

Costs of climate change, state-by-state: Billions, says UMD

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Climate change will carry a price tag of billions of dollars for a number of U.S. states, says a new series of reports from the University of Maryland's Center for Integrative Environmental Research (CIER). The researchers conclude that the costs have already begun to accrue and are likely to endure.

Combining existing data with new analysis, the eight studies project the long term economic impact of climate change on Colorado, Georgia, Kansas, Illinois, Michigan, Nevada, New Jersey and Ohio. Studies on additional states are in the works.

"We don't have a crystal ball and can't predict specific bottom lines, but the trend is very clear for these eight states and the nation as a whole: climate change will cost billions in the long run and the bottom line will be red," says Matthias Ruth, who coordinated the research and directs the Center for Integrative Environmental Research at the University of Maryland. "Inaction or delayed action will make the ink run redder."

Last year, Ruth conducted a similar nationwide analysis and concluded that the total economic cost of climate change in the United States will be major and affect all regions, though the cost remains uncounted, unplanned for and largely hidden in public debate.

"These new state snapshots can help underscore the extent of damage already experienced in various parts of the country," Ruth adds. "We hope the data and the trends can help state and local policy-makers plan

for additional changes ahead."

The eight new studies are being released today at the legislative summit of the National Conference of State Legislators (NCSL) convening in New Orleans. The NCSL collaborated with CIER to develop summaries for the thousands of officials participating in the convention.

STATE SUMMARIES

Note: The economic impacts are based on climate changes already in motion. Unabated climate change would likely increase these economic effects.

- Colorado: More than \$1 billion in losses due to impacts on tourism, forestry, water resources and human health from a predicted drier, warmer climate.
- Georgia: Multi-million dollar losses from predicted higher seas along Georgia's coast.
- Kansas: Losses exceeding \$1 billion from impact on agriculture of predicted warmer temperatures and reduced water supply in much of the state.
- Illinois: Billions of dollars in losses from impact on shipping, trade and water resources. Warmer temperatures and lower water levels predicted for much of the state.
- Michigan: Billions of dollars in losses from damage to the state's shipping and water resources. Warmer temperatures and lower water levels predicted for much of the state.
- Nevada: Billions of dollars in losses from a much drier climate and

pressure on scarce water resources. Water limitations could affect tourism, real estate, development and human health. Many western states may confront similar challenges.

-- New Jersey: Billions of dollars in losses from higher sea levels and the impact on tourism, transportation, real estate and human health.

-- Ohio: Billions of dollars in losses from warmer temperatures and lower water levels and the resulting impact on shipping and water supplies.

The complete reports (8) are available online:

<http://cier.umd.edu/climateadaptation/>

LESSONS FOR STATES

The report offers five "lessons" derived from the researchers' analysis:

-- "There are already considerable costs to society associated with infrastructures, agricultural and silvicultural practices, land use choices, transportation and consumptive behaviors that are not in synch with past and current climatic conditions. These costs are likely to increase as climate change accelerates over the century to come."

-- "The effects of climate change should not be considered in isolation. Every state's economy is linked to the economies of surrounding states as well as to the national and global economy. While the economic costs of climate change are predicted to vary significantly from state to state, the negative impacts that regional, national and global markets may experience are likely to affect all states and many sectors."

-- "While some of the benefits from climate change may accrue to individual farms or businesses, the cost of dealing with adverse climate

impacts are typically borne by society as a whole. These costs to society will not be uniformly distributed but felt most among small businesses and farms, the elderly and socially marginalized groups."

-- "The costs of inaction are persistent and lasting. Benefits from climate change may be brief and fleeting - for example, climate does not stop changing once a farm benefited from temporarily improved growing conditions. In contrast, costs of inaction are likely to stay and to increase."

-- "Climate models and impact assessments are becoming increasingly refined... Yet, little consistency exists among studies to enable 'summing up' impacts and cost figures across sectors and regions to arrive at a comprehensive, state-wide result." More precise modeling will require further research.

"If there's a single bottom line in all of this research, it's that delaying action on climate change carries a significant cost," says Ruth. "State, local and national leaders will save money in the long-run by adopting a proactive approach."

The researchers selected the eight states to be analyzed based on the availability of data from prior studies, while avoiding replication of research on states already in the limelight (e.g., California). The researchers also made their selections to provide geographical diversity.

Source: University of Maryland

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