No mitigation without adaptation of forests to climate change

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CO$_2$-balance of Swiss forests, 2008-2012 – a huge carbon sink

1.6 Mt CO$_2$ Y$^{-1}$

Source
Sink

Forest Management
Afforestation
Deforestation

first commitment period
Forest sink projects: high risks for forest owners
Climate change protection potential of forests and wood – combine 3 effects

1. storage of CO\textsubscript{2} in wood

2. long-term CO\textsubscript{2} detention in wood

3. Substitution of fossil fuel
Waiting to be transformed into long lasting wood products
Dry summer 2003 in Ticino
warmer, drier, and more extreme
Forest fires might also flash over to regions north of the Alps
Tree regeneration with high adaptive capacity is key
Results on Swiss Research Program Adaptation in Autumn 2016

Research Programme Forests and Climate Change

Why a research programme on forests and climate change?

Climate change and its impact on man and the environment is a central challenge for society in the 21st century. In the field of forestry, three questions are most important:

1. How will climate change affect forests?
2. How will climate change affect forest products and services?
3. What adaptation measures can be implemented to secure forest services?
Important international cooperation
Recommended actions on mitigation

- Forest owners to communicate their contribution to climate protection and claim compensation
- Develop processes and models e.g. by UNECE and FAO, to document and prove this performance
- Improve rules to optimize all three climate protection effects from forests and wood, especially in the context of the international climate negotiations
- mitigation alone through development of sinks is not sustainable, growing risks to older stocks
Recommended actions on adaptation

• Adaptation to climate change is an indispensable condition for the forest ecosystem to safeguard mitigation and all other forest services
• The existing knowledge on adaptation of forests to climate change must be exchanged at the international level
• Adaptation as important theme at the 23rd meeting of the FAO Committee on Forestry in 2016
• Discussion on adaptation should include all types of forest, from boreal to tropical forests
• forest policy processes like UNFF or Forest Europe to increase policy leadership on mitigation and adaptation