

Carbon-regulating sink-services of forests at risk

Results of a global assessment

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BACKGROUND

- Global Forest Expert Panels (GFEP):
  a new mechanism to provide policy makers with science-based information on key global issues; established in 2007 by Collaborative Partnership on Forests (CPF)

- Led and coordinated by IUFRO (the International Union of Forest Research Organizations)

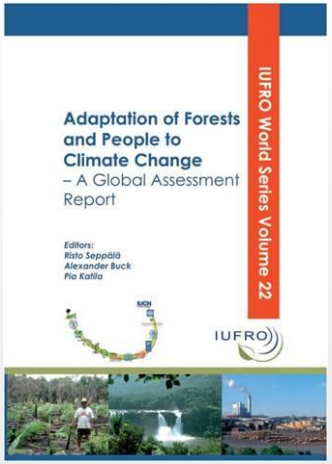
- Expert Panel on Adaptation of Forests to Climate Change established as first thematic panel

EXPERT PANEL ON ADAPTATION OF FORESTS TO CLIMATE CHANGE

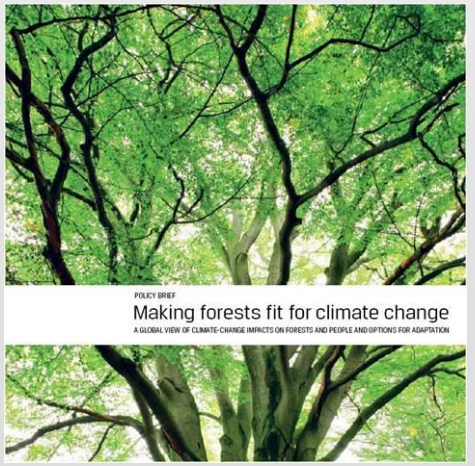
- Task: assessment of climate change impacts on forests, implications for human wellbeing, and options for adaptation
- Almost 100 experts with broad range of scientific backgrounds; several IPCC scientists

PRODUCTS

- Peer reviewed scientific report "Adaptation of Forests and People to Climate Change – A Global Assessment"



- Policy brief "Making Forests Fit for Climate Change" (available in all official UN languages)



KEY FINDINGS (1)

- Climate change has already affected forest ecosystems
- It will have increasing effects on forests in the future – boreal forests particularly affected
- In general, the warmer, the weaker forests will be able to adapt to climate change
- Sink service of forests may turn into a disservice

KEY FINDINGS (2)

- Beyond global warming of 2.5°C (4.5 degrees Fahrenheit) relative to pre-industrial levels, the carbon-regulating sink services of forests are at risk of being lost as land ecosystems turn into a net source of carbon

- This loss of carbon-regulating sink services of forests would seriously exacerbate climate change and cause a dangerous feedback loop

KEY FINDINGS (3)

- Climate change can also have positive effects on forest ecosystem services
- Climate change can increase the supply of timber especially in boreal regions and even globally due to increased tree growth
- In the end, however, the growth will likely be offset by an increase in pests and diseases, fires, and storms

CLIMATE CHANGE AFFECTS FORESTS, BUT

Climate change is only one factor affecting forests and the people depending on them. So far, the effects of other factors, such as human population growth causing land use changes (such as deforestation) have been more visible than the direct impacts of climate change.

OPTIONS FOR ADAPTATION

- Practices associated with sustainable forest management (SFM) work well also in reducing the vulnerability of forests to climate change.
- Need for flexibility in forest management on ground (adaptive co-management)
- Need for new flexible modes of governance and improved stakeholder participation
- More inter-sectoral coordination and policy integration

KEY CONCLUSION: IMMEDIATE ACTION IS NEEDED

- Unmitigated climate change would, during the current century, exceed the adaptive capacity of many forests even if adaptation measures are fully implemented

- Therefore, large reductions in emissions from fossil fuels and deforestation are needed to preserve both the adaptive and mitigative capacity of forests

Thank you for your attention !