Using basic insurance principles as a guide and Oregon’s 2004 Gross State Product of $128 billion as the baseline, the researchers estimated that Oregonians would be willing to pay between $570 million and $3.24 billion dollars for "global warming insurance" to avoid the risks of these types of catastrophic outcomes. The researchers concluded by assessing three major current policy proposals that would help mitigate the risk of climate change: clean car standards, renewable portfolio standards for clean energy, and carbon cap-and-trade programs. They found that these policies are likely to cost less than the low end estimate of willingness to pay for global warming insurance, and in the case of clean cars, much, much less. Looking at insurance against catastrophic outcomes alone, the researchers concluded that these policies would be economically reasonable measures to reduce global warming gasses.

"People pay for insurance to protect against low probability, high cost events, like fire," said Dr. Eban Goodstein, professor of Economics at Lewis and Clark College, who authored the report. "Our study suggests that relatively low cost measures to reduce the emissions of global warming pollution make sense as an insurance policy against a catastrophic sea level rise."
"Sea level rise, which is one of a number of possible irreversible impacts that global warming poses, would have major costs for the State of Oregon," said Bob Doppelt, director of the University of Oregon Climate Leadership Initiative, who co-authored the report. "We found that, given what may be at risk, the costs of many climate policies would be sound investments."

The complete study and maps are available at: http://climlead.uoregon.edu/publicationspress/SealevelRise.html