

**Background** The Alps are particularly affected by climate change. Temperatures in this region increased at more than twice the global average rate in the last century, and further warming is already unavoidable. Consequences may include thawing of permafrost, melting glaciers and extreme events

such as heavy precipitation and long periods of drought. Climate change will bring major changes to your economy, environment and society. Adverse consequences can be reduced or avoided, and future development potential safeguarded, through adaptation. It's time to take action now!



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General

Energy

Health

Spatial  
Planning

Biodiversity

Natural  
Hazard

Agriculture

Water

**Forestry**

Tourism

## Forestry

### WHY?

Changing climate conditions have a significant impact on mountain forests. They directly and indirectly affect the productivity of forests. Increasing temperatures can cause infestation by bark-beetle and lead to economic loss. Natural hazards like heavy precipitation can lead to substantial damages or mudslides, which threaten infrastructure and society. Extreme storm events and forest fires are also expected to be more frequently. The development of a sustainable management plan for the forest sector to adapt to climate change is therefore necessary.

#### Protect forests

- Reduce possible stress factors like forest fires, storm, erosion or pest infestations
- Update forestry strategy and launch debate on options for an EU approach on forest protection and forest information systems

#### Advance diversity

- Promote the adaptation of tree species, including a focused promotion of diversity through adequate forest management
- Conserve, adapt and diversify forest genetic resources

#### Pursue and increase research and development on adaptation

- Develop forest adaptation concepts
- Develop innovative and adapted techniques for wood processing, considering possible changes in wood quality

### HOW?





## GROWING IN THE GAP

Seven years ago, a logging operation was performed with a cable crane to remove mature fir trees from the forests in the area of the Bregenzer Ache, the main river of the Austrian province of Vorarlberg. That was done to create space and light for deciduous trees to grow and make the forest less dense. The young trees – mainly beech, sycamore and ash – have responded well to the new conditions. In a warmer climate, the higher proportion of deciduous trees will have a stabilising effect on the forest as these species are more adaptable. [Further information \(de/en/it/fr/sl\)](#)



## FOREST FIRE CAMS

With climate change bringing longer periods of hot weather, the risk of forest fires is also increasing. In the karst area of Slovenia, where the fire hazard is very real, the response has been to install a video monitoring system, which also works well in poor light conditions. Twenty cameras are being used to monitor 7.068 square kilometres of land so as to permit a rapid response in the case of a forest fire. That also reduces the economic and ecological follow-up costs.

[Further information \(en/sl\)](#)

## WHO?

## You can take action now!

### Together with

- National and regional administration
- Researchers and experts on climate change adaptation
- Civil society organizations such as NGOs
- Entrepreneurs



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**Service** Further measures, tools, practical examples and information on how to adapt to climate change can be found at [www.c3alps.eu/kip](http://www.c3alps.eu/kip)

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LIVING IN  
THE ALPS

**About C3-Alps** The C3-Alps initiative is conducted by a transnational consortium of 17 partners from all Alpine countries. The partnership combines authorities responsible for climate adaptation policies on national and regional levels and expert institu-

tions that support national and European adaptation strategies. C3-Alps is coordinated by the Environment Agency Austria and is co-funded by the Alpine Space programme, through the European Regional Development Fund – European Territorial Cooperation.