



# Forest Carbon Aggregation

Looking back, looking forward

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# Outline

1. Introduction to New Forests
2. Aggregation: why bother?
3. New Forests' experience to date
4. Two core models for carbon aggregation
5. Suggestions for the path forward



# About New Forests



**Global real asset manager.** New Forests manages over USD \$1 billion in capital for investments in sustainable timber and associated environmental markets, such as carbon, biodiversity and water. Headquartered in Sydney, with offices in San Francisco and Singapore.



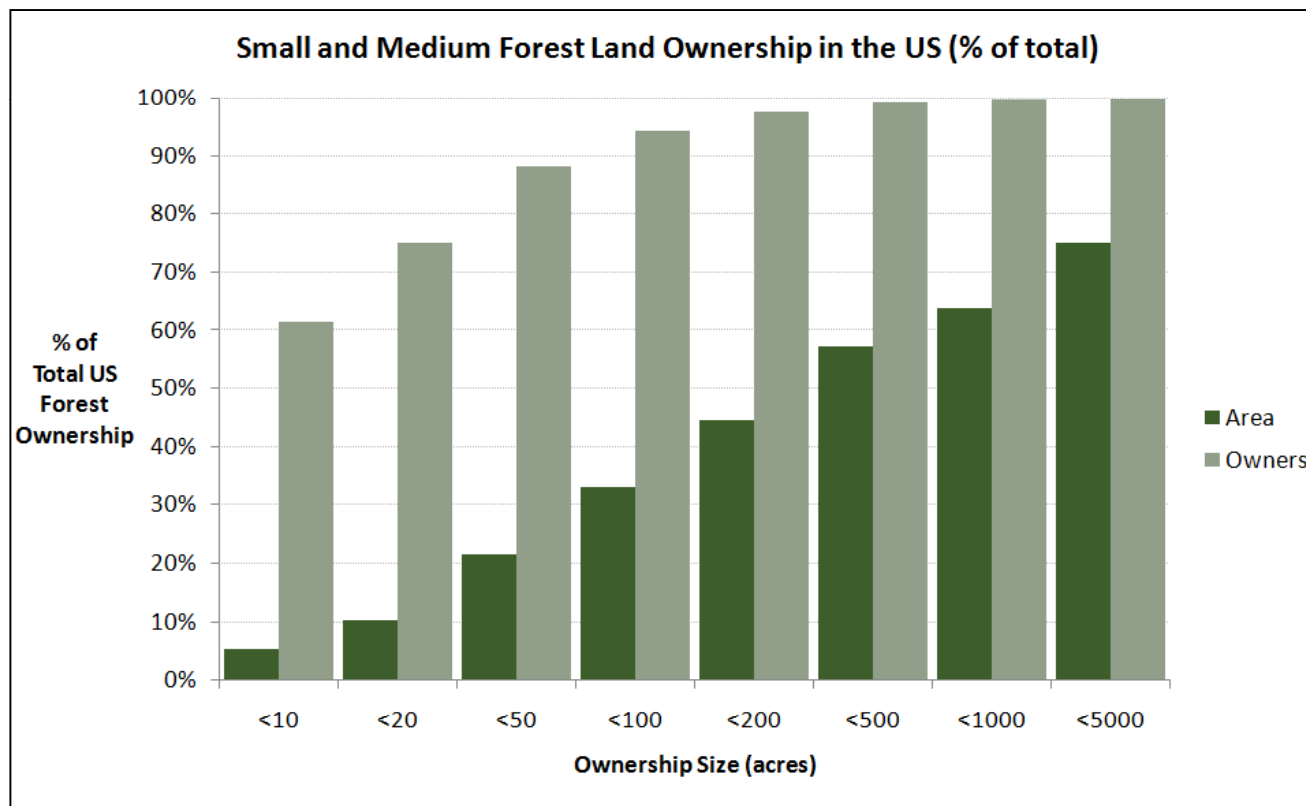
**Forest carbon offset expertise.** New Forests has participated as a stakeholder and investor in the development and implementation of forest carbon offset markets and cap and trade systems in multiple countries for over six years.



**Projects developed for the California market.** We have invested in forest carbon offset projects for the California market through two fund vehicles and are developing projects on over 71,000 acres.

# Aggregation: why bother?

- Western Climate Initiative policy.
- 75% of U.S. private forestland is in small holdings of <5,000 acres.
- It's where the carbon is.



# New Forests & Forest Carbon Aggregation

- CAR aggregation stakeholder committee (2010)
- Forest Carbon Partners, L.P.
  - Launched in 2011
  - Finances and develops projects with family forest owners and Native American tribes
  - 11,500 acres of projects under development at present, expect 17,000 this quarter
  - Will aggregate projects if aggregation rules adopted by ARB

# Aggregation Value Proposition

- *For landowners*
  - Project finance, project management, credit sales management, market access (high volume sales), potentially reduced costs via CAR aggregation rules
- *For compliance buyers*
  - Portfolio diversification – reduced delivery risk
  - Scalable supply relationship
  - One counterparty, one point of sale
  - Charismatic carbon

# Aggregation Challenges

- Key challenges in aggregating forest projects:
  - Skepticism of landowners in early stage of system
  - Origination costs
  - Credit yield estimation in low-data environment
  - Low percentage of projects pencil out at current costs and expected near-term carbon prices
    - Inventory and verification costs are key
  - Managing credit invalidation risk

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# Models of Aggregation

## 1. *Project-centric: aggregator as service provider*

- Example: CAR forest carbon aggregation rules
- Baseline, additionality, MRV, permanence assessed and enforced at project level
- Aggregation reduces MRV costs – quantification and verification

## 2. *Aggregate-centric: aggregator as project owner*

- Permanence, MRV, and potentially baseline and additionality assessed at aggregate level

# Two Approaches to the Key Aggregation Issues

	#1: Project-centric	#2: Aggregate-centric
<b>Temporal dispersion</b>	Feasible	Feasible
<b>Geographical dispersion</b>	Feasible	Feasible
<b>Additionality</b>	Measured at project level	Measured at project or aggregate level
<b>Risk allocation</b>	Project-focused	Aggregator-focused
<b>Quantification</b>	Project-focused with cost savings from aggregation	Either project or aggregate-focused
<b>MRV</b>	Project-focused, with cost savings from aggregation	Aggregate-focused
<b>Permanence</b>	Project (default liability)	Aggregator (default liability)
<b>Invalidation liability</b>	Project (default liability)	Aggregator (default liability)

# Forest Carbon Aggregation in Compliance Markets

- Permanence and invalidation liability are key.
  - Integrity of the cap requires strong assurance that MRV is accurate and permanence is maintained.
- Market participants prefer aggregation model #2:
  - Permanence and invalidation liability most efficiently managed by aggregator.
  - Landowners can more easily enter and exit.
  - Aggregator can more easily manage invalidation liability with large portfolio of offset instruments.

# Forest Carbon Aggregation in Compliance Markets

- Regulator concerns about aggregation model #2 in sequestration project context:
  - Compliance market regulators have historically expressed some concern about default assignment of permanence and credit invalidation liability to a project developer or corporate aggregation entity.

How do we carefully structure true project aggregation in compliance markets to adequately ensure permanence and credit quality?

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# A path forward with two tracks

Both models of aggregation should be available in compliance markets.

- *Track #1.* Compliance market adoption of aggregation model #1.
  - e.g. CAR forest carbon aggregation rules
- *Track #2.* Laying the foundation to support compliance market adoption of aggregation model #2.

# A path forward with two tracks

- One approach to enabling aggregation model #2 in the compliance market sequestration project context:
  - Legislative adoption of a terrestrial carbon property right at the state level (technically: a new type of negative easement in gross)
  - Require aggregators to hold such a carbon property right on all projects
  - In the event of aggregator bankruptcy or dissolution, require such carbon property rights to escheat to the state.
- Aggregator thereby becomes project owner after acquiring rights from landowner.
- Strong assurance of recovery in the event of intentional reversal of obligated carbon or credit invalidation.

# Summary

- New Forests is actively engaged in financing and aggregating forest carbon projects for the California compliance market.
- Aggregation is critical to organizing adequate offset supply and in the forest carbon context leads to strong environmental and social co-benefits.
- Aggregation delivers significant economic value to landowners and to compliance offset purchasers.
- There are two core models of carbon project aggregation: project-centric and aggregator-centric.
- Many market participants prefer an aggregator-centric model.
- Recommendation: compliance markets enable both aggregation models for sequestration carbon projects. An aggregator-centric model may be facilitated by the legislative adoption of a forest carbon property right.



