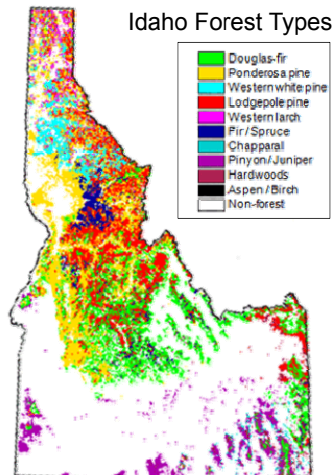


Idaho Forest By the Numbers



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OUTLINE

- Forest management – “triple win”
- Forest extent & ownership
- Timber inventory trends
- Wildfire & carbon emissions
- Forest business sector contributions

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Forest management . . .

. . . opportunity to address three challenging issues:

- Restoring forest health, fire resiliency, and wildlife habitat
- Finding renewable energy alternatives
- Revitalizing western economies

“Triple Win”

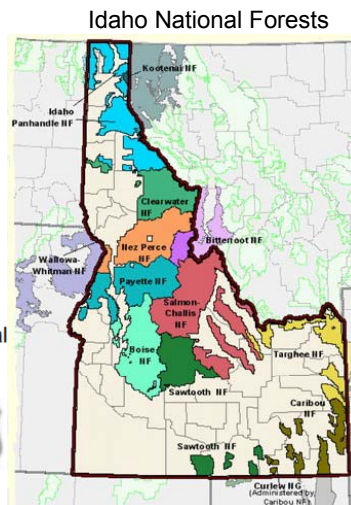
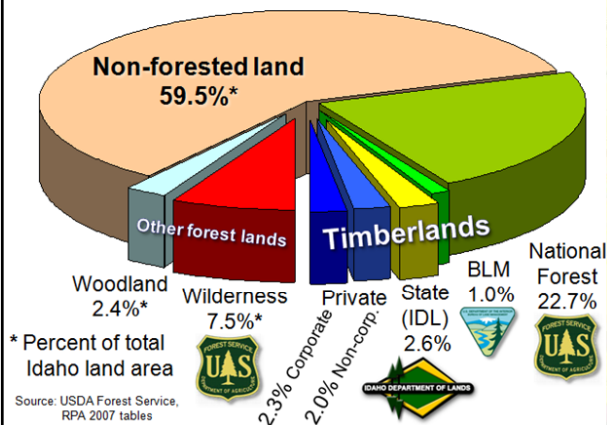


<http://www.forestry.org/pdf/dec06.pdf>

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Forest extent & ownership

- Forests cover 40.5% of Idaho
- Most forests are timberlands



Data: Forest Resources of the U.S., 2007 (U.S. Forest Service)

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Timber volume & change factors

Idaho Timberland Data

- Growing stock volume:* 36.7 billion ft³
- Forest change factors (2007)
 - Growth: 994 million ft³
 - Mortality: 383 million ft³
 - Removals: 246 million ft³
 - Wood increment:† 748 million ft³
- Sound dead volume: 5.0 billion ft³

* Wood volume in trees > 5" diameter

† Wood increment = Growth – Removals

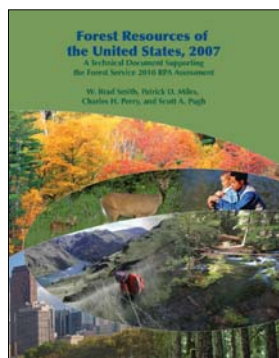


Data: Forest Resources of the U.S., 2007 (U.S. Forest Service)

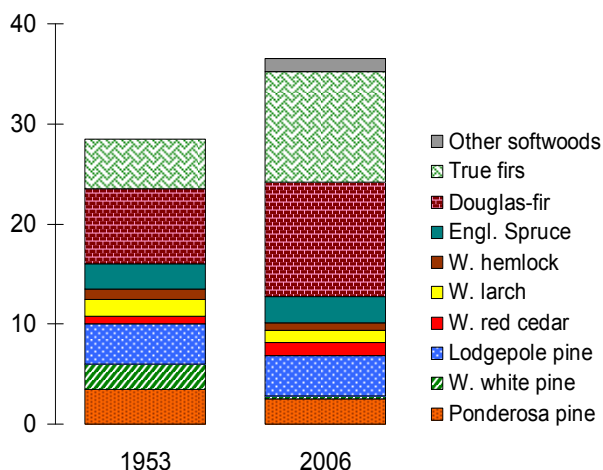
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Forest inventory change, 1953-2007

- 30% increase
- Fewer pines, more firs



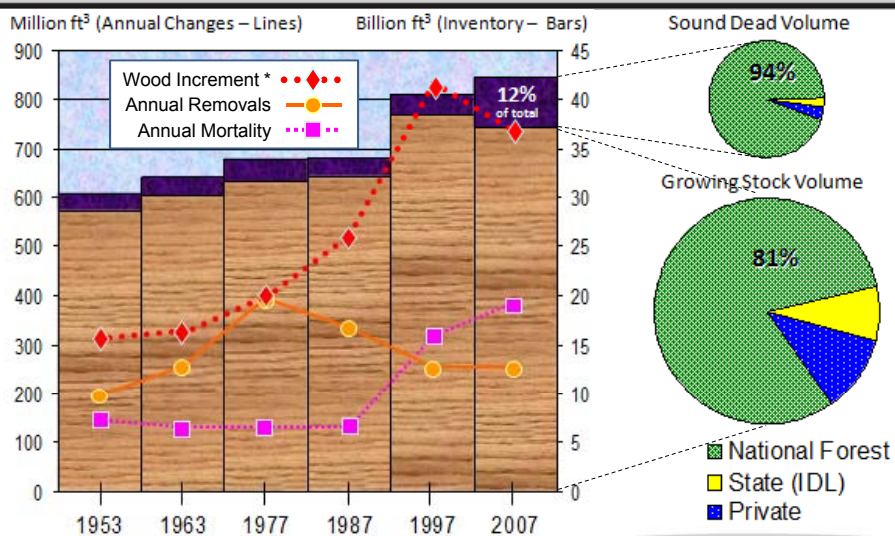
Growing stock volume, billion cubic feet



Data: Forest Resources of the U.S., 2007 (U.S. Forest Service)



Forest inventory change, 1953-2007



* Wood Increment is Annual Growth minus Annual Removals



Wildfire & fuels

U.S. Government Accountability Office
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The most extensive and serious problem related to the health of national forests in the Interior West is the over-accumulation of vegetation, which has caused an increasing number of large, intense, uncontrollable, and catastrophically destructive wildfires.

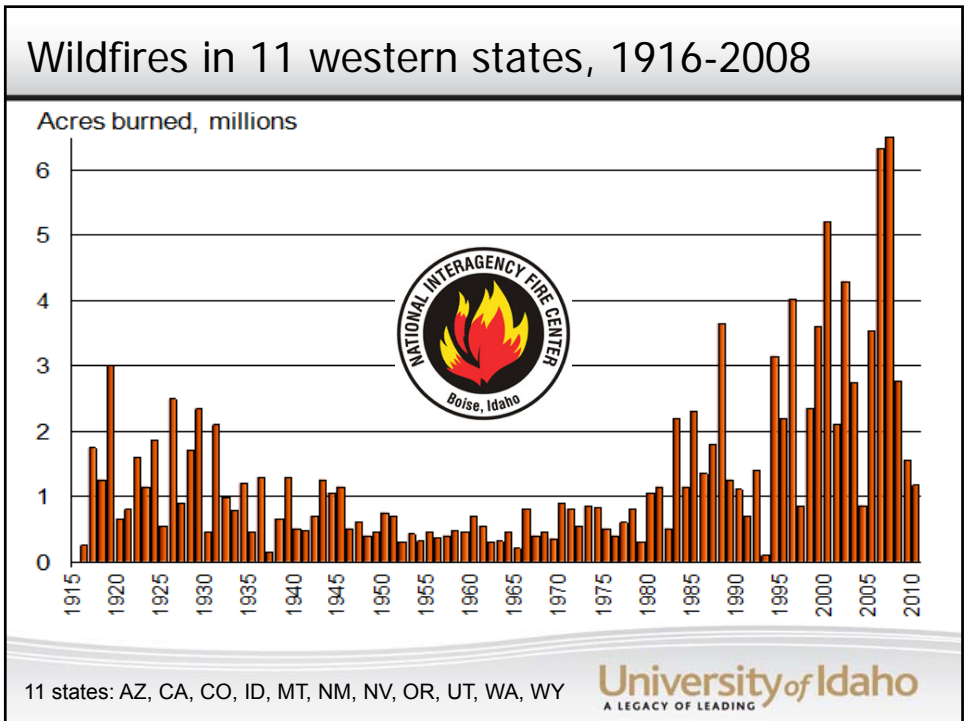
GAO
Report to the Subcommittee on Forests and Forest Health, Committee on Resources, House of Representatives

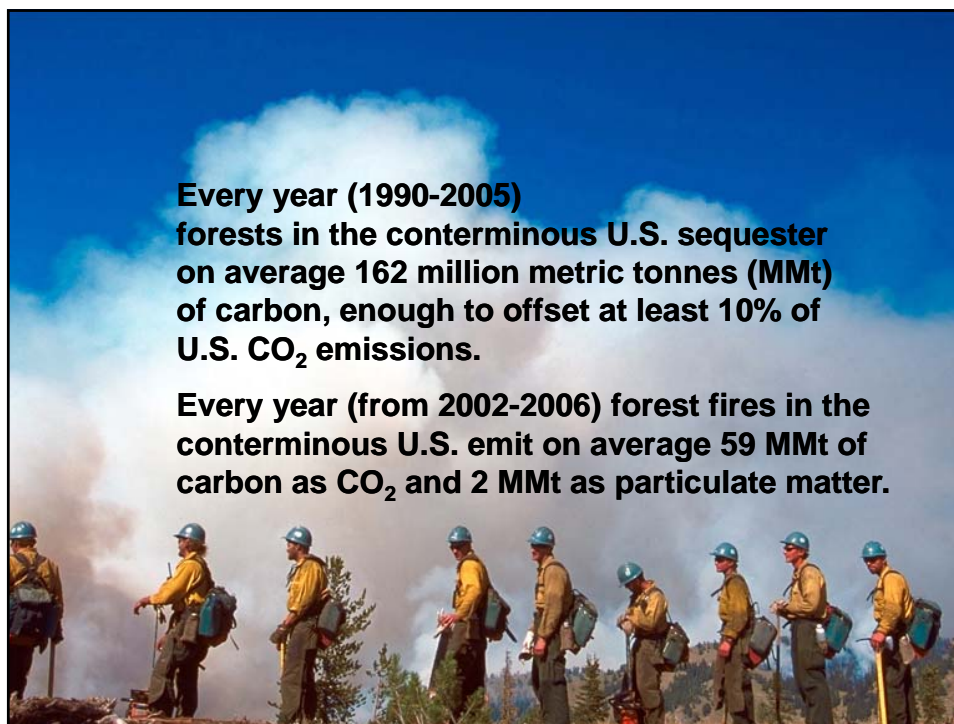
April 1999

WESTERN NATIONAL FORESTS

A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats

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Wildfire, fuels & climate change

The overall importance of climate in wildfire activity underscores the urgency of ecological restoration and fuels management to reduce wildfire hazards to human communities and to mitigate ecological impacts of climate change . . .

A.L. Westerling, et al. (2006).
 "Warming and earlier spring increase western U.S. forest wildfire activity."
Science 313: 940-943.



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Wildfire, fuels & emissions



Although wildfires reduce the forest carbon sink function considerably, nevertheless due to tree growth Idaho's forests in an "average" year offset 88% of all fossil fuel combustion emissions in the State.

In an "average" wildfire year in Idaho, CO₂ emissions are equivalent to 3.6 million cars.

In 2006 Idaho wildfire emissions equalled 160% of all fossil fuel burning emissions.

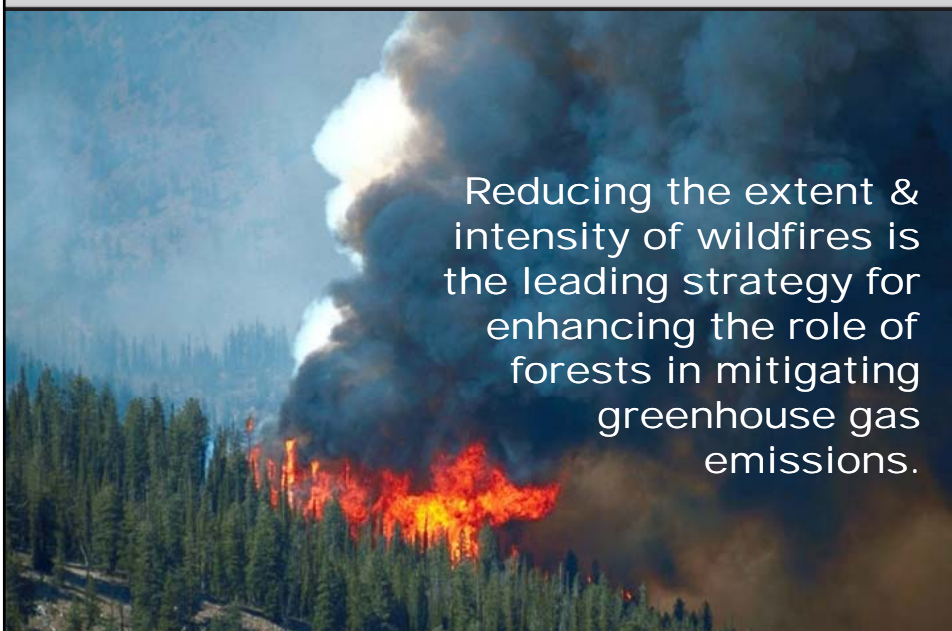
Because of more wildfire activity in 2006, Idaho wildfire emissions were equivalent to 6.4 million cars.

Even so, in 2006 Idaho's forests were a net sink for atmospheric carbon.



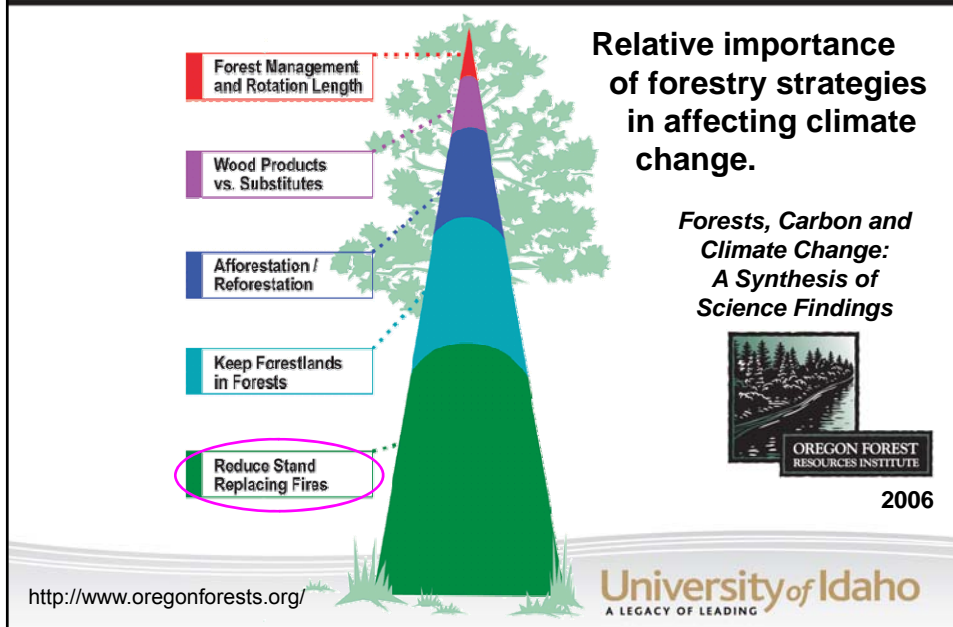
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Wildfire, fuels & emissions



Reducing the extent & intensity of wildfires is the leading strategy for enhancing the role of forests in mitigating greenhouse gas emissions.

Wildfire, fuels & climate change



Forests' role in climate change mitigation

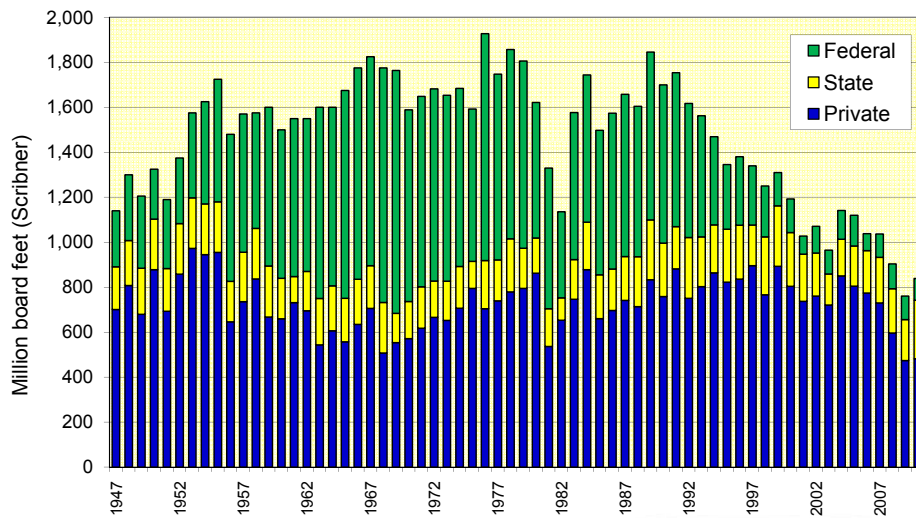
“ . . . a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber fibre or energy from the forest, will generate the largest sustained mitigation benefit.”



<http://www.ipcc.ch/ipccreports/ar4-wg3.htm>

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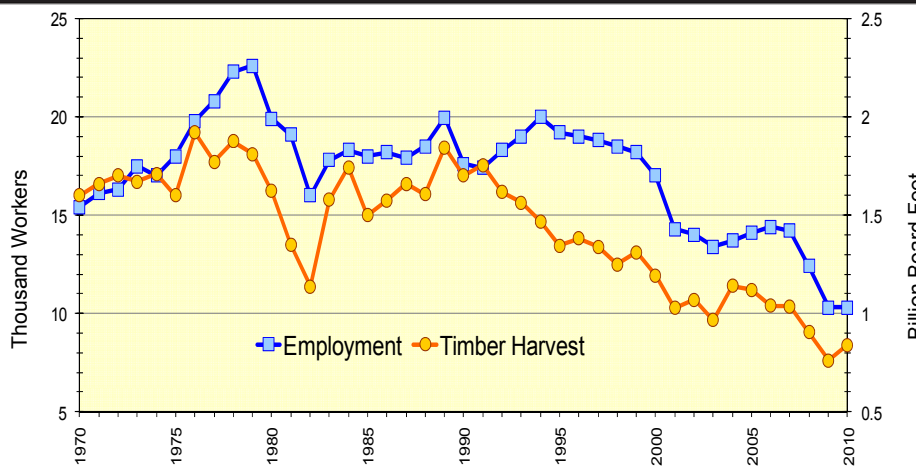
Idaho timber harvest trend by ownership



<http://www.cchrome.uidaho.edu/default.aspx?pid=120133>

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Idaho forest-based jobs & timber harvest



● Employment & harvest are correlated (≈ 13 jobs per million bd. ft., 2001-2010)

Data: Bureau of Business & Economics Research, Univ. of Montana

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Idaho forest business sector employment

Idahoans rely on jobs in the woods, on the roads, and in the mills



Each of the 10,300 direct forest sector jobs supports two more jobs in other sectors

2.5% of total personal income in Idaho comes from employment in the forest business sector



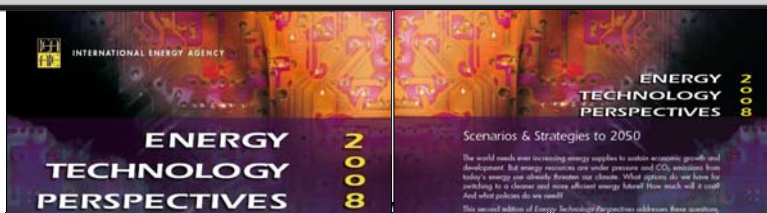
Only 3 states depend more on forest business:

- Maine
- Mississippi
- Oregon



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Energy perspectives – Int'l Energy Agency



The world needs ever increasing energy supplies to sustain economic growth and development. But energy resources are under pressure and CO₂ emissions from today's energy use already threaten our climate. What options do we have for switching to a cleaner and more efficient energy future? How much will it cost? And what policies do we need?



<http://www.iea.org/Textbase/techno/etp/index.asp>

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Wood bioenergy is a byproduct . . .

Plummer
combined heat & power
"cogeneration"

Wool
Lewiston
combined heat & power
"cogeneration"

"hog fuel"

under-story small log

saw log

clean chips

kiln-dried lumber

Wood Bioenergy
Management Overview
Energy for Idaho
Report of the Forestry Task Force
Idaho Strategic Energy Alliance
June 2009

Idaho Strategic Energy Alliance

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