



# CLIMATE CHANGE HEALTH RISKS

The World Health Organization has identified climate change as the **biggest global health threat of the 21<sup>st</sup> century**. Here in British Columbia, climate change is clearly observable and many people are already feeling its effects. With some degree of climate change now locked-in regardless of mitigation efforts, climate change adaptation is necessary to ensure British Columbia will fare well in the future.

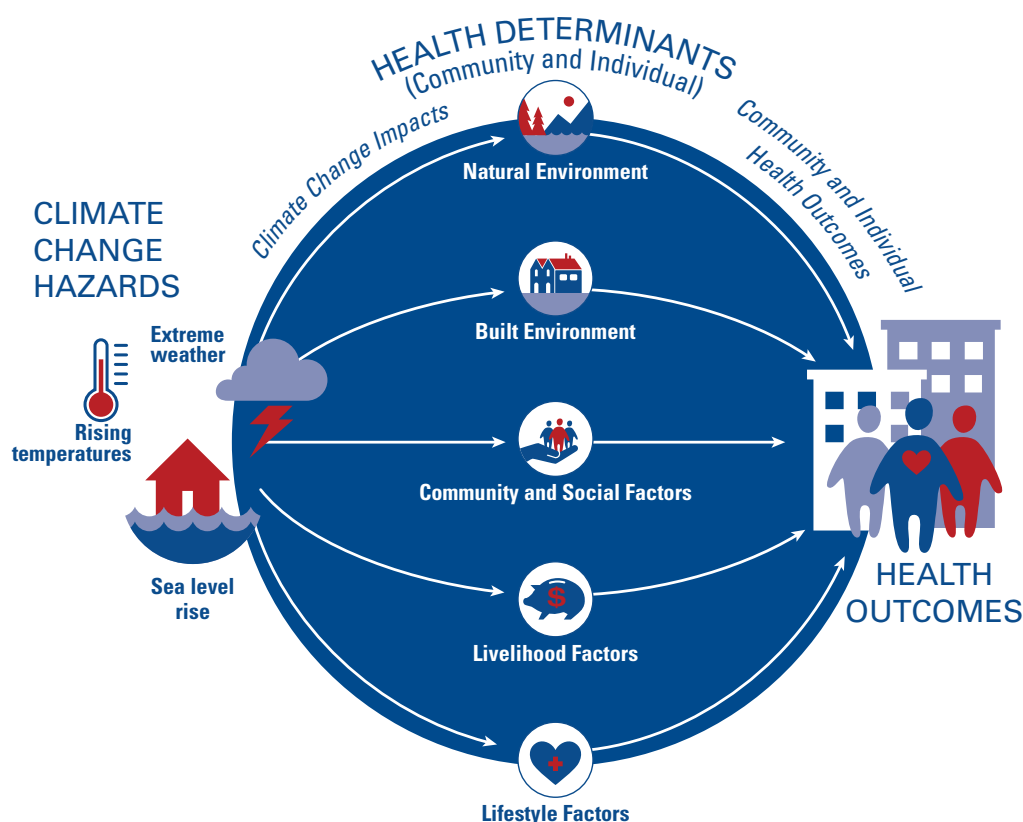
The challenge is significant, but British Columbia is well positioned to respond given strong capacity across different sectors. There are many specific actions that the larger health community can take to respond and prepare for climate change. These actions often fall within the day-to-day responsibilities of the health care community and align with the sector's overarching goal: improving health and well-being outcomes for all British Columbians.

## CLIMATE CHANGE AND HEALTH

Climate change is likely to impact most areas of our lives, including our health. In British Columbia, the principal hazards include **rising temperatures, sea level rise, and increased frequency and intensity of extreme weather events**. These hazards bring new and complex challenges, but by working together, we can increase our collective knowledge base and begin to think more strategically about how best to prepare to protect health.



Population and community health are influenced by wider social, cultural, economic and environmental factors. These factors are commonly known as *health determinants*, and they are closely linked to a range of health outcomes. Increasingly, **climate change hazards are impacting health determinants**. As illustrated in the figure, these impacts in turn influence and affect physical and mental health outcomes.

**Figure:** Climate change hazards and their impacts on health determinants and health outcomes



## CLIMATE CHANGE: BC HEALTH RISKS

The table outlines key health and community risks posed by climate change that have been observed in BC. Vulnerable groups such as young children, the elderly, people with existing cardiopulmonary and respiratory illnesses, low-income families and people with mental wellness challenges are at greater risk.

CLIMATE CHANGE HAZARDS	PRIMARY IMPACTS	HEALTH AND COMMUNITY RISKS
 Sea level rise	Storm surges (temporary flooding)	<ul style="list-style-type: none"> <li>Stress, anxiety and trauma</li> <li>Food and water contamination and/or shortages</li> <li>Increased prevalence of water-borne pathogens and contaminants</li> <li>Interruption of health services</li> <li>Increased potential for mold growth</li> <li>Infrastructure/property damage</li> </ul>
	Flooding (long-term and permanent inundation)	<ul style="list-style-type: none"> <li>Stress, anxiety and trauma</li> <li>Food and water contamination and/or shortages</li> <li>Increased prevalence of water-borne pathogens and contaminants</li> <li>Population displacement</li> <li>Infrastructure/property damage</li> </ul>
 Rising temperatures	More frequent, severe and prolonged heat waves and urban “heat island” effects	<ul style="list-style-type: none"> <li>Decreased air quality due to heat (ground level ozone [smog])</li> <li>Heat-related deaths</li> <li>Heat-related illnesses such as heat stroke and heat exhaustion</li> <li>Mental health impacts such as stress and anxiety</li> <li>Health care facility impacts such as power outages, rising temperatures in facilities without air conditioning</li> </ul>
	Changes in infectious agents, introduction of new pests, longer disease transmission seasons in some areas	<ul style="list-style-type: none"> <li>Possible increased incidence and/or prevalence of vector-borne infectious diseases</li> <li>Introduction of new pests affecting food/crop production</li> <li>Possible emergence of new diseases and/or re-emergence of previously eradicated diseases</li> </ul>
	Increased production of pollens and spores	<ul style="list-style-type: none"> <li>Increased allergies, intensification of symptoms</li> <li>Increased exposure to allergens due to longer allergy seasons</li> </ul>
 Extreme weather	Increased frequency and intensity of storms	<ul style="list-style-type: none"> <li>Injury, death</li> <li>Stress, anxiety and trauma</li> <li>Food and water contamination and/or shortages</li> <li>Increased prevalence of water-borne pathogens and contaminants</li> <li>Interruption of health services</li> <li>Increased potential for mold growth</li> <li>Infrastructure/property damages</li> </ul>
	More frequent, severe and prolonged drought	<ul style="list-style-type: none"> <li>Food and water contamination and/or shortages</li> <li>Increased prevalence of water-borne pathogens and contaminants</li> <li>Stress, anxiety and trauma</li> </ul>
	Wildfires	<ul style="list-style-type: none"> <li>Injury, death</li> <li>Stress, anxiety and trauma</li> <li>Exacerbation of respiratory conditions such as asthma and emphysema due to poor air quality</li> <li>Interruption of health services</li> <li>Infrastructure/property damages</li> </ul>