



# EPA's Endangerment Finding

## Health Effects

The key effects that support EPA's determination that current and future concentrations of greenhouse gases endanger public health include:

### Temperature

- There is evidence that the number of extremely hot days is already increasing. Severe heat waves are projected to intensify, which can increase heat-related mortality and sickness. Fewer deaths from exposure to extreme cold is a possible benefit of moderate temperature increases. Recent evidence suggests, however, that the net impact on mortality is more likely to be a danger because heat is already the leading cause of weather-related deaths in the United States.

### Air Quality

- Climate change is expected to worsen regional ground-level ozone pollution. Exposure to ground-level ozone has been linked to respiratory health problems ranging from decreased lung function and aggravated asthma to increased emergency department visits, hospital admissions, and even premature death. The impact on particulate matter remains less certain.

### Climate-Sensitive Diseases and Aeroallergens

- Potential ranges of certain diseases affected by temperature and precipitation changes, including tick-borne diseases and food and water-borne pathogens, are expected to increase.
- Climate change could impact the production, distribution, dispersion and allergenicity of aeroallergens and the growth and distribution of weeds, grasses, and trees that produce them. These changes in aeroallergens and subsequent human exposures could affect the prevalence and severity of allergy symptoms.

### Vulnerable Populations and Environmental Justice

- Certain parts of the population may be especially vulnerable to climate impacts, including the poor, the elderly, those already in poor health, the disabled, those living alone, and/or indigenous populations dependent on one or a few resources.
- Environmental justice issues are clearly raised through examples such as warmer temperatures in urban areas having a more direct impact on those without air-conditioning.

### Extreme Events

- Storm impacts are likely to be more severe, especially along the Gulf and Atlantic coasts. Heavy rainfall events are expected to increase, increasing the risk of flooding, greater runoff and erosion, and thus the potential for adverse water quality effects. These projected trends can increase the number of people at risk from suffering disease and injury due to floods, storms, droughts and fires.