

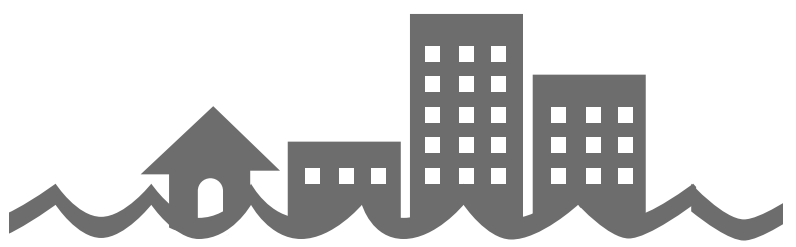


Climate change has significant effects around the world.

Climate change has already affected society in many ways, for example, in relation to water resources and food production, health and well-being and cities and infrastructure.

Observed impacts		Global	Europe	Arctic
Water resources and food production 	Water availability	↑↓	↑↓	↑↓
	Crop production	↓	↑↓	↑↓
	Livestock health and productivity	-	↓	↓
	Fisheries yields and aquaculture production	↓	↑↓	↓
Health and well-being 	Infectious diseases	↑	↑	↑
	Health and nutrition	↓	↓	↓
	Mental health	↓	↓	↓
	Displacement	↑	↑	↑
Cities, settlements and infrastructure 	Inland flooding and associated damages	↑	↑	↑
	Flood/storm damage in coastal areas	↑	↑	↑
	Damages to infrastructure	↑	↑	↑
	Damages to key economic sectors	↑	↑	↑↓

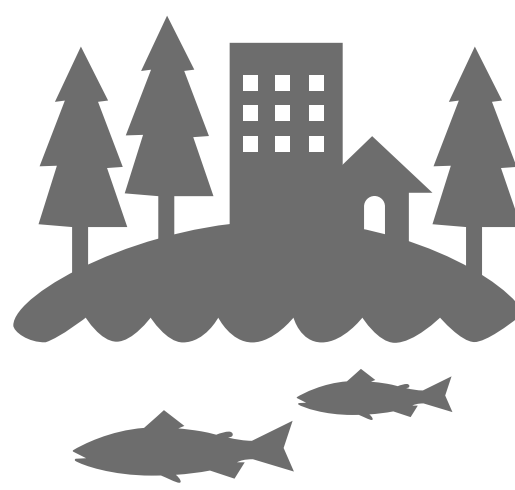
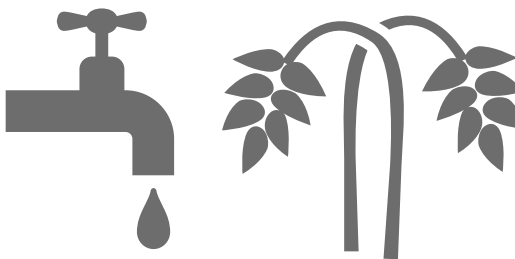
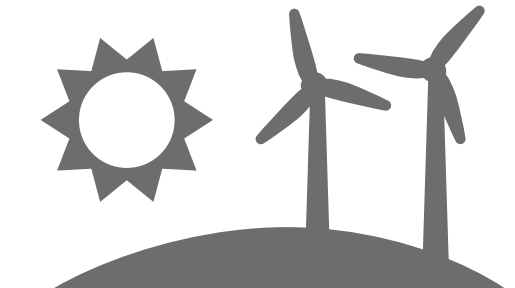

Confidence:
■ High
■ Medium
■ Low

Direction of change:
 ↑ Increasing
 ↓ Decreasing
 - Evidence limited, insufficient



To keep global warming under 1.5 °C, adaptive measures are needed in many sectors.

The feasibility of adaptation measures depends on technological, economic, socio-cultural, institutional and geophysical factors and various environmental factors.

Adaptation options		Feasibility
 Terrestrial and ocean ecosystem services	Integrated coastal zone management	● ●
	Sustainable forest management, conservation and restoration	● ● ●
	Sustainable aquaculture and fisheries	● ●
	Biodiversity management	● ●
 Water and food security	Sustainable water management	● ●
	Improved crop land management	● ●
	Efficient livestock systems	●
 Urban infrastructure and services	Green infrastructure and ecosystem services	● ●
	Resilient power systems	● ● ●
 Health, living standards and equity	Health and health systems adaptation	● ●
	Livelihood diversification	● ●

Confidence:

■ High

■ Medium

Feasibility level:

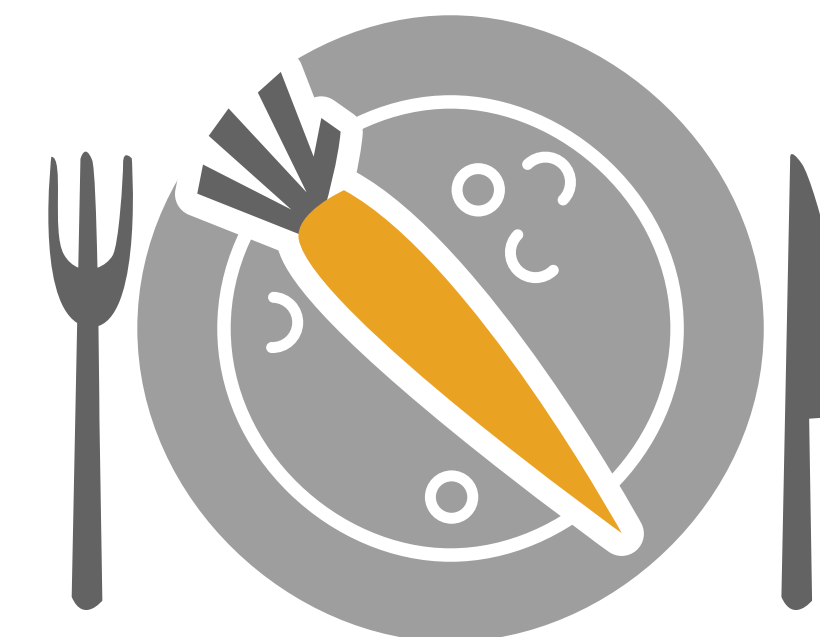
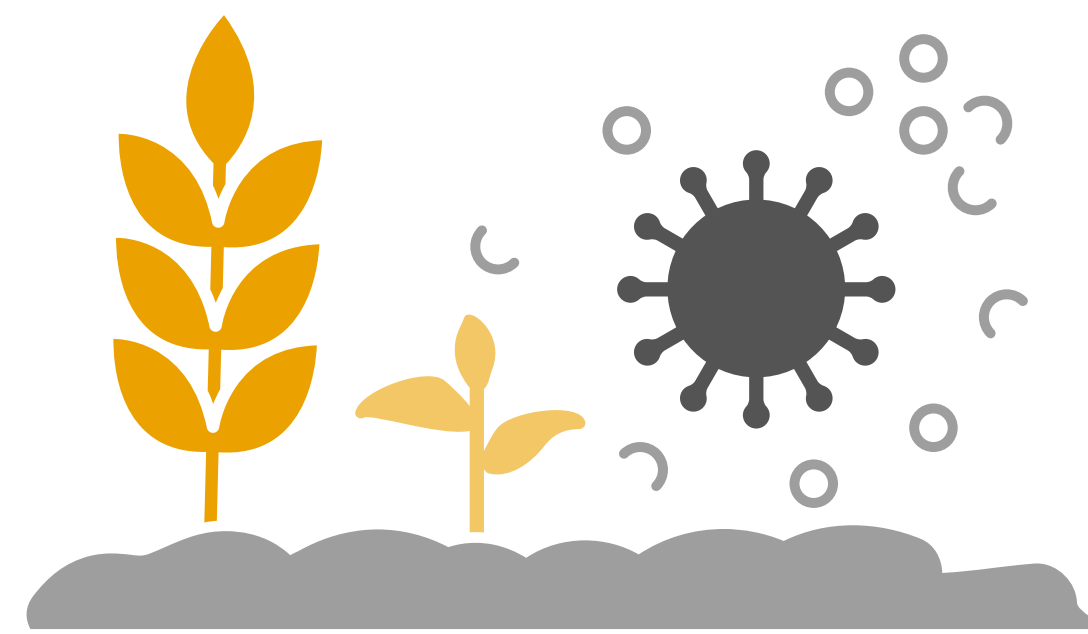
● ● ● High

● ● Medium

● Low

Climate change affects food security all over the world.

The changes will affect all parts of the food production chain in a variety of ways.



Quantity and availability

- Yields and productivity
- Quality losses
- Employee productivity
- Pollination
- Soil fertility and moisture
- Plant pests and animal diseases

Stability of supply

- Fluctuations in production
- Pest and disease risks
- Disturbances in food transport

Access to food

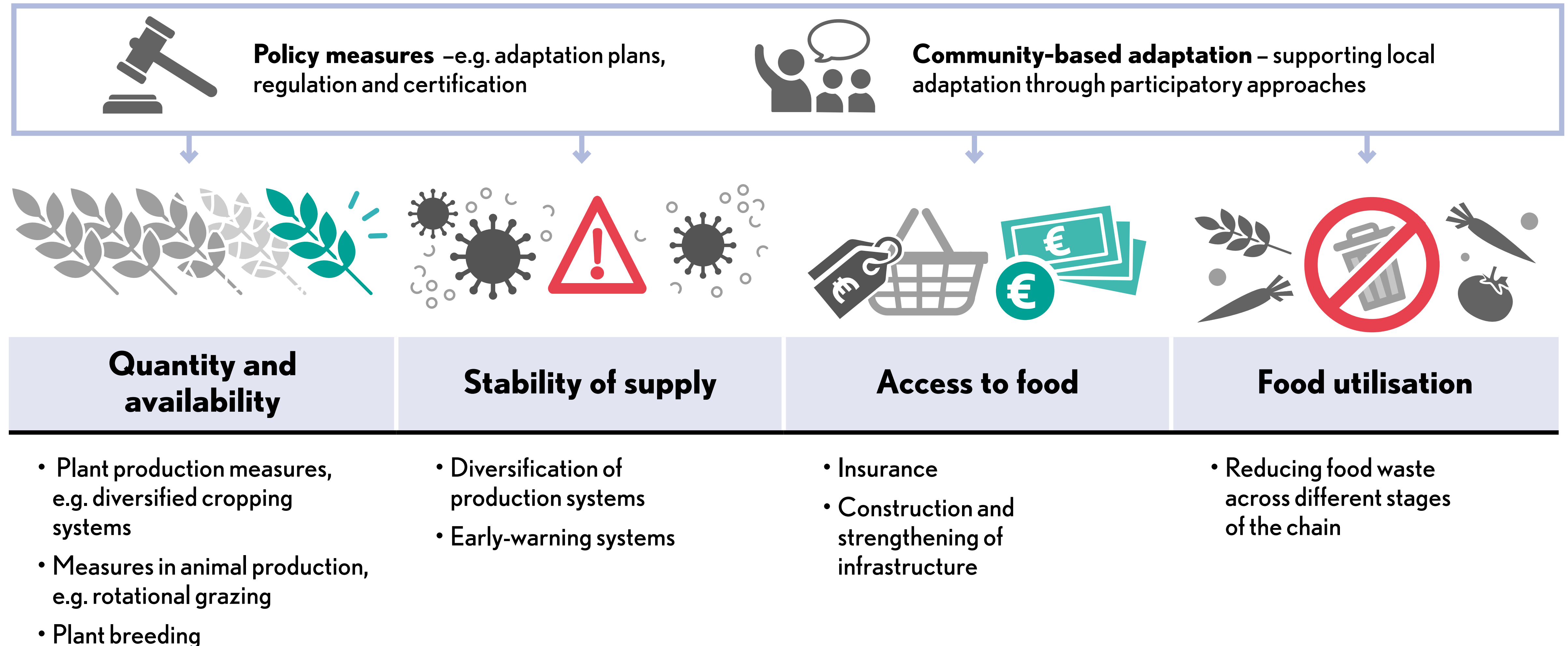
- Resources available for food
- Unstable agricultural incomes
- Food price spikes

Food utilisation

- Food safety risks
- Diet diversity
- Nutritional quality of food crops

Food security can be supported through various adaptive measures around the world.

Many adaptation measures have synergies with climate change mitigation and sustainable development. However, the effectiveness of the adaptation measures will be limited if global warming exceeds 1.5 degrees Celsius.



Climate change also affects flooding in Finland.

Examples of impacted areas in Finland	Change 2040	Change 2080
Northern Finland and Ostrobothnia	≈ No significant change	?↓ Uncertain development or decreasing
The largest lakes in the lake district	≈↑ Inland flooding as common or more common	↑ Inland flooding increasing
Small watersheds in the South and West	≈↑ Inland flooding as common or more common	≈↑ Inland flooding as common or more common

Direction of change:
 ↑ Increasing
 ↓ Decreasing
 ≈ No significant change
 ? Uncertain development

Impacts vary from region to region, and adaptation and preparedness can affect flood risks.

