The California carbon market and the California Landowner

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Outline

- Overview: what is the carbon market and what is the role of forestry?
- How is the market structured? Ensuring additionality, permanence, and verifiability, and preventing leakage
- Who participates in the forest carbon market?
- Research questions

Building a market “from whole cloth”

- AB 32 = 2006
  - Reduce GHG emissions to 1990 levels by 2020
  - Reduce GHG emissions 80% further by 2050
  - cap and trade market
- Selling carbon is “another type of pork belly”

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Or: “we’re just selling bags of air”

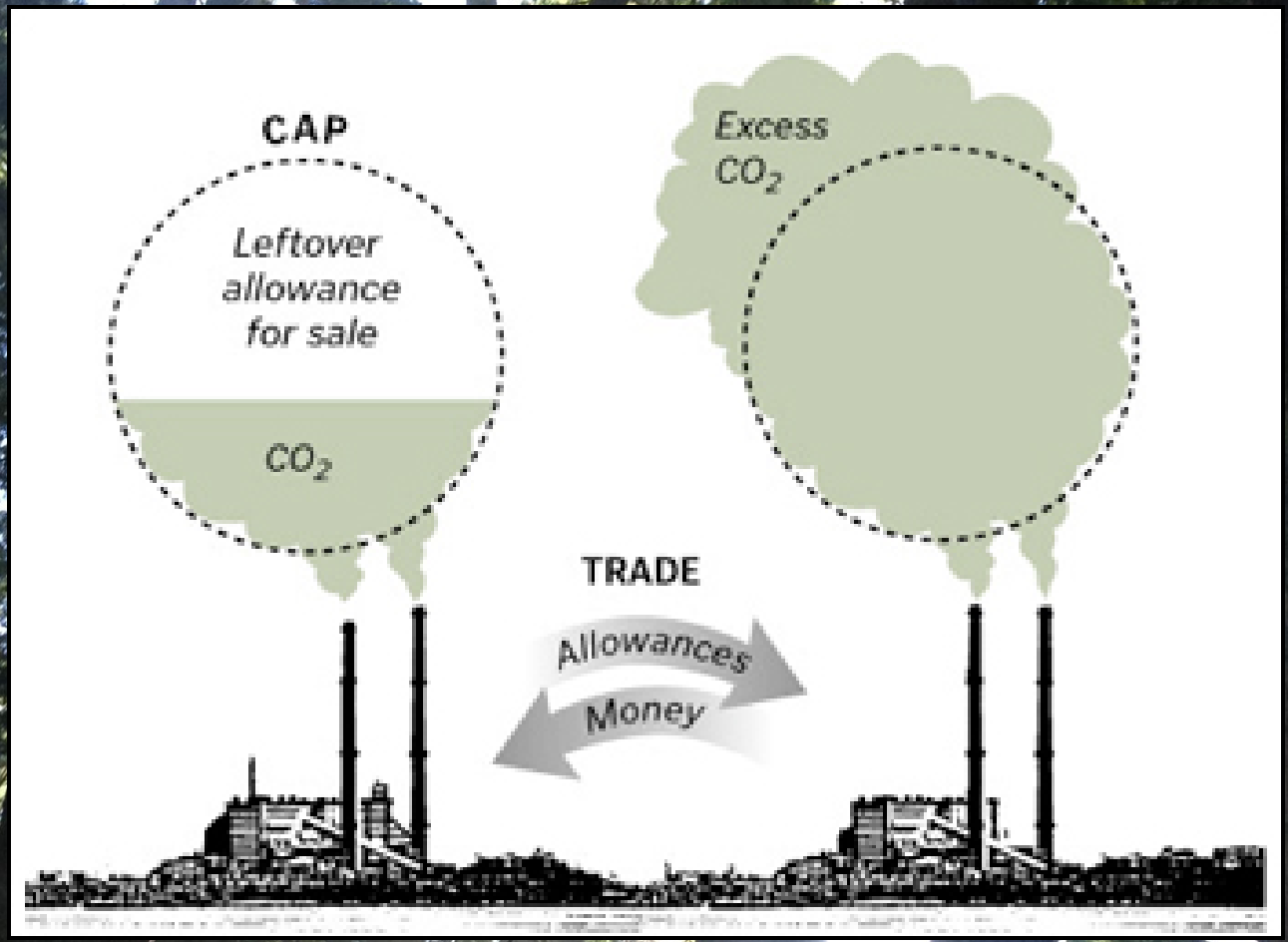

Image from: http://www.climatepedia.org

Building a market "from whole cloth"

Forestry offset protocols:

- Voluntary markets came first
  - Developed and tested *how* to monetize carbon
- CCAR → CAR protocols
  - Avoided conversion
  - Reforestation
  - Improved forest management

How are forest protocols structured, or: Will forest protocols actually result in more carbon sequestration?

Ensure:

- Additionality
- Permanence
- Verifiability

Prevent:

- Leakage

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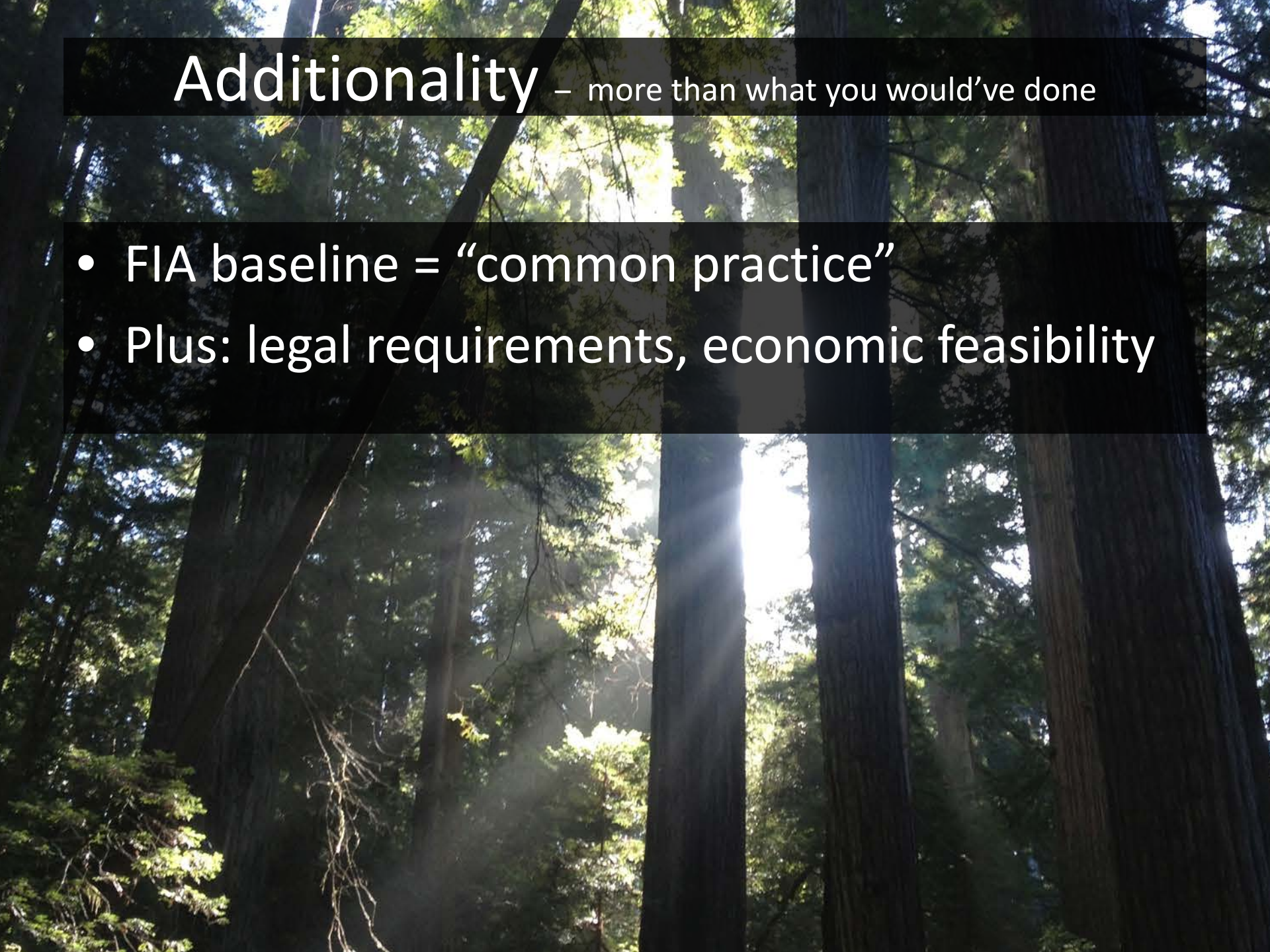
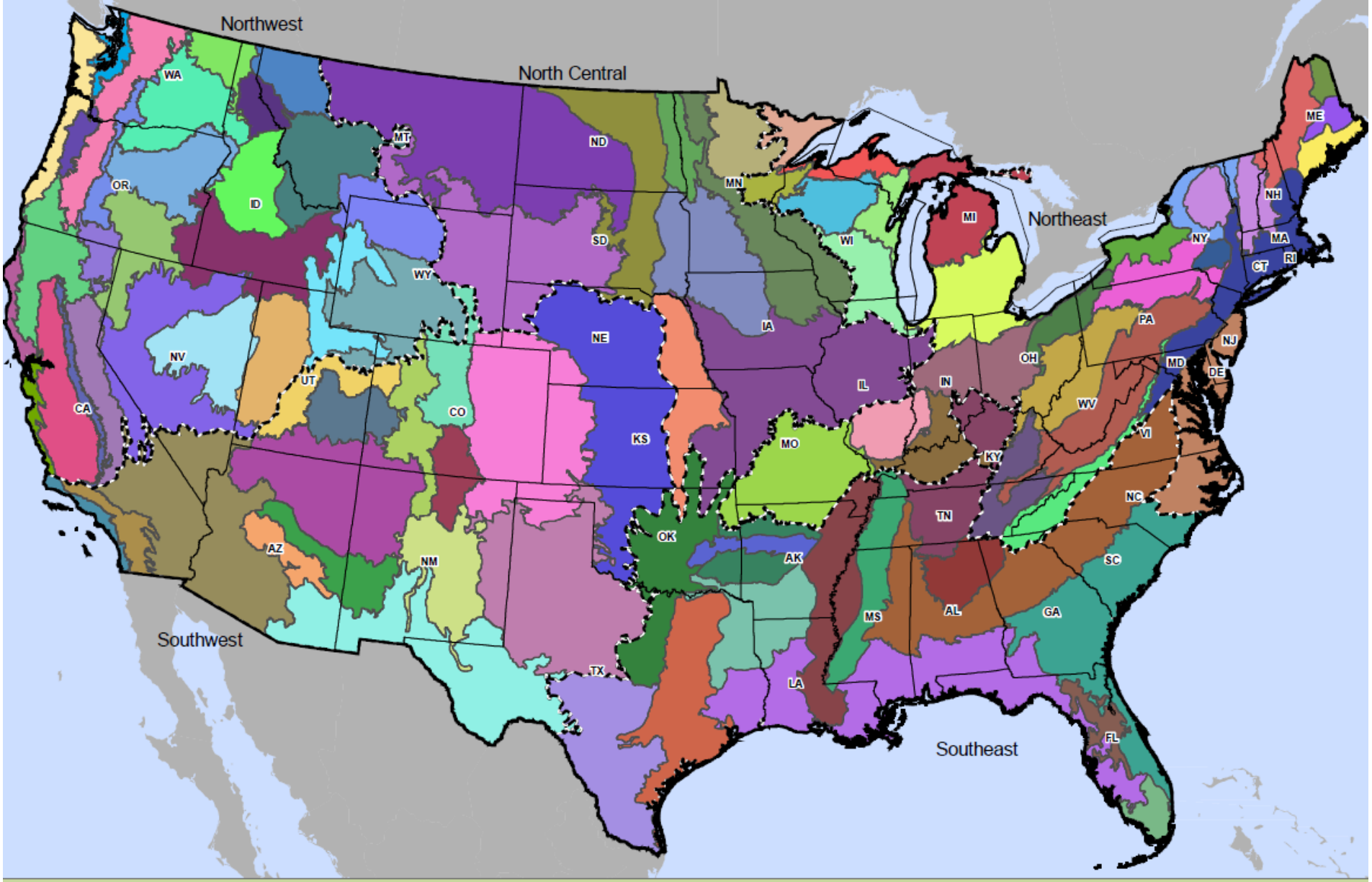
What do these mean for landowners?

Additionality – more than what you would've done

- FIA baseline = "common practice"
- Plus: legal requirements, economic feasibility





Legend

- Supersection Boundary
- U.S. State Boundary
- Key to Larger Scale Maps

N
W E
S

0 50 100 200 Miles

Climate Action Reserve
FIA Supersections

Created for Climate Action Reserve Forest Project Protocol

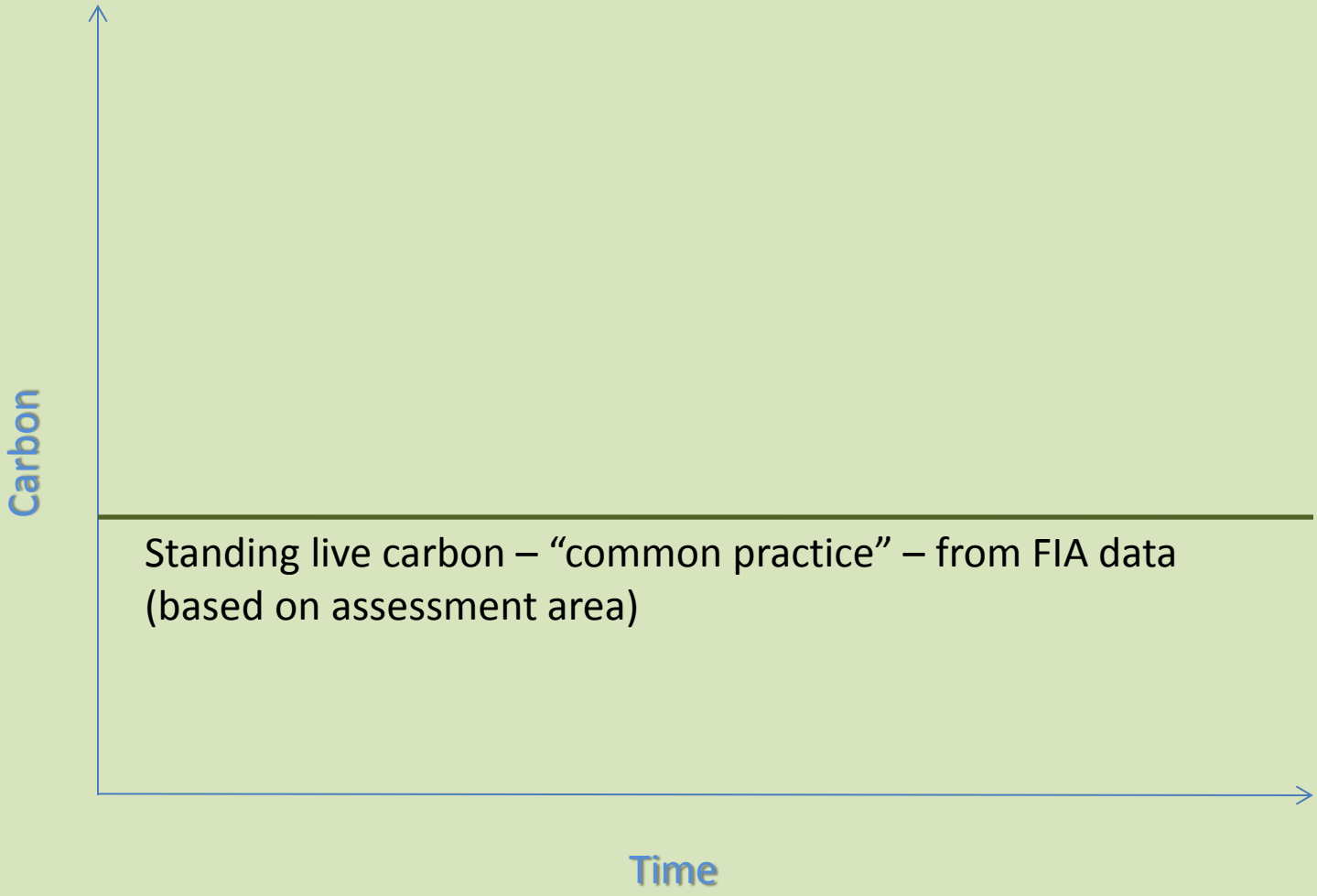
CLIMATE ACTION RESERVE

Adapted from:
Ecological Subregions: Sections and Subsections of the Conterminous United States.
U.S. Department of Agriculture, Forest Service. 2007.

Produced by: Dogwood Springs Forestry. February 2010.

Projection: Albers

Additionality – more than what you would've done



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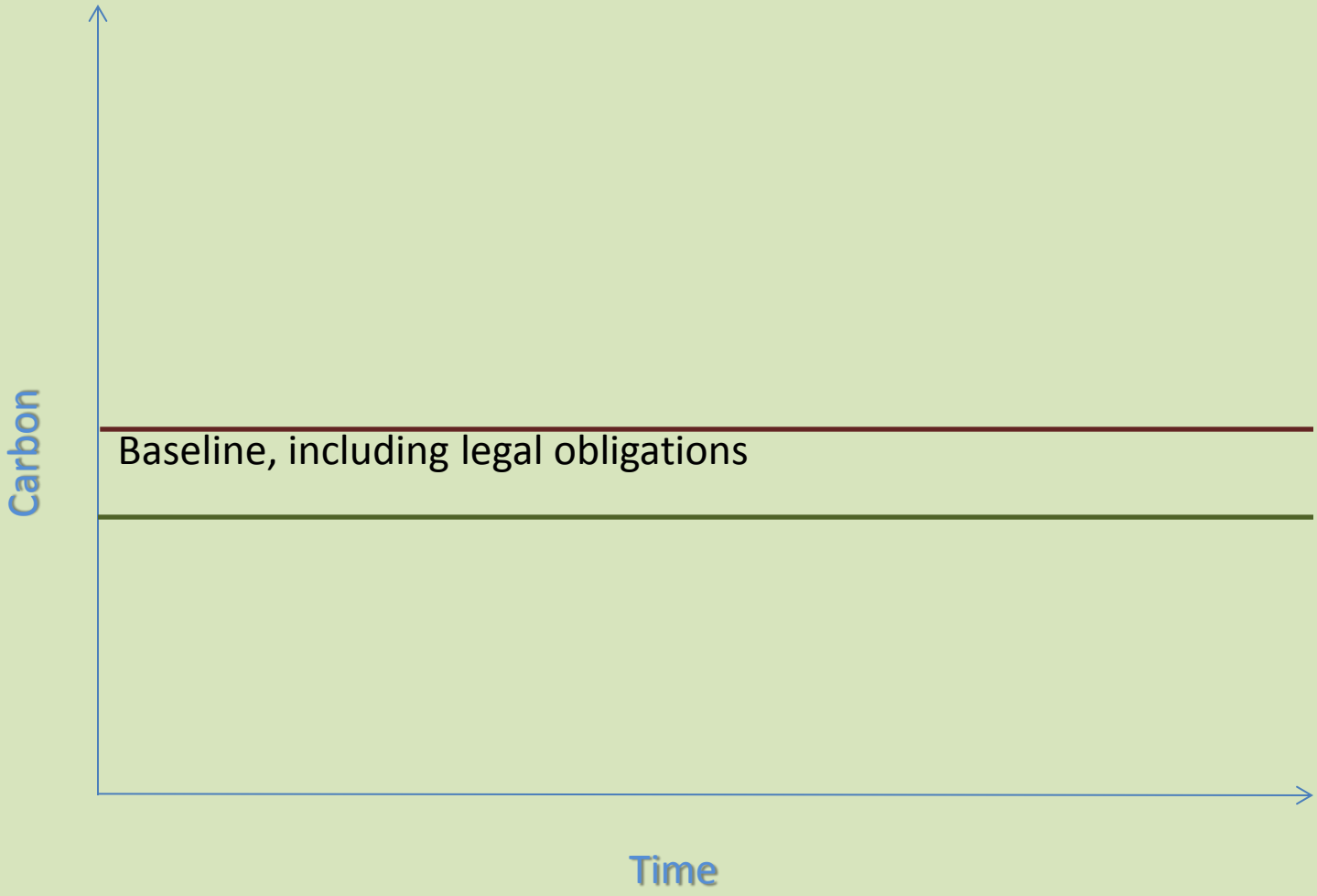

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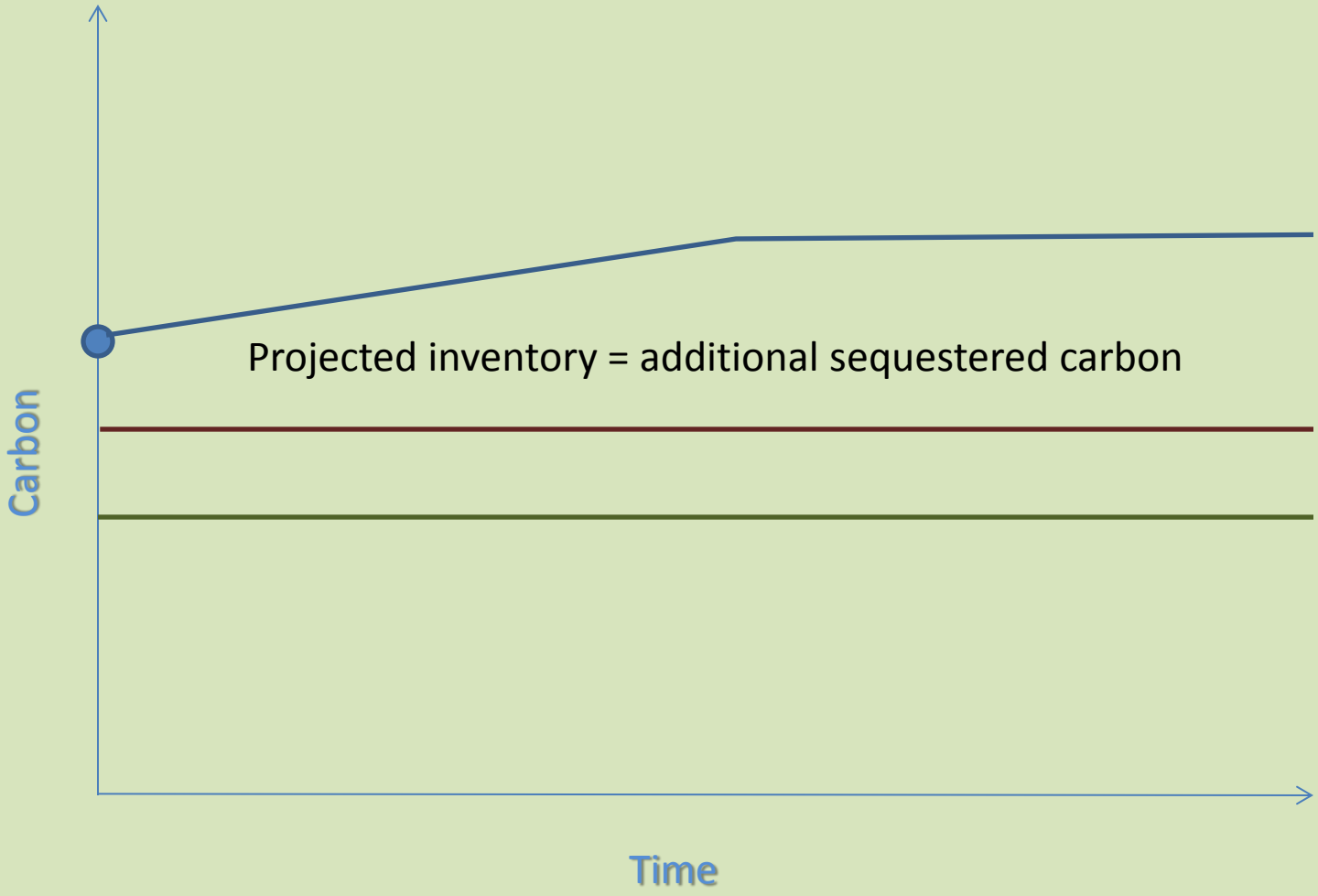


Permanence – keep carbon sequestered long term

- 100 year commitment
- Buffer against loss

Permanence – keep carbon sequestered long term

Re-inventory and verification

Initial sale
Inventory
Verification
Registration

100 years from last carbon sale

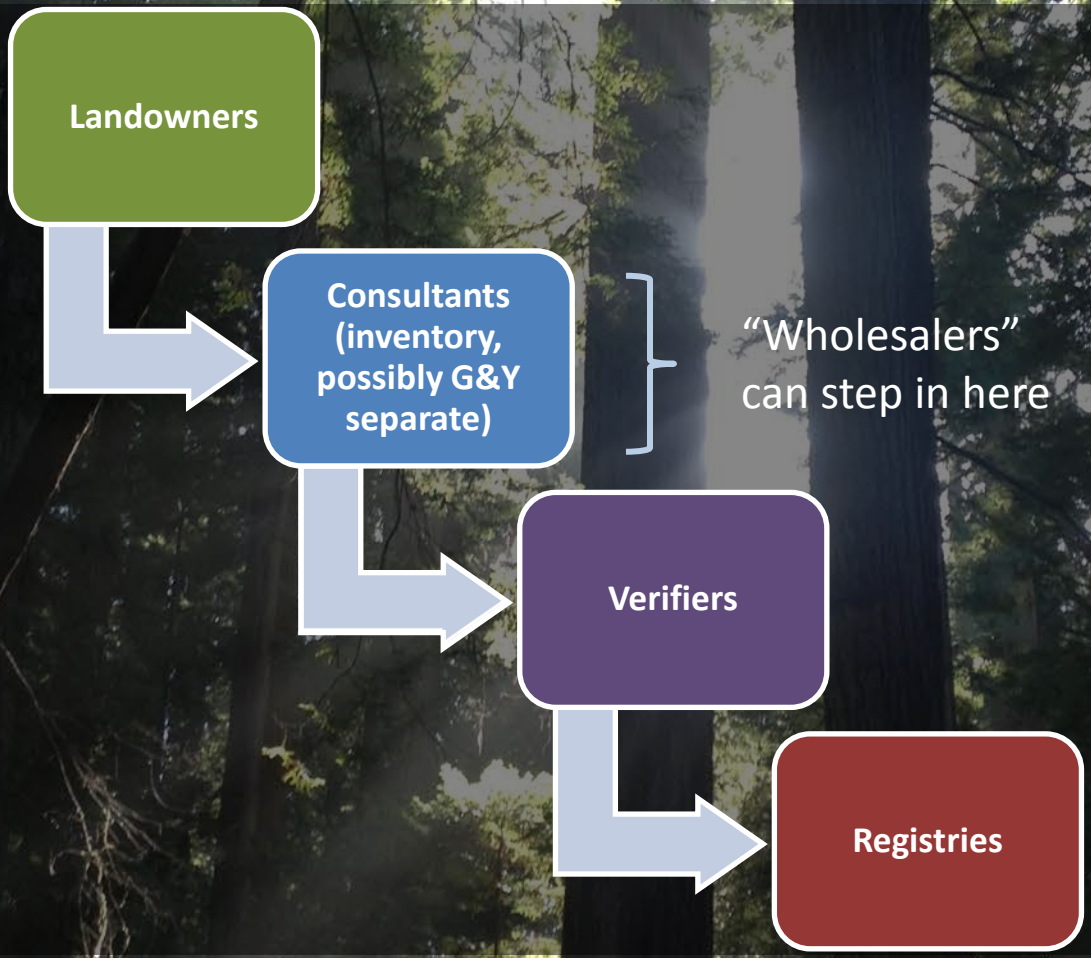
Verifiability – make sure what you say is there, is there

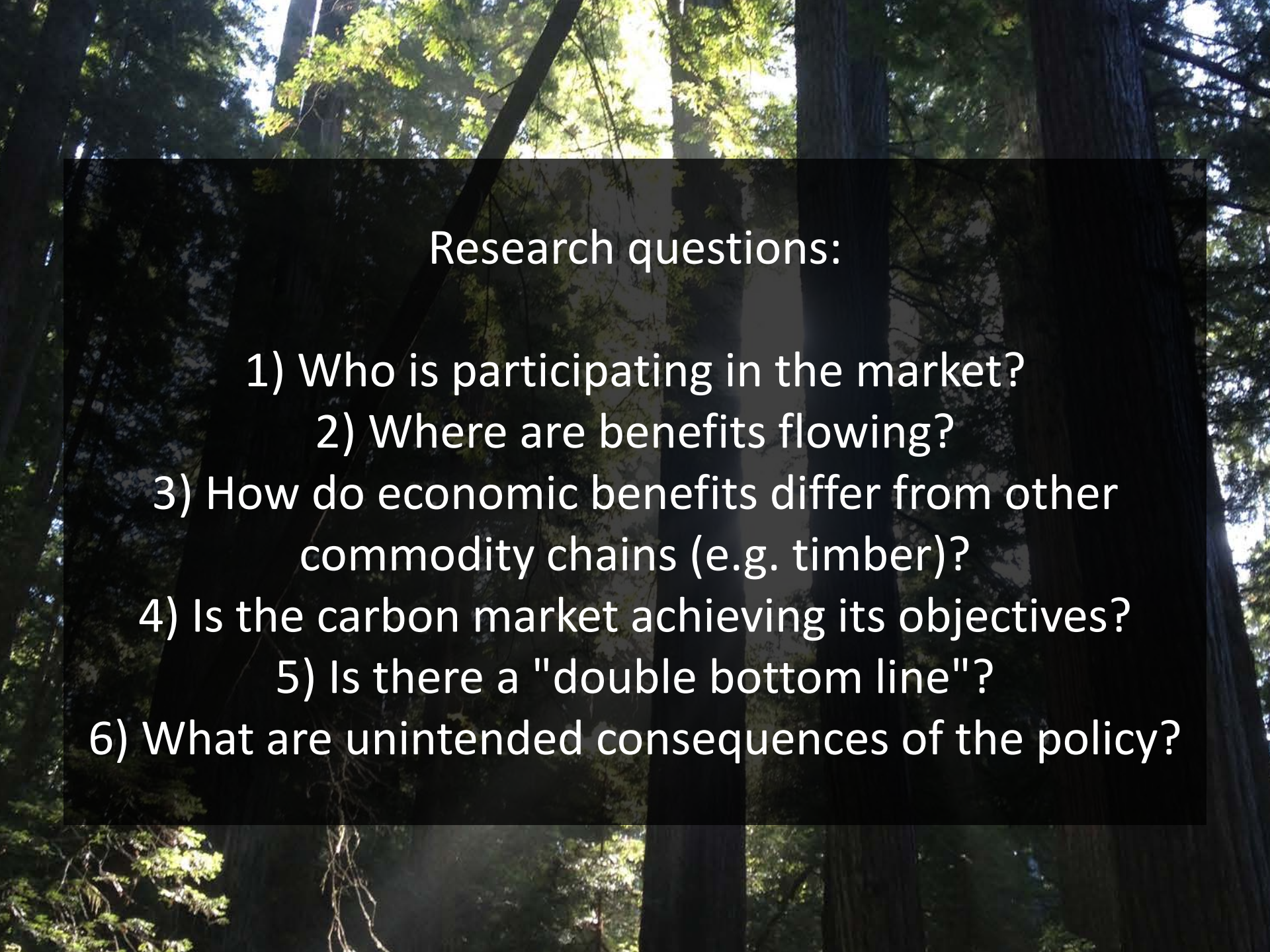
- 3rd-party verification
- Every 6 years/12 years re-inventoried
- After harvests
- Very precise inventories

Leakage – prevent simply displacing harvest elsewhere

- 20% default "leakage" factor = applied to difference in harvest volume relative to baseline
- Whole-ownership requirements, *either*:
  - Certification (FSC, SFI, Tree farm)
  - Renewable long-term management plan
  - Uneven-aged silviculture, maintenance of 40% canopy cover over all the forest land

Who is participating?





Research questions:

1) Who is participating in the market?
2) Where are benefits flowing?
3) How do economic benefits differ from other commodity chains (e.g. timber)?
4) Is the carbon market achieving its objectives?
5) Is there a "double bottom line"?
6) What are unintended consequences of the policy?

California's cap and trade market

How will broader cap and trade policies impact forestry?