IMPACTS OF CLIMATE CHANGE ON PNW TIMBER PRODUCTION

Summary Points

- Timber producing forests are distributed among federal, state, and private owners, but most harvesting is on private lands.
- Climate change can affect timber production:
  1. Through ecological changes in growing conditions and disturbance regimes
  2. Through economic changes in timber prices
  3. Through policy changes in regulations and markets

PNW FORESTS (WA, OR, ID)

- 73.6 million acres (29.7 million hectares)
- 58.8 million acres (80%) considered timberlands (capable of producing timber)
- 36% of timberland is privately owned (18% forest industry, 18% non-industrial private forests)
- 12.1 billion board feet (28.5 million cubic feet) softwood lumber produced in 2001
- 78% harvested timber from private lands
- In 2001, WA and OR maintained 14 direct jobs for every million board feet of timber harvested

MANAGING IMPACTS DUE TO ECOLOGICAL CHANGES

Climate change may affect temperature and precipitation patterns, which in turn will affect snow pack levels, soil moisture, and natural disturbance regimes such as fire, insects, and wind throw.

In the Pacific Northwest both precipitation and temperature may increase, potentially causing reduced winter snow pack and changes in soil moisture levels (drier in summer months but potentially wetter in spring months).

Changing fire and insect disturbance regimes will need to be monitored. Nursery stock should be chosen to withstand changes in soil moisture. Road planners should consider potential future wetter conditions in certain areas.

EFFECTS OF ECONOMIC CHANGES

Climate change may affect the price of timber by changing forest...
FOCUS ON ECOLOGICAL, ECONOMIC, AND POLICY IMPACTS OF CLIMATE CHANGE ON PNW TIMBERLANDS

productivity around the world. Productivity will vary but is expected to yield a total increase in the harvestable timber supply. This increase may lower average timber prices (unless demand increases more rapidly than supply). Regions with higher costs of timber production may have decreasing economic benefits from timberlands.

In the Pacific Northwest forest productivity may increase in some areas and decrease in others, but higher costs of production will decrease economic benefits from timberlands.3

In 1997 Oregon passed the first state law limiting carbon dioxide emissions from new power plants (limit now at .675 lbs per kWh). Similarly, Washington just passed House Bill 3141, which will require fossil fuel powered electric generation facilities to offset 20% of total carbon dioxide emissions through purchasing third party carbon credits or investing in carbon mitigation projects such as cogeneration. Finally, forest certification standards such as AF&PA’s Sustainable Forestry Initiative4 and Canada’s Sustainable Forest Management5 have included carbon management in their latest standards.

EFFECTS OF POLICY CHANGES

Climate change policies may affect management of timberlands by introducing a new product (carbon) or introducing a new liability (greenhouse gas emissions).

Policies to cap or tax greenhouse gas emissions may increase carbon trading, which can affect forest industry in three ways: by paying landowners to store carbon in forests, by favoring wood products over more energy intensive substitute materials such as steel or concrete, and by increasing the favorability of renewable energy from biomass.

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For More Information

For more information on the impacts of climate variability and change on Pacific Northwest forest resources, please contact the Climate Impacts Group.

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