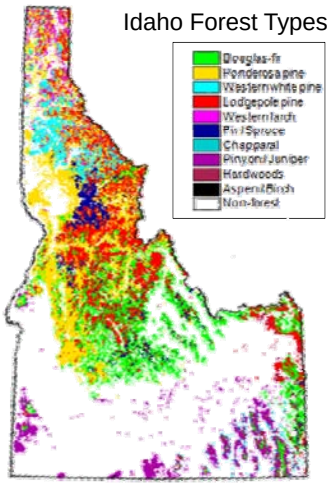
Idaho Forests by the Numbers

Jay O'Laughlin, Ph.D.
Professor of Forestry & Policy Sciences
Director of the Policy Analysis Group
College of Natural Resources
University of Idaho
208-885-5776; jayo@uidaho.edu

Idaho Forest Types



OUTLINE

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

http://www.cnrhome.uidaho.edu/pag/

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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/media/docs/westernforester/2006/dec06.pdf

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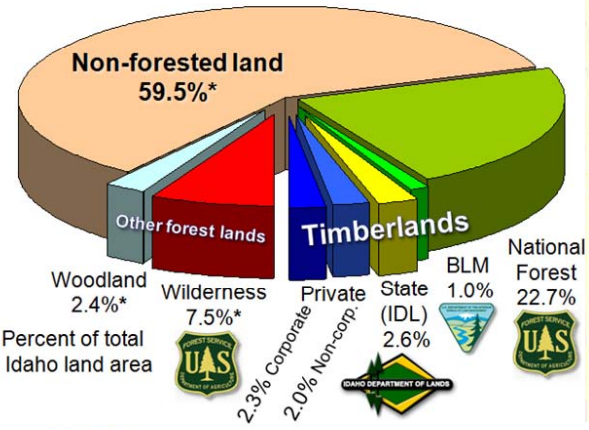
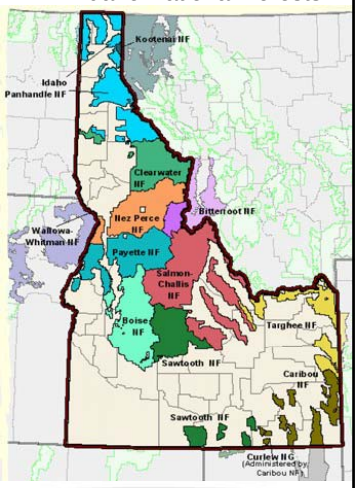
Forest extent & ownership

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



Idaho National Forests



Data: *Forest Resources of the U.S., 2007* (U.S. Forest Service 2009)

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Timber volume & change factors

<u>Idaho Timberland Data</u>

- Growing stock volume:* 36.7 billion ft^3
- Forest change factors (2007)
  - Growth: 994 million ft^3
  - Mortality: 383 million ft^3
  - Removals: 246 million ft^3
  - Wood increment:† 748 million ft^3
- Sound dead volume: 5.0 billion ft^3

* Wood volume in trees > 5" diameter

† Wood increment = Growth – Removals

Data: *Forest Resources of the U.S., 2007* (U.S. Forest Service 2009)

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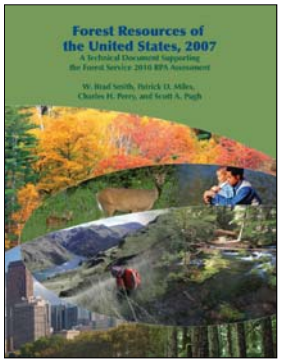
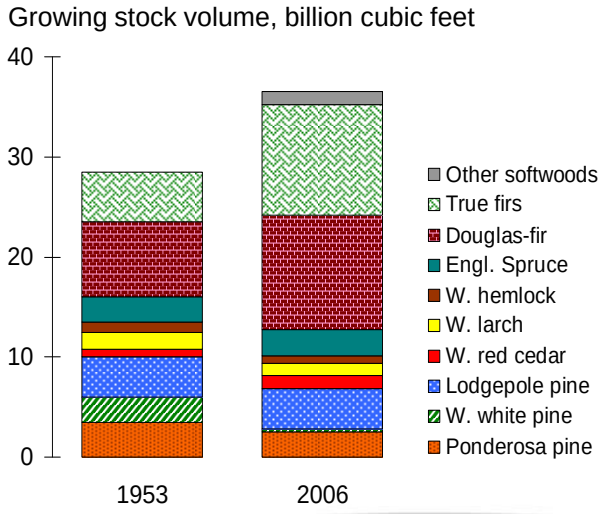
Forest inventory change, 1953-2007

- 30% increase
- Fewer pines, more firs





Data: *Forest Resources of the U.S., 2007* (U.S. Forest Service 2009)

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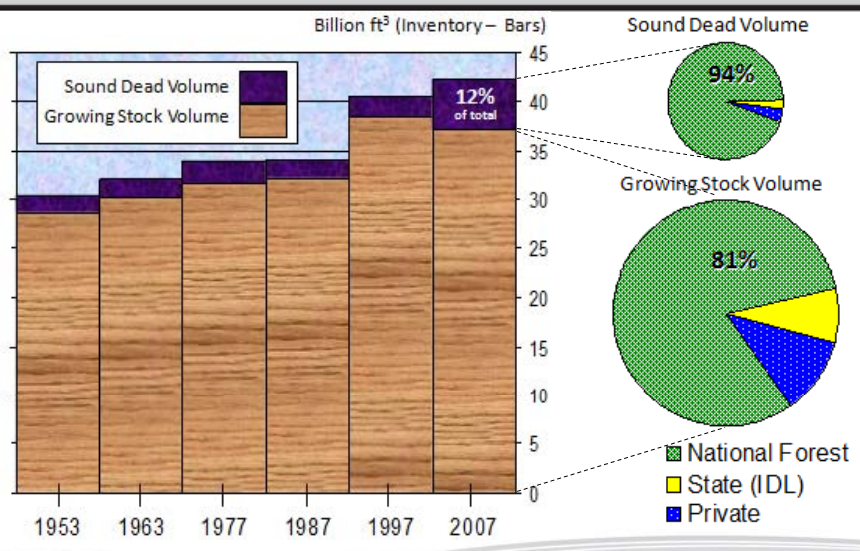
Idaho forest inventory change, 1953-2007



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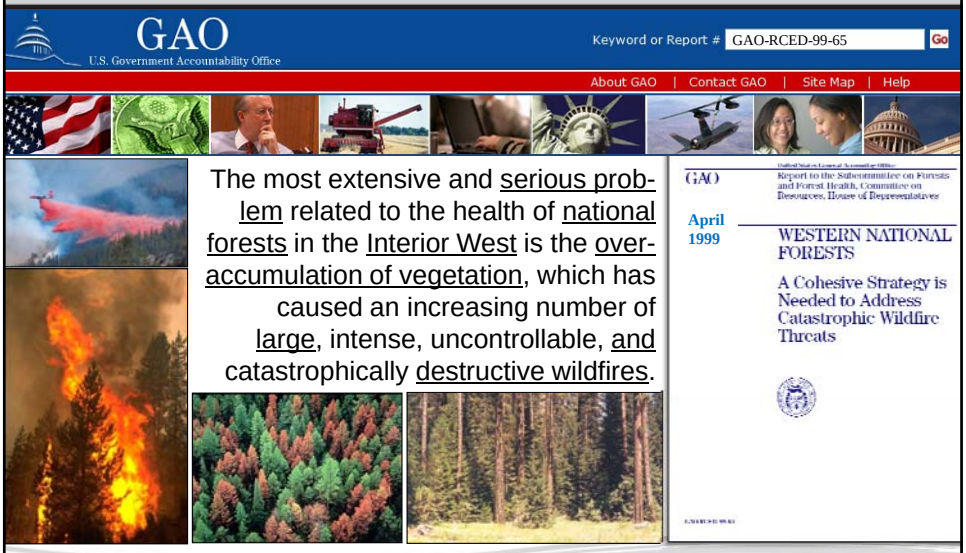
Wildfire & fuels



http://www.gao.gov/assets/160/156559.pdf

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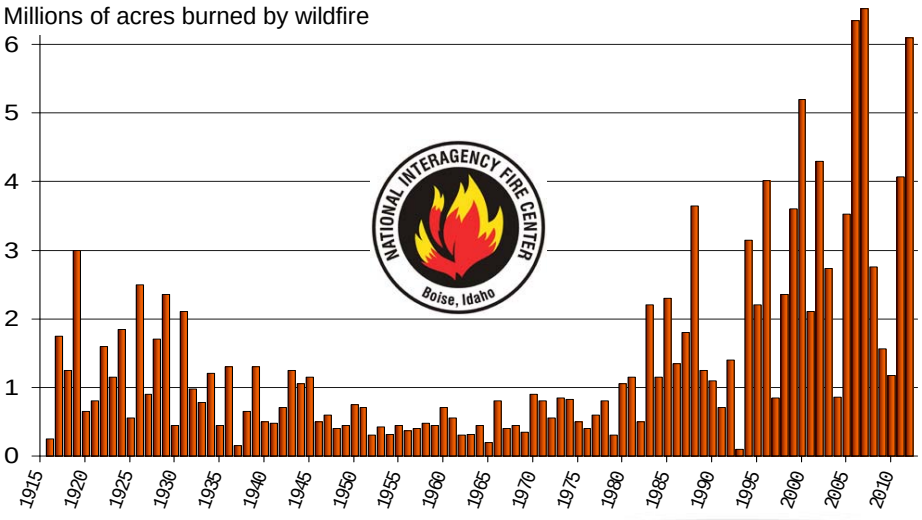
Wildfires in 11 western states,* 1916-2012†



* 11 states: AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

† 2012 data through August 23

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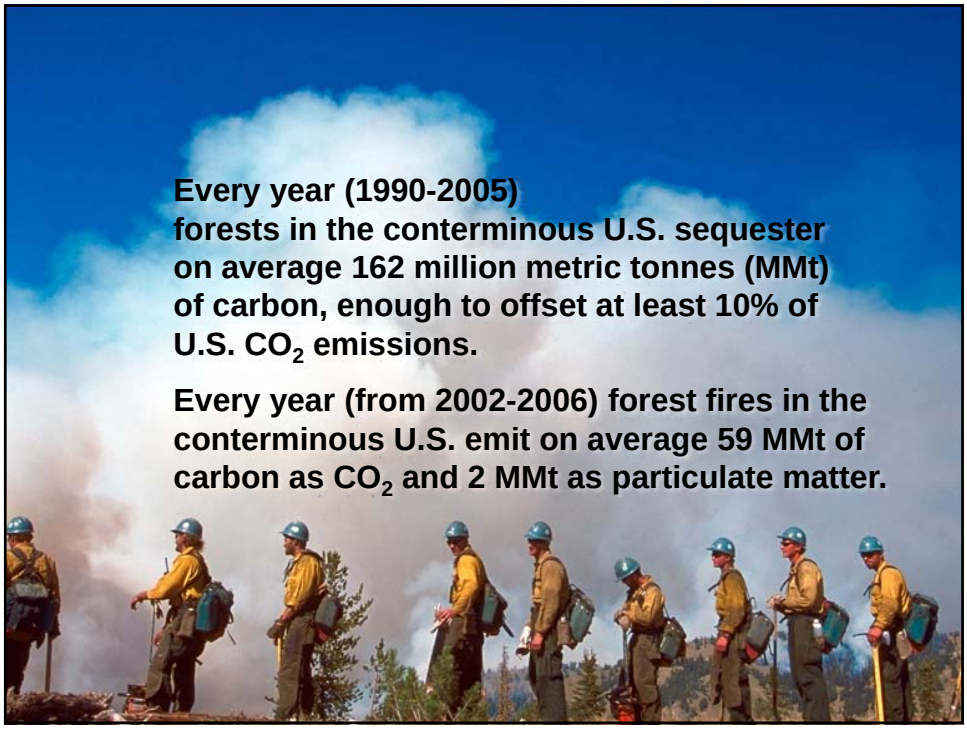

Wildfire, fuels & climate change

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.

http://www.sciencemag.org/content/313/5789/940.short

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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, CO_2 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.

http://www.energy.idaho.gov/energyalliance/d/carbon_issues_report.pdf

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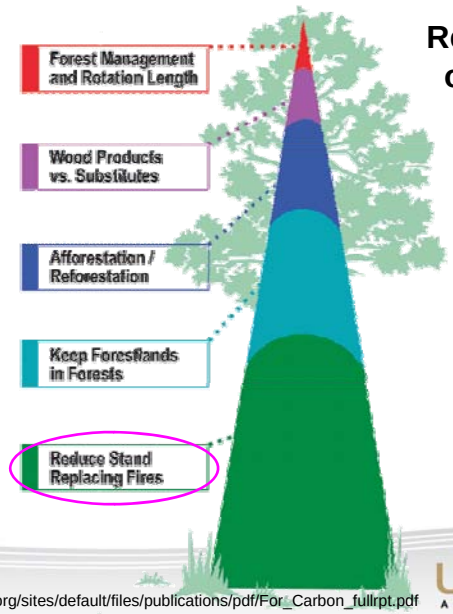
Wildfire, fuels & emissions

Wildfire, fuels & climate change



Relative importance of forestry strategies in affecting climate change.

Forests, Carbon and Climate Change: A Synthesis of Science Findings

OREGON FOREST RESOURCES INSTITUTE

2006

http://oregonforests.org/sites/default/files/publications/pdf/For_Carbon_fullrpt.pdf

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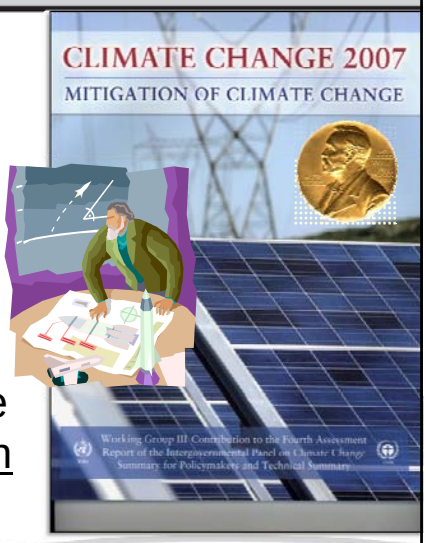
Forests' role in climate change mitigation

". . . 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/publications_and_data/ar4/wg3/en/ch9.html

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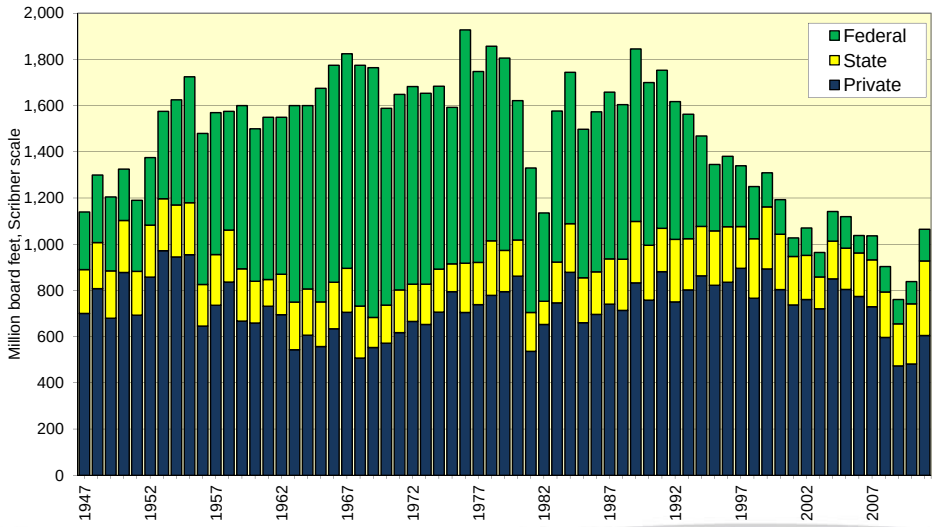
Idaho timber harvest by ownership, 1947-2011



http://www.cnrhome.uidaho.edu/default.aspx?pid=120623

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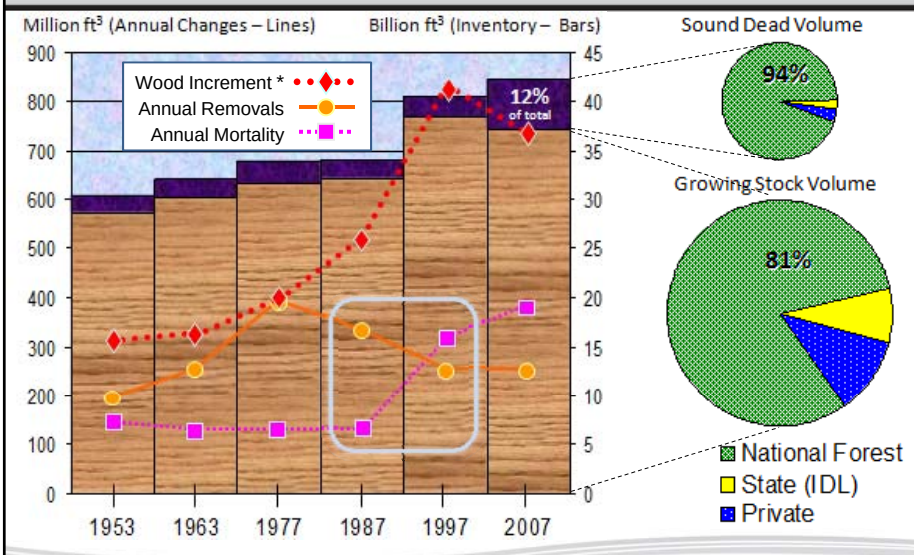
Idaho forest inventory change, 1953-2007



* Wood Increment is Annual Growth minus Annual Removals

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Idaho timber harvest economic benefits

Idaho forest business sector employment

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

10,300 direct forest sector jobs support almost 9,000 jobs in other sectors

$654 million in personal income comes from direct and indirect jobs in Idaho's forest products business sector

Only 3 states depend more on forest business:
- Maine
- Mississippi
- Oregon

http://www.cnrhome.uidaho.edu/default.aspx?pid=120623

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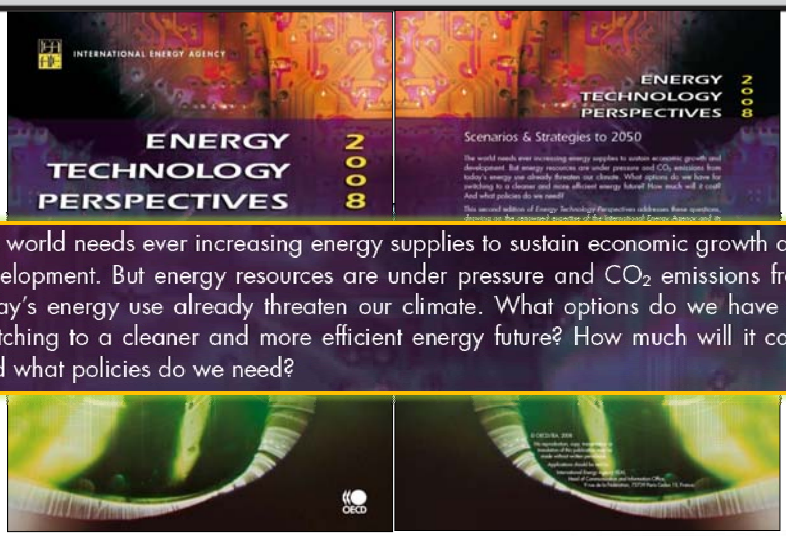
Energy perspectives – Int'l Energy Agency



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

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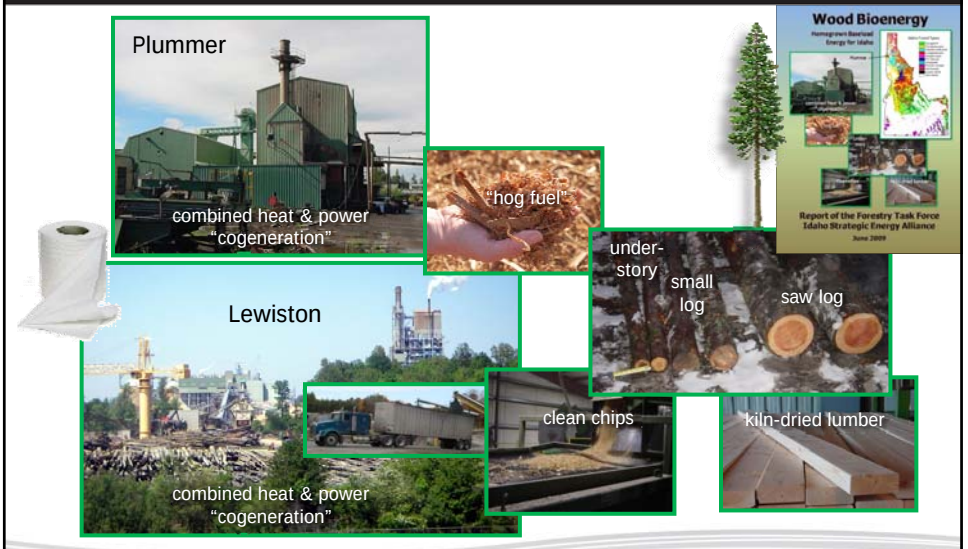
Wood bioenergy is a byproduct . . .



http://www.energy.idaho.gov/energyalliance/d/forest_packet.pdf

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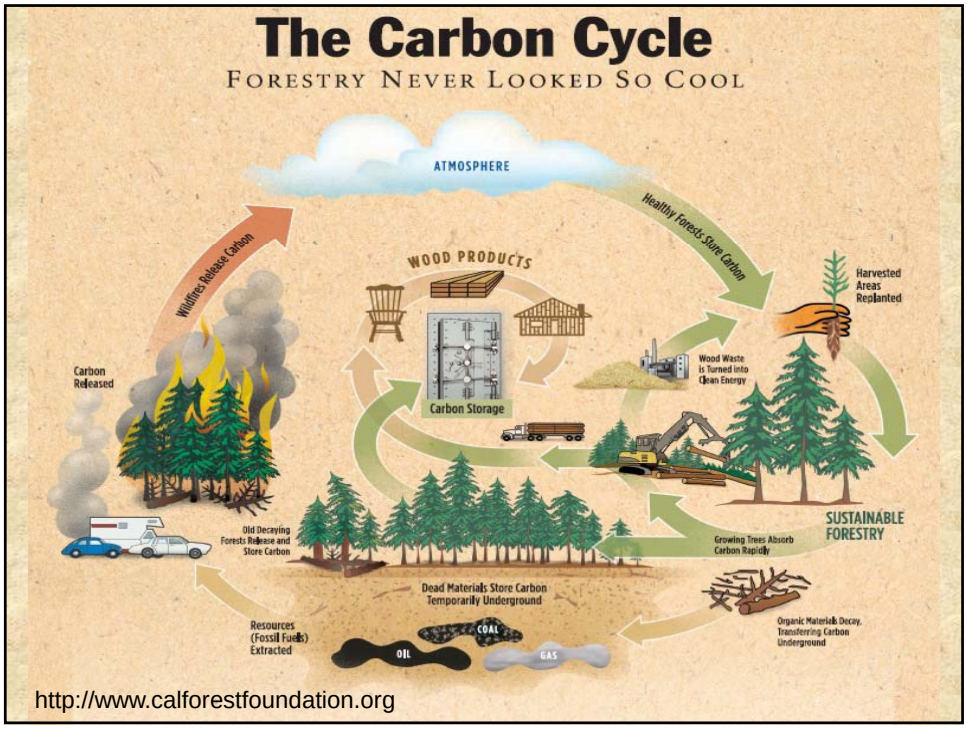

http://www.calforestfoundation.org