

IUFRO –Division 8
«Forest Environment »
Views & Priorities



Seoul 2010

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Division 8

concerns ecological basis for forest management, restoration and conservation practices

includes:

- study of forest ecosystems in different biomes
- landscape ecology
- forest hydrology and watershed management
- soils and biogeochemical cycles
- forest biodiversity
- wildlife conservation and management
- natural hazards and risk management

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Global issues related to D8

- climate change
- erosion of biodiversity
- pressure on natural resources
- changing land-use patterns
- changing energy sources
- urban sprawl

D8 - main issues (1)



Another problem caused by deforestation

- impacts of climate change on forest ecosystems functioning
- changes of species and communities distribution
- threats to biodiversity and resilience capacity
- landscapes fragmentation and loss of habitats
- invasive species

D8 - main issues (2)

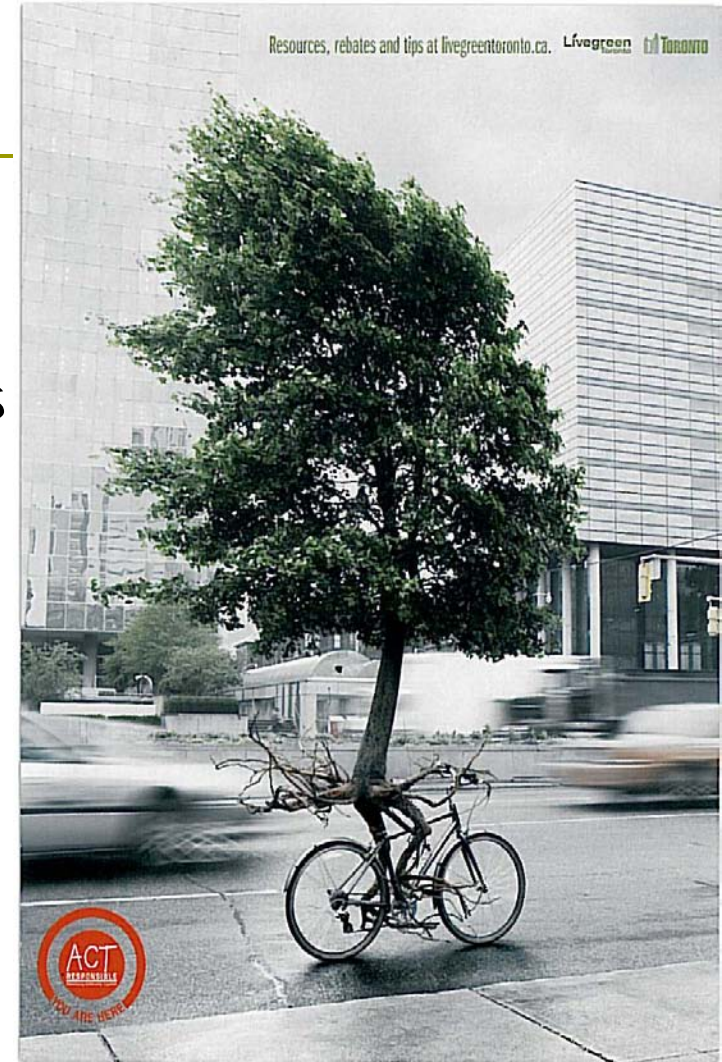
loss of forest ecosystem services under changing climates

...concerning forest water services:

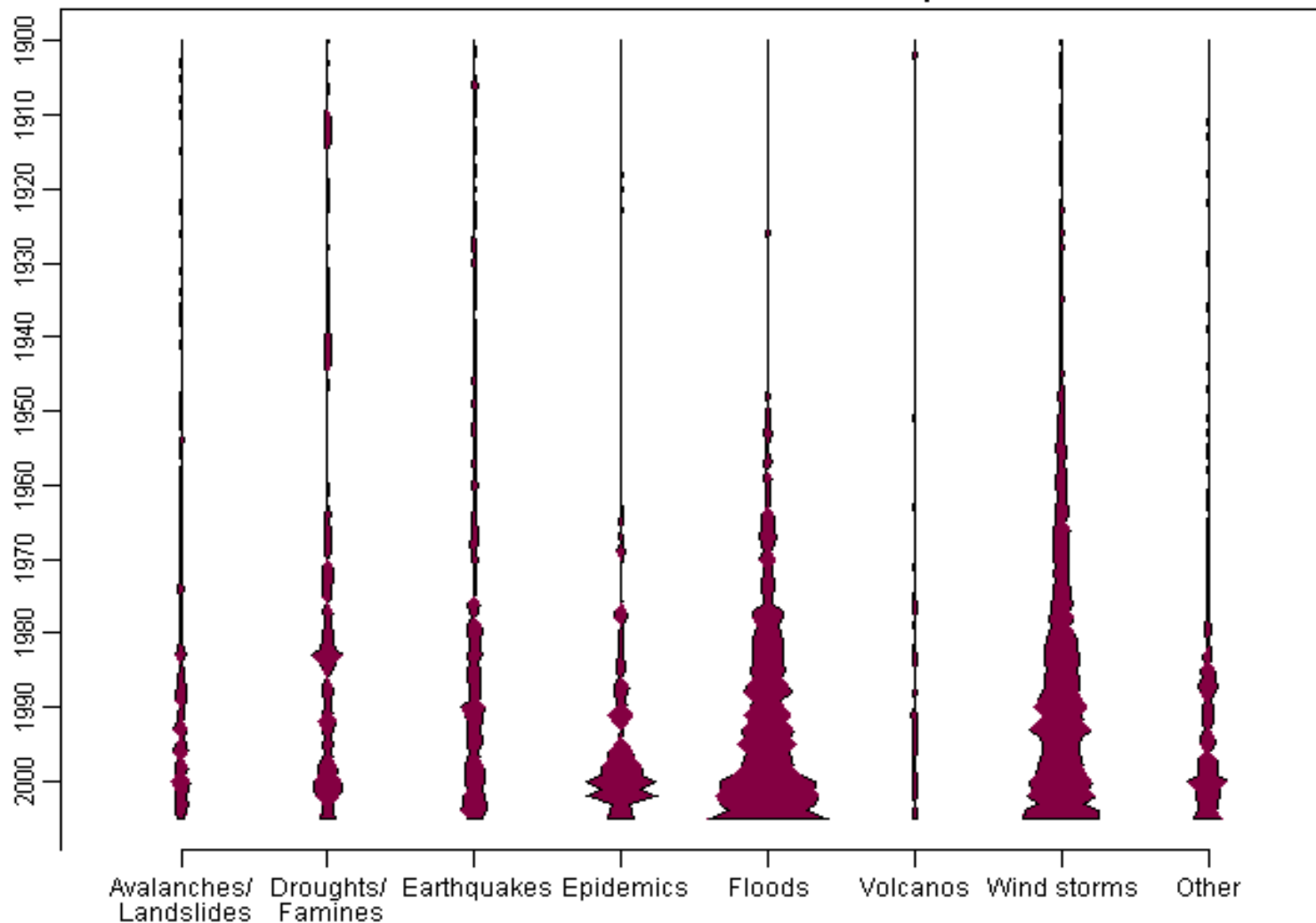
- disruption of water cycle (drought, flood)
- degradation of water quality and health issues
- reduced buffering capacity against coastal damage

D8 - main issues (3)

- intensification of dendrobiomass production and exploitation
- durability of bioenergy production systems
- environmental impacts
- water use of plantations
- conflicting land-uses



Number of natural disasters reported



Priority thematic areas – next period

climate change and forests

- CC impacts on forest ecosystems
- feedbacks between land cover, disturbances & CC

forest and water interactions

- effects of land-use change on watershed hydrology
- forest and water interactions under CC
- region specific interactions

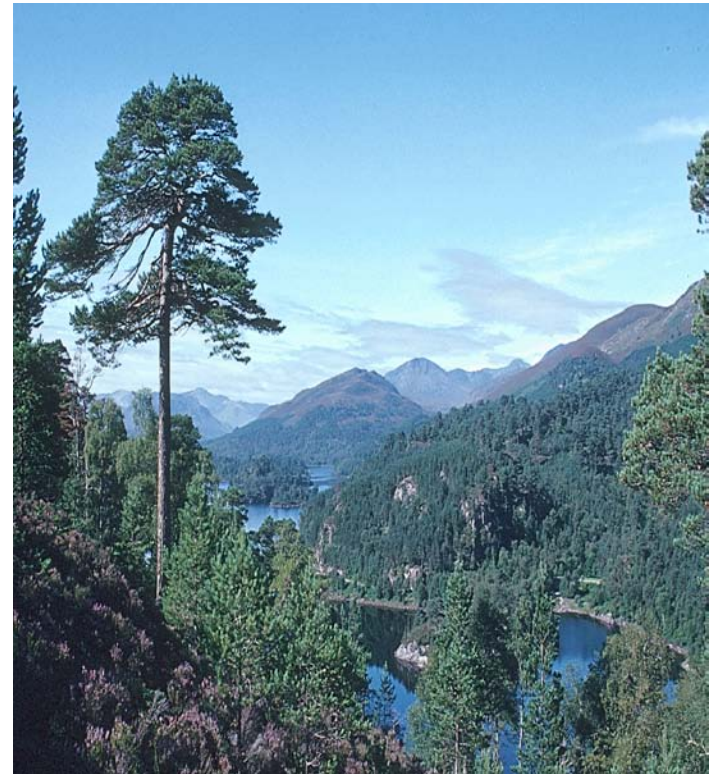
forest biodiversity conservation

- landscape-level strategies
- forest ecosystem resilience

D8 - priority research areas (1)

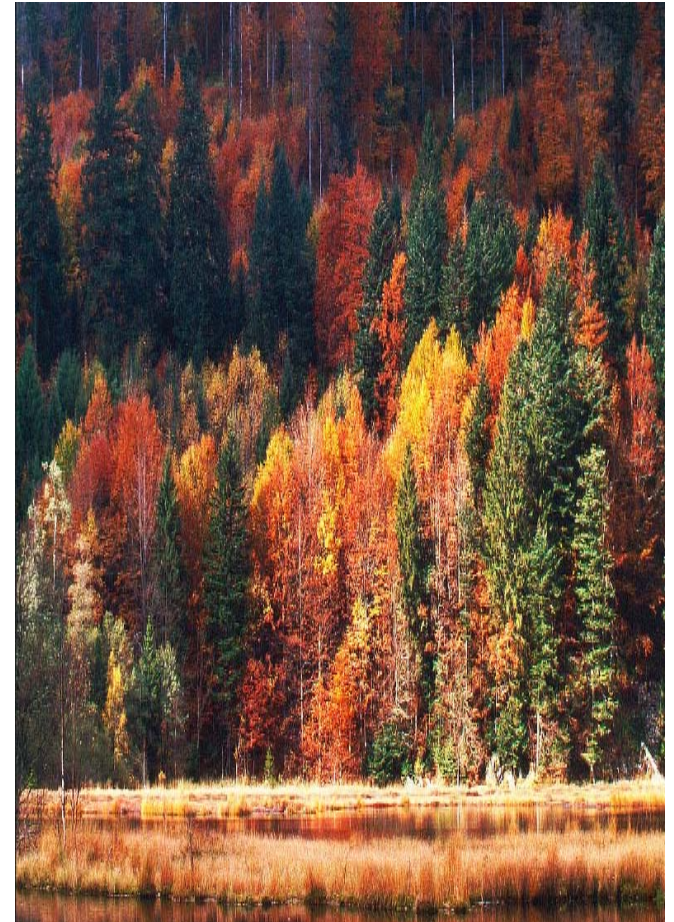
structure and functions of forest ecosystems and landscapes

- climate change impacts on biogeochemical cycles
- forest hydrological processes and watershed management
- forest management impacts on environmental services
- landscape analysis and assessment tools



D8 - priority research areas (2)

- ❑ biodiversity assessment tools
- ❑ effects of biodiversity loss on ecosystem functioning
- ❑ role of biodiversity in forest resilience to disturbances
- ❑ impacts of biological invasions (coop.with D 7)
- ❑ biodiversity conservation and landscape planning



D8 - priority research areas (3)

- ❑ assessment of impacts from natural disturbances
- ❑ disturbance regimes and landscape responses under changing climates
- ❑ disaster prevention and mitigation measures
- ❑ multiple risk analysis and management (in coop.with D4)



D8 – what's new

- natural hazards and risk management (RG 8.03)

- new WPs on
 - hydrological processes and watershed management
 - aquatic biodiversity in forests
 - bioenergy production systems and biodiversity

- events
 - Forest Landscapes and Global Change, Portugal, Sept 2010
 - Forest and Water conference, Spain, May 2011
 - Forests and Climate Change, China, Oct 2011
 - Biodiversity in Forest Ecosystems and Landscapes, Ireland, August 2012 - combined with D8 meeting in 2012



Thank you for your attention