





Developing forest carbon projects: observations from the bleeding edge





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Outline


- PNW and forest carbon
- Co-production of goods and ecosystem services
- Ecotrust/Ecotrust Forests: testing the market
- Timeline of a forest carbon deal: observations from the bleeding edge
- Closing thoughts


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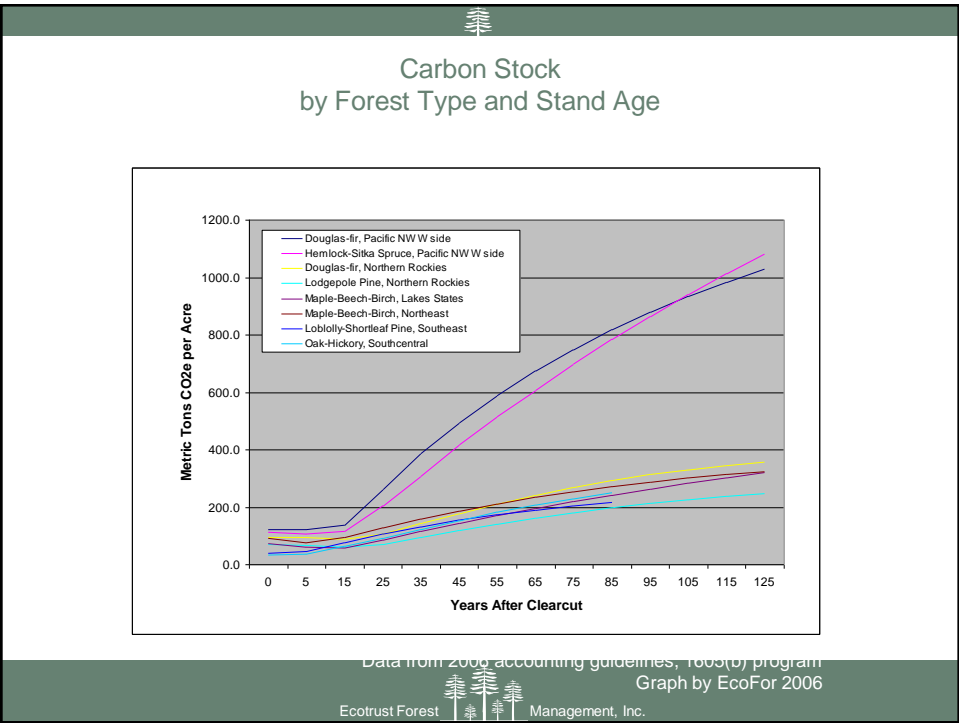
PNW is unique: Ecosystem service markets in forests

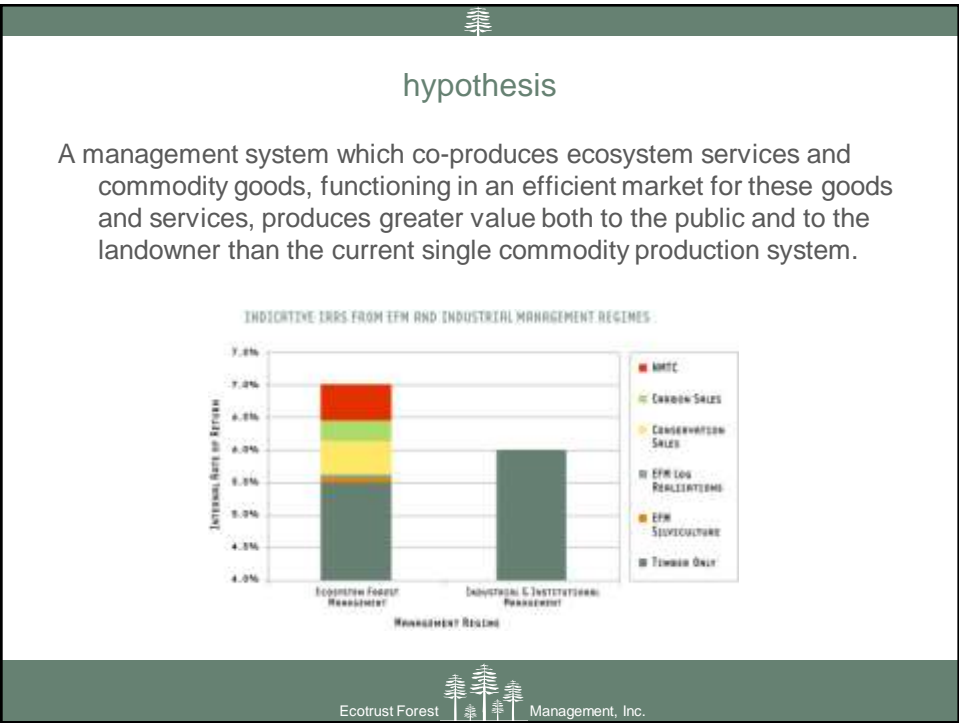
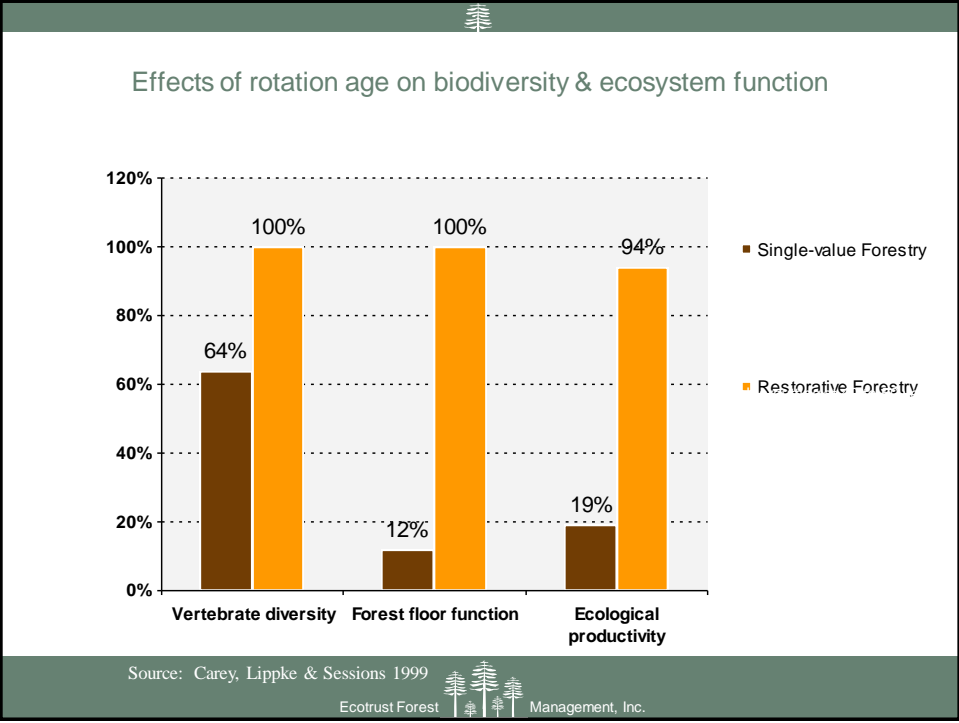
- Carbon sequestration/storage
- Habitat banking for forest-dependent species and habitats (Pacific salmon, spotted owl, oak woodland, floodplain forest)
- Wetland banking (forested wetlands)
- Flood control/water storage
- Water quality: temperature reduction
- Scenic vistas
- Passive and active recreational opportunities
- Moderate temperature and rainfall
- Wild mushroom and plant harvesting...

while providing for timber, pulp, fuel, and other commercial harvest opportunities, and jobs, management and ownership opportunities for millions



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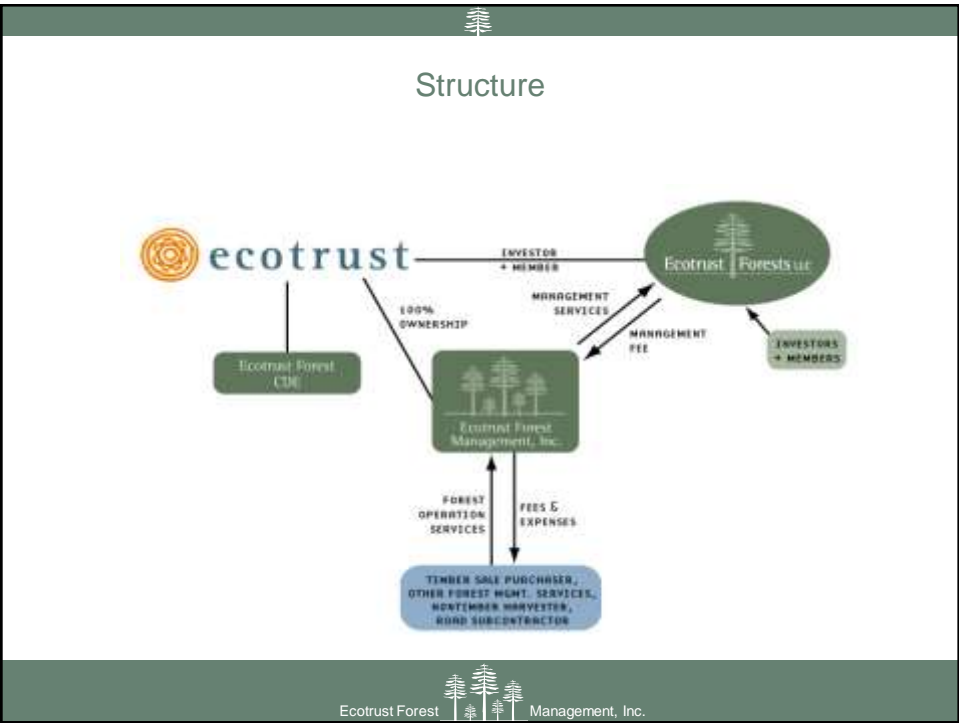


Putting our money where our mouth is: Ecotrust Forests LLC



- Raise capital into open, perpetual fund (currently 34 investors)
- Acquire and manage forestland
- Manage forests for longer rotations, structural complexity & diversity
- Generate competitive returns for investors through full range of forest products and services: timber, non-timber, ecosystem services, recreation
- Make strategic acquisitions in high-conservation value watersheds, and restore health and productivity
- Generate jobs and wealth for local residents

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Ecotrust/ Ecotrust Forests carbon transaction


Improved forest management project

Sources of additional carbon above baseline:

- extended rotations
- expanded riparian reserves
- carbon reserves on steep and unstable slopes above salmon streams
- protection of unique landscape features

In addition,

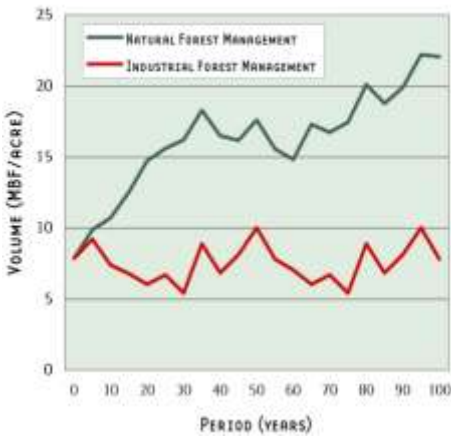
- manage for species diversity (especially under-represented species) and structural complexity (multi-canopy forest).
- improve salmon passage and access and reduce sedimentation





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Long rotation forestry results in 2.5x more standing volume

VOLUME PER ACRE



Period (Years)	Natural Forest Management (MBF/Acre)	Industrial Forest Management (MBF/Acre)
0	8	8
10	10	7
20	15	6
30	17	6
40	16	8
50	17	10
60	15	7
70	17	6
80	20	7
90	22	8
100	22	8


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Forest carbon project: Ecotrust objectives

- Develop and/or demonstrate high quality improved forest management project:
- High quality standards for additionality and permanence
- Project design results in significant co-benefits: enhancement of habitat, water quality, and other ecosystem services
- Effective for both large and small forest landowners



Forest carbon project: Ecotrust Forests objectives

- Same as Ecotrust (high quality, efficient, effective) but also:
- Pricing model allows participation in upside
- Considers opportunity costs of foregone timber revenues and biomass options
- Does not impact Net Asset Value adversely/disproportionally
- Efficient: Builds on/incorporates existing inventory, management, and certification systems
- Does not create adverse tax consequences for tax exempt and non-exempt investors
- Future liability and monitoring costs proportionate to value received

The triple top line: a case study of the Natural Capital Center



Timeline of a carbon deal: life on the bleeding edge

September 2007	CCAR 2.1	Sign term sheet specifying CCAR* adapted to OR/WA, negotiate contract Begin adapted CCAR project development
November 2007	VCS Guidance for AFOLU	Select VCS Develop VCS IFM methodology Submit for validation August 2008 Term sheet for additional tons
December 2008	CAR draft 3.0 released	Wait for validator to be accredited CAR trading at \$2 premium to VCS CAR improved, beyond CA Reconcile VCS methodology with CAR 3.0 Resubmit
March 2009	American Carbon Registry releases Forest Carbon Project Standard	Wait for double validation guidance
June 2009 & beyond	CAR 3.0 approval? Further modifications? Waxman-Markey? WCI? Copenhagen? Biomass/wood pellet market development?	

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Closing thoughts: from bleeding edge to leading edge

Reduce uncertainty: Provide early guidance on acceptable protocols and early action.

Significantly reduce transaction costs: project development, quantification, verification, contract negotiation, registration, ongoing monitoring – need greater standardization & public investment/funding of project development & monitoring

Ensure fair (or better yet favorable) tax treatment for carbon revenues

Provide guidance on treatment of permanence obligations by appraisers and lenders

Reduce opportunity costs and uncertainty by allowing purchase out of obligation at FMV without penalty as long as atmosphere remains whole

Consider and clarify stacking/bundling of other ecosystem service markets (conservation easements, Section 6, habitat banking, water quality trading credits, etc.) on lands encumbered with carbon obligations (assuming additional ecological uplift)