



Update to the 2010 RPA Assessment: Past, present, and future of America's forests and rangelands

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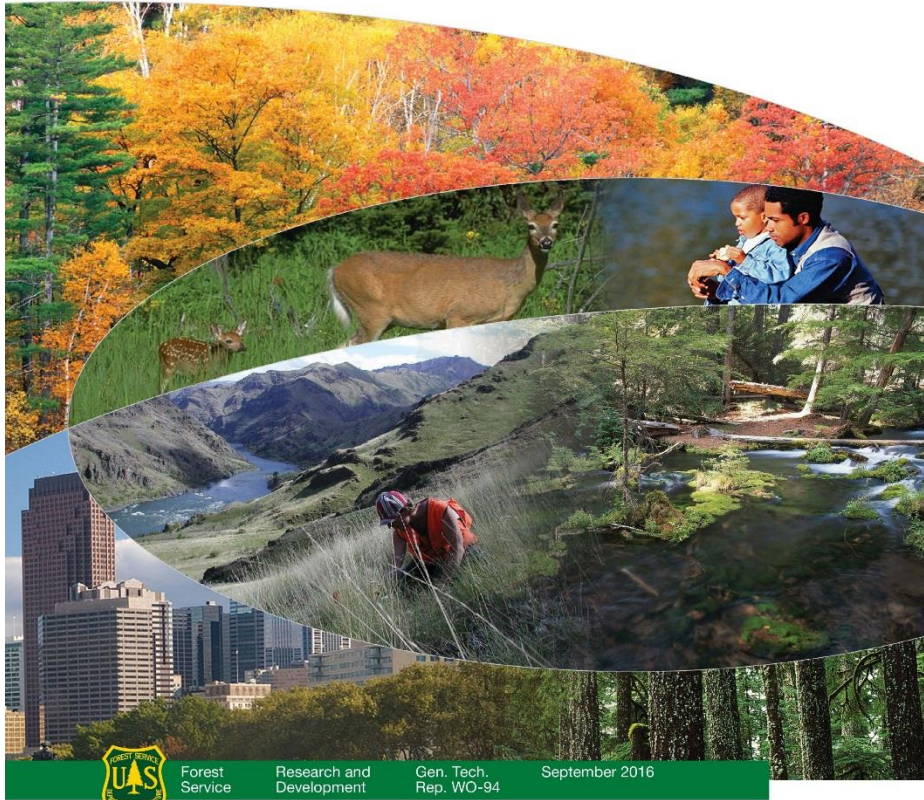
The RPA Assessment



- The Forest and Rangeland Renewable Resources Planning Act of 1974 mandates a national report (RPA Assessment) on the conditions and trends of renewable resources **on all forest and rangelands** every ten years.
 - The RPA Assessment provides a snapshot of current U.S. forest and rangeland conditions and trends; identifies drivers of change; and **projects 50 years into the future (2010-2060)**.
 - The Assessment includes analyses of forests, urban forests, rangelands, water, outdoor recreation, biodiversity, fish and wildlife, wilderness, and the potential effects of climate change on these resources.
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Future of America's Forests and Rangelands

Update to the Forest Service
2010 Resources Planning Act Assessment



Forest Service

Research and Development

Gen. Tech. Rep. WO-94

September 2016

<https://www.fs.fed.us/research/rpa/>

Scenarios in the RPA Update

Nine Scenario-Climate Futures

Three RPA scenarios

linked with IPCC scenarios, but updated and nationally focused

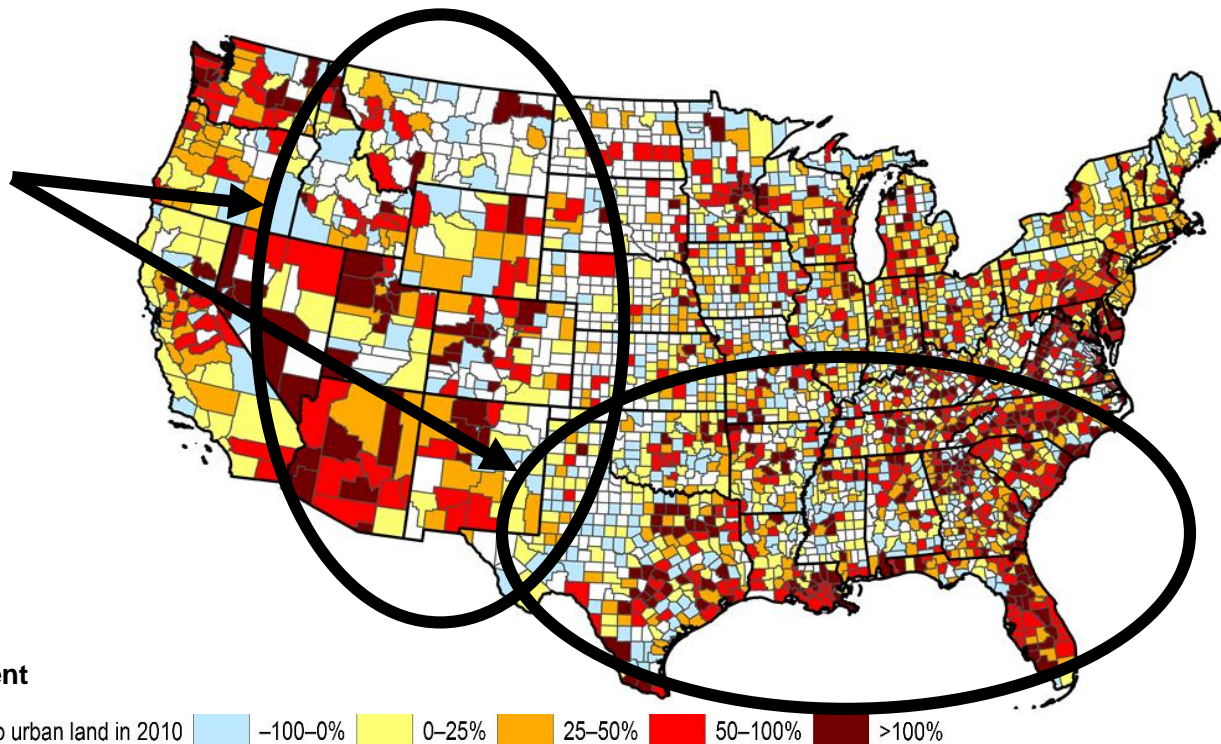
- **RPA A1B**: high economic growth, moderate population growth, mid-to high emissions
- **RPA A2**: moderate economic growth, high population growth, highest emissions
- **RPA B2**: moderate economic growth, low population growth, lowest emissions

Each RPA scenario is paired with three climate projections

Land Resources

- *Developed land and urban areas are increasing, at the expense of forests and rangelands.*
- *Urban area expanded 45% between 1990 and 2010.*

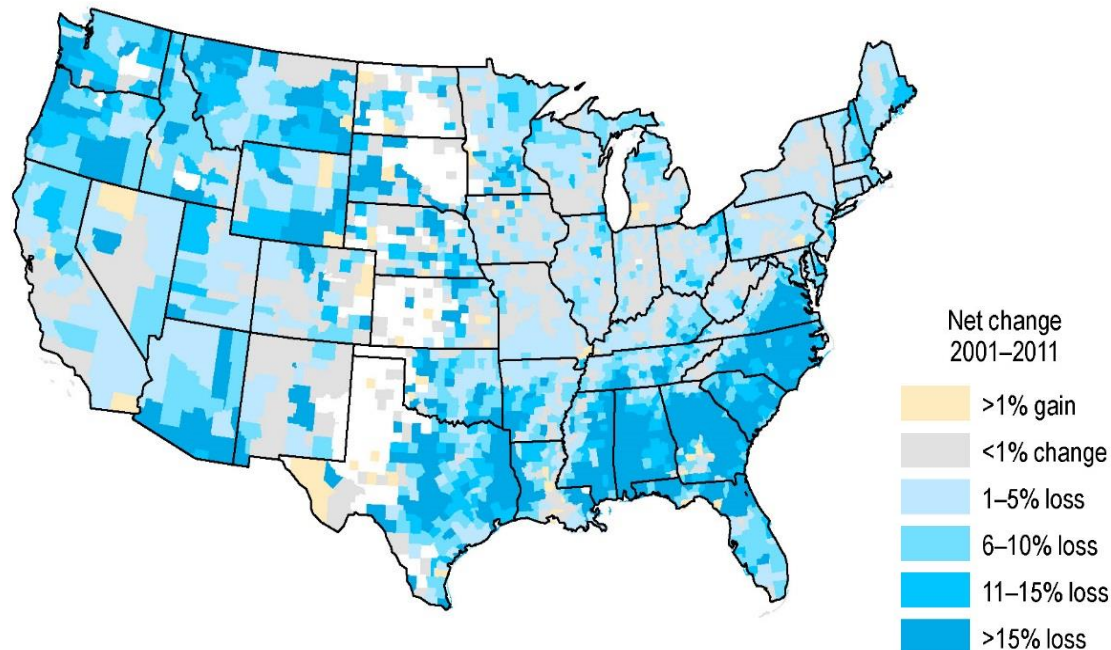
RPA South and Rocky Mountain Regions exceeded national average urban area growth.



Percent change in urban land by county between 1990 and 2010 for the conterminous United States.

Forest Resources

- Forest area increased slightly from 2007-2012
- Forest fragmentation increased from 2001 to 2011 with the greatest increase occurring in interior forests



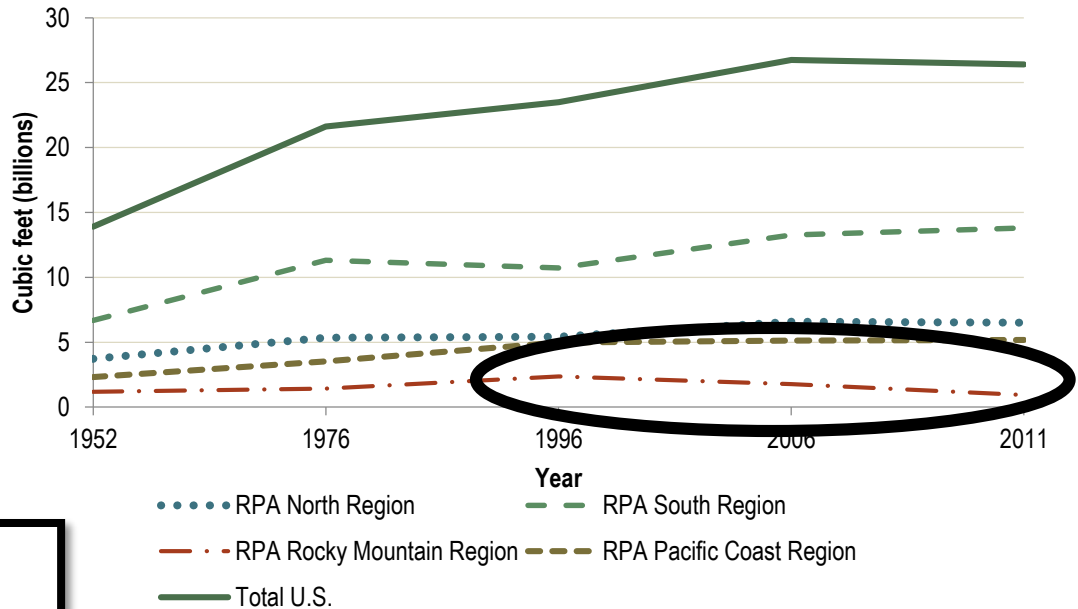
Net change of interior forest cover from 2001 to 2011, by county (38-acre scale).

(9% at a 38-acre scale, 20% at a 13,000 acre scale)

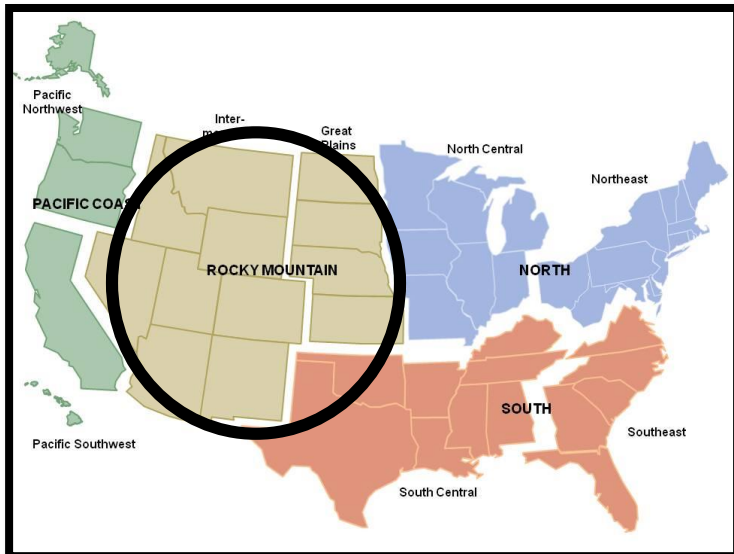
Forest Resources

Average net forest growth increased from 1996-2011.

Only RPA Rocky Mountain Region declined in net annual growth and increased in mortality.

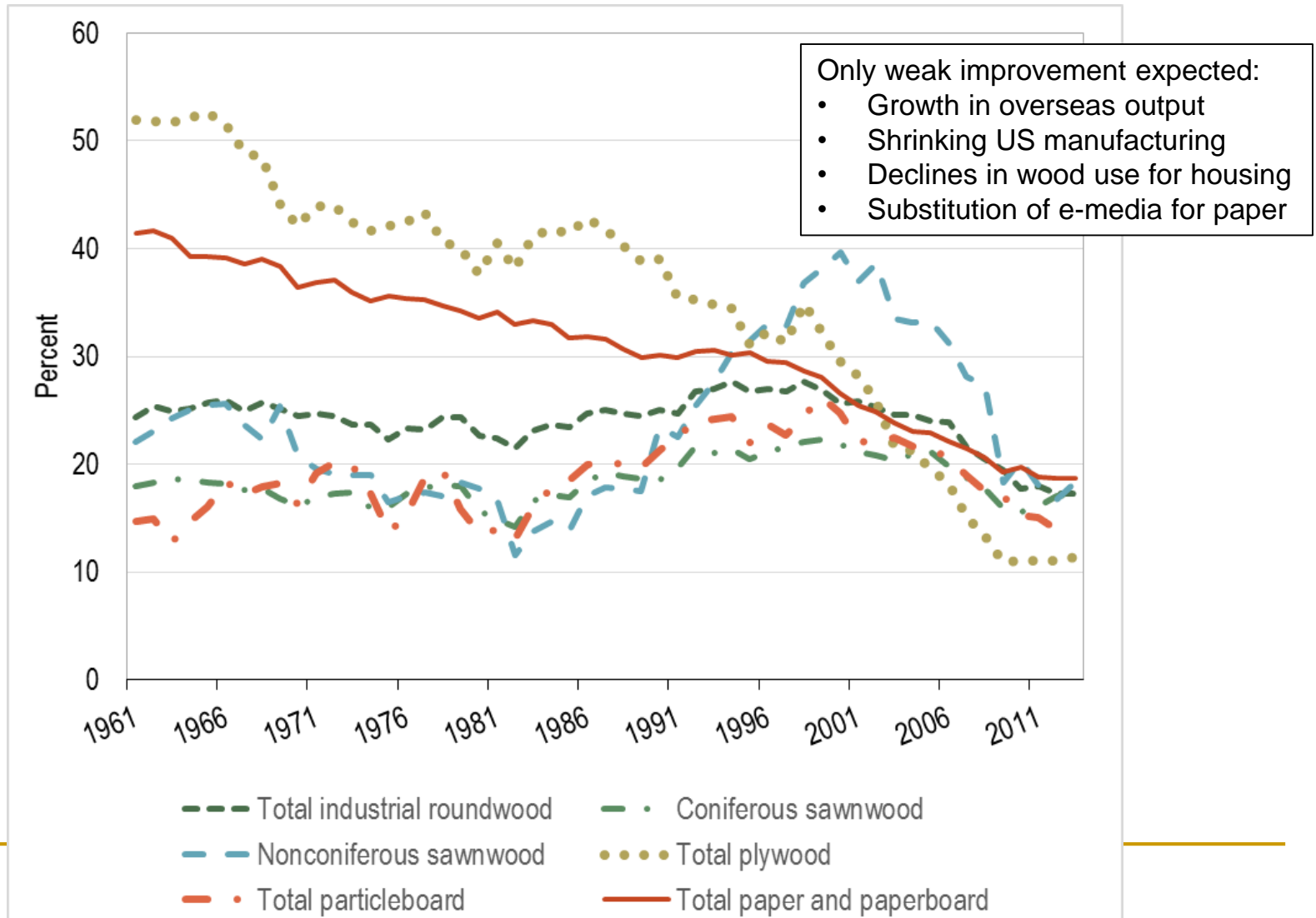


Net annual growth of growing stock on timberland, 1952-2011



Forest Products

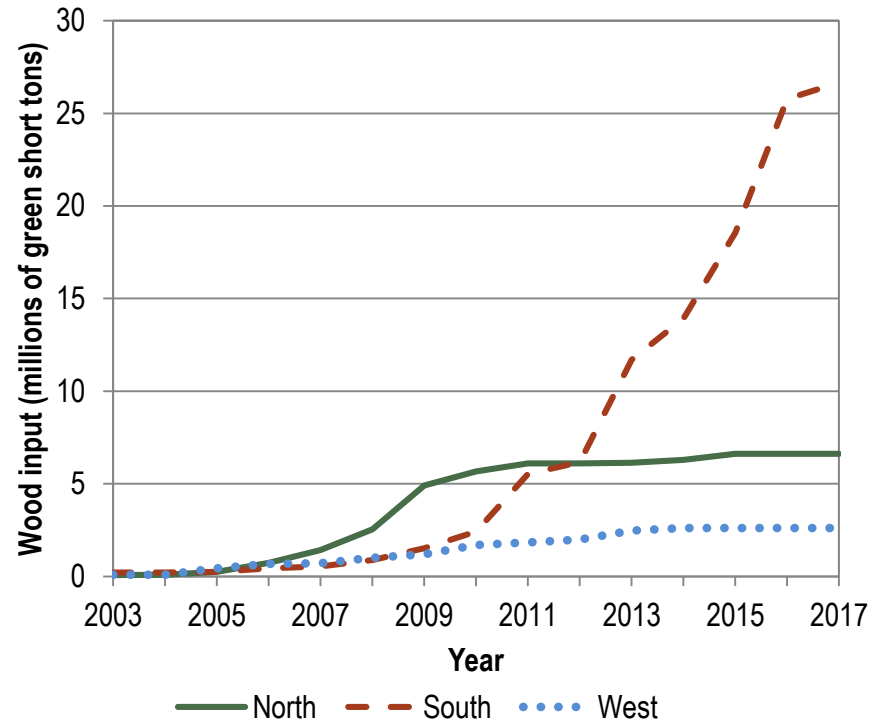
The U.S. Role in the International Wood Products Sector: Retrospective



Forest Products

The U.S. wood pellet export market will continue to grow, led by production in the South.

- ❑ *Increased demand leads to increased timber harvests and prices, providing short-run gains to forest owners and losses to users.*
- ❑ *Future supply to European markets depends on EU energy demands and policies.*

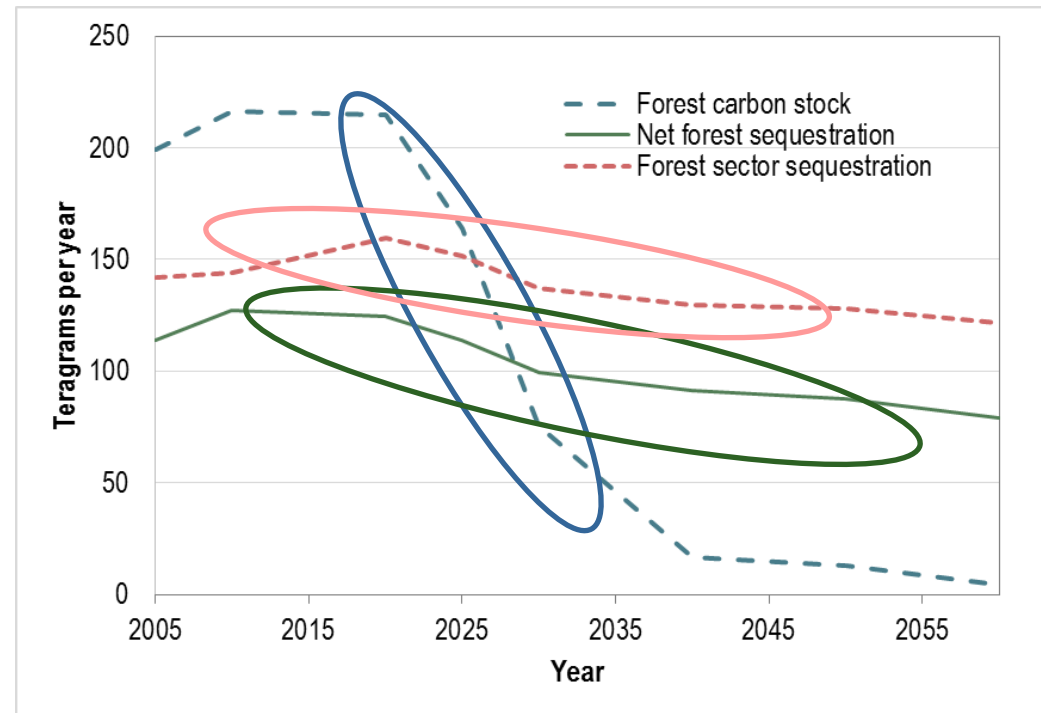


Growth in wood pellet production capacity by U.S. region, 2003-2014, and projected, 2015-2017.

Forest Carbon

Forest carbon accumulation rate will decline, primarily because of land use change.

Slight declines in annual net forest sequestration are due to forest aging.



Carbon stored in harvested wood products is an increasing portion of total forest sector sequestration over time.

Key Themes

- Land development will continue to threaten the integrity of forest and rangeland ecosystems.
- Climate change and natural disturbances will alter forest and rangelands ecosystems.
- Increasing demands and effects of climate change will impact the provision of ecosystem services.

The RPA Assessment projects the future of our resources if current policies remain unchanged. If the projected conditions are undesirable, opportunities exist to make changes in current policies and programs to obtain more desirable future conditions.

RPA Assessment Lead Scientists



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