



Impacts are either direct or indirect effects of climate change on built, natural and human systems. Impacts can be positive or negative.

Depending on the consideration of adaptation, there are potential impacts and residual impacts.

Potential impacts are all impacts that may occur given a projected change in climate, without considering adaptation.

Residual impacts are the impacts of climate change that would occur after adaptation.

Example: Increased average temperatures could lead to a longer growing season, which could lead to increased forest/vegetation growth. However, decreased soil moisture conditions could lead to decreased forest/vegetation growth.

Example: Increased temperatures and drier climates could lead to an increase in the incidence of forest fires.

Example: Increased temperatures will lead to a decrease in glacier mass in the Columbia Basin. The photo below shows the recession of the Illecillewaet Glacier at Rogers Pass between 1902 and 2002.

Sensitivity is the degree to which built, natural and human systems are directly or indirectly stressed by changes in climate conditions or specific climate change impacts. Systems may be affected either adversely or beneficially by climate-related stimuli.

The effect may be direct, such as a change in crop yield in response to a change in the average, range, or variability of temperature. Or the effect may be indirect, such as damages caused by an increase in the frequency of flooding.

Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change. It is a function of a system's sensitivity to climate and the capacity of that system to adapt to changes.



Illecillewaet Glacier at Rogers Pass taken in 1902



Illecillewaet Glacier at Rogers Pass taken in 2002