Agriculture

The combination of mild climate, fertile soils and demand for locally produced food has enabled a thriving agricultural industry that contributes to the region's food security. Uncertainty around the supply of food is emerging in many parts of the world due to a changing climate and limited fresh water resources. Protecting agricultural land and enhancing local food production are a priority for resilience in the region.

Climate models predict there will be both positive and negative consequences for agriculture. Rising average temperatures shifts the types of crops that can be grown and decreases heating costs for greenhouses. At the same time, rising temperature will introduce and exacerbate pest and disease problems, and increase irrigation demand. Changes in seasonal precipitation patterns could limit water supply during the growing season, putting increased stress on crops and livestock.

Heat waves can damage crops and increase the need for cooling of livestock barns and expanded use of refrigerated crop storage, which leads to higher costs and energy use. Rising sea levels can limit access to irrigation water from the Fraser River, and storm surges may require dike upgrades and other coastal flood protection measures to prevent agricultural land from flooding during the growing season.

Agricultural activities are also a source of greenhouse gas emissions. Around 3% of the regional greenhouse gas emissions come from agriculture, primarily methane from livestock and manure, nitrous oxide from the application of fertilizer and soil management, and carbon dioxide from burning fossil fuels to heat greenhouses and operate farm equipment. The good news is that agricultural soils can play a substantial role in carbon sequestration, which has the added benefit of maintaining soil productivity over the long term.

Securing local food production means that some of the food consumed by residents is available year round and during emergency situations. Equally important is the role agricultural land plays in providing ecosystem services. Nutrient and organic matter recycling on farmland supports regional efforts to recycle organic waste. Agricultural land also provides important habitat for migratory birds and other wildlife. Both agricultural land and natural areas can help communities manage river water levels and extreme precipitation events through groundwater infiltration and flood management.