

Idaho Climate-Economy Impacts Assessment

Snapshot: Human Health

Human Health, Climate, and Idaho's Economy

Human health is significantly impacted by extreme weather-related events. Heat waves, floods, drought, and wildfires increase the risk of heat-related illness, respiratory illness, infectious diseases, mental health disorders, and even loss of life. Climate change will lead to more frequent and intense weather-related events in Idaho. As impacts to human health rise, so do direct and indirect health-related costs to local, state, and tribal economies.

Changes in climate

- Warming temperatures
- Increasing rain-on-snow events
- Increasing spring precipitation
- Increasing peak streamflow
- Decreasing summer streamflow
- Decreasing summer precipitation

Increasing hazards

- Floods
- Landslides
- Smoke and poor air quality
- Avalanches
- Drought
- Wildfires

Economic risks

- Increasing clinic, ER, and hospital visits
- Increasing health care expenditures and insurance premiums
- Increasing absence from work and school
- Increasing rehabilitation and home health visits
- Increasing work delays and lower productivity

Changes in Climate Impact the Health of Idahoans

Climate change is often referred to as a 'threat multiplier,' worsening existing conditions and creating new challenges and disparities across all economic sectors. The most widespread impacts of climate change on Idahoans' health are from poor air quality caused by wildfire smoke and high temperatures. However, as shown below, there are a number of potential impacts that may affect Idahoans' health.

Increasing Impacts of Climate Change on Human Health

Increasing extreme weather



Air pollution & allergens

Asthma, cardiovascular disease, respiratory illness, and allergies.



Extreme heat

Heat-related illness, cardiovascular failure, and death.



Severe weather

Displacement of people, injuries, fatalities, mental health impacts, and loss of homes, jobs, and income.

Increasing temperatures



Vector-borne disease

Lyme disease, Rocky Mountain spotted fever, and West Nile virus.



Water & food supply

Food insecurity and supply chain disruptions.



Water quality

Cholera, leptospirosis, and harmful algal blooms.

Increasing wildfires

Preparing Idaho for Impacts to Health

There are key challenges facing Idaho’s health care system as it responds to the increasing changes in climate. By considering growing health risks associated with climate change, Idaho’s health care system can take steps to plan and prepare for changing conditions.

Health care capacity in Idaho

While the number of beds can fluctuate, in May 2021, Idaho had 292 ICU beds, which supported 0.016% of the population. Trauma-level hospitals are concentrated in urban areas, and rural access to emergency services is limited. Idaho has one of the highest rates of population growth in the U.S. In 2018, Idaho ranked 49th in the U.S. in number of physicians per capita. The impacts climate change will have on Idaho’s health care system and Idaho’s increasing population are important aspects for the health care system to consider.

Disproportionate impacts

Vulnerable populations: Idahoans will not experience health and economic impacts of climate change equally. Climate change-related health impacts disproportionately affect the elderly, the young, people with chronic diseases and disabilities, people with limited health care access, and low-income Idahoans.

Outdoor workers: Those who work outdoors, particularly in the agriculture sector, construction, and public safety, are disproportionately exposed to impacts associated with wildfire, smoke, and temperature extremes. Note: Impacts to indoor workers is an emerging area of research, specifically related to non-temperature and air quality-controlled indoor settings.

Wildfire Impacts on Local and Tribal Health

Wildfires pose immediate risk of death, injury, and economic loss, and threaten long- and short-term physical and mental health. Wildfires are also disruptive to essential tribal cultural and spiritual practices, such as hunting, fishing, and food and medicinal plant gathering. Temperature extremes worsen the negative impacts of wildfires, particularly when power is unavailable in communities for cooling, operation of medical devices, food and medicine access and storage, and food preparation. Devastation resulting from fires has long-lasting impacts on habitat essential for wild game, fish, and plant life; water quality and quantity; and recreation, and these repercussions are acutely felt by tribal and local communities where cultural and spiritual practices are tied to the landscape.

Opportunities for Adaptation: Supporting Idaho’s Vulnerable Populations

Opportunities to prepare for health impacts associated with climate change:

- Increase awareness of climate change-related health risks, including mental health.
- Provide resources that describe risks of extreme heat and poor indoor and outdoor air quality to workers, child care facilities and schools, and adults in long-term care.
- Create warning systems and health communication for extreme weather events that meet literacy and language needs.
- Plan for extreme weather events by supporting access to safe clean air, cooling, and heating centers.
- Strengthen local food systems to lessen the impacts of climate-related food supply disruptions.

Interested in learning more about economic impacts and Idahoans’ health?

For further information, resources, tools, references, and additional reports, please visit www.uidaho.edu/iceia



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