The Role of Agriculture, Forestry, and Land Use in Making Georgia a Carbon Neutral State by 2030

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Working Groups #4 (Food Systems) & #5 (Forestry and Land Use)

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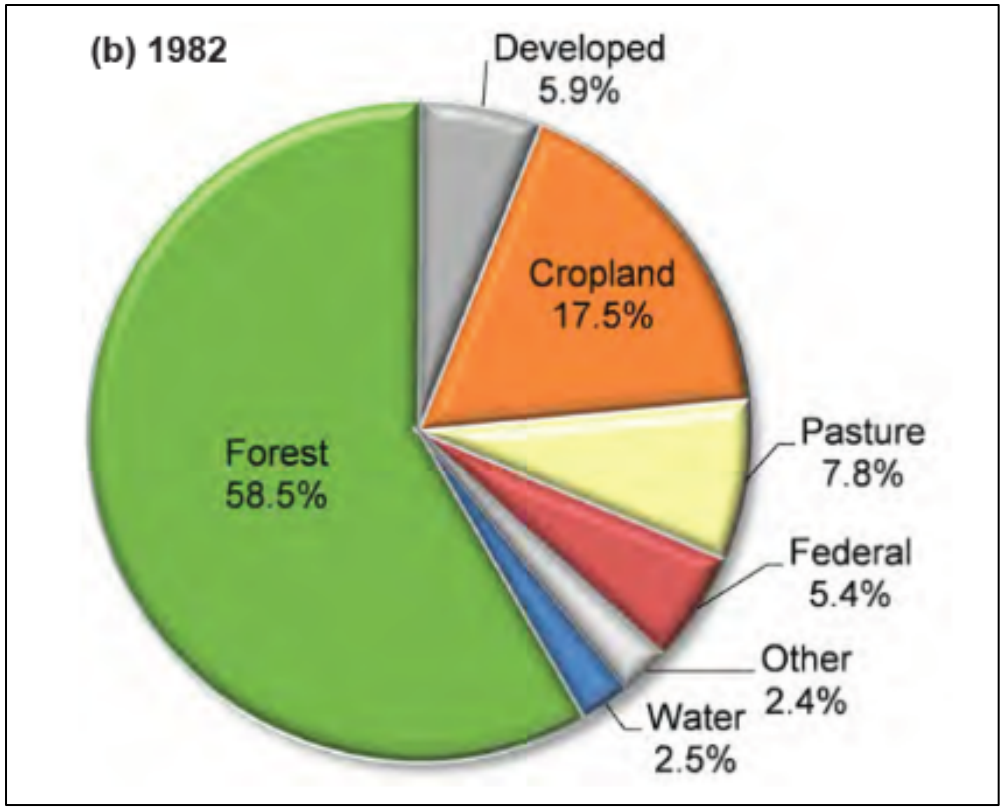
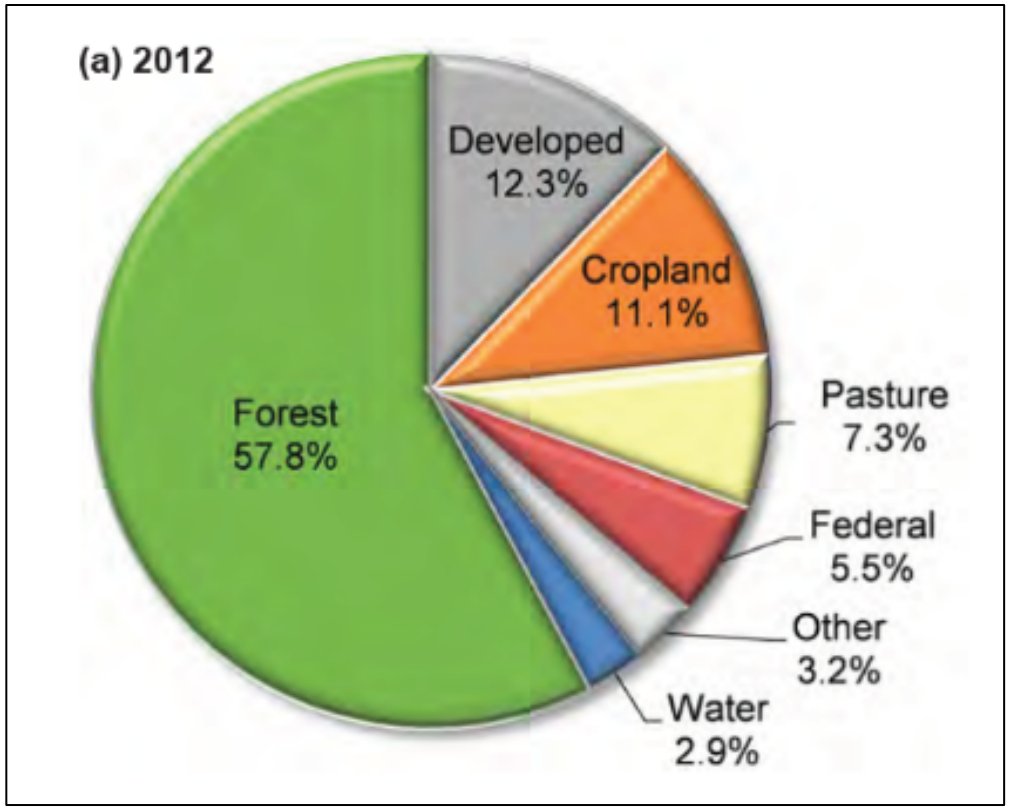
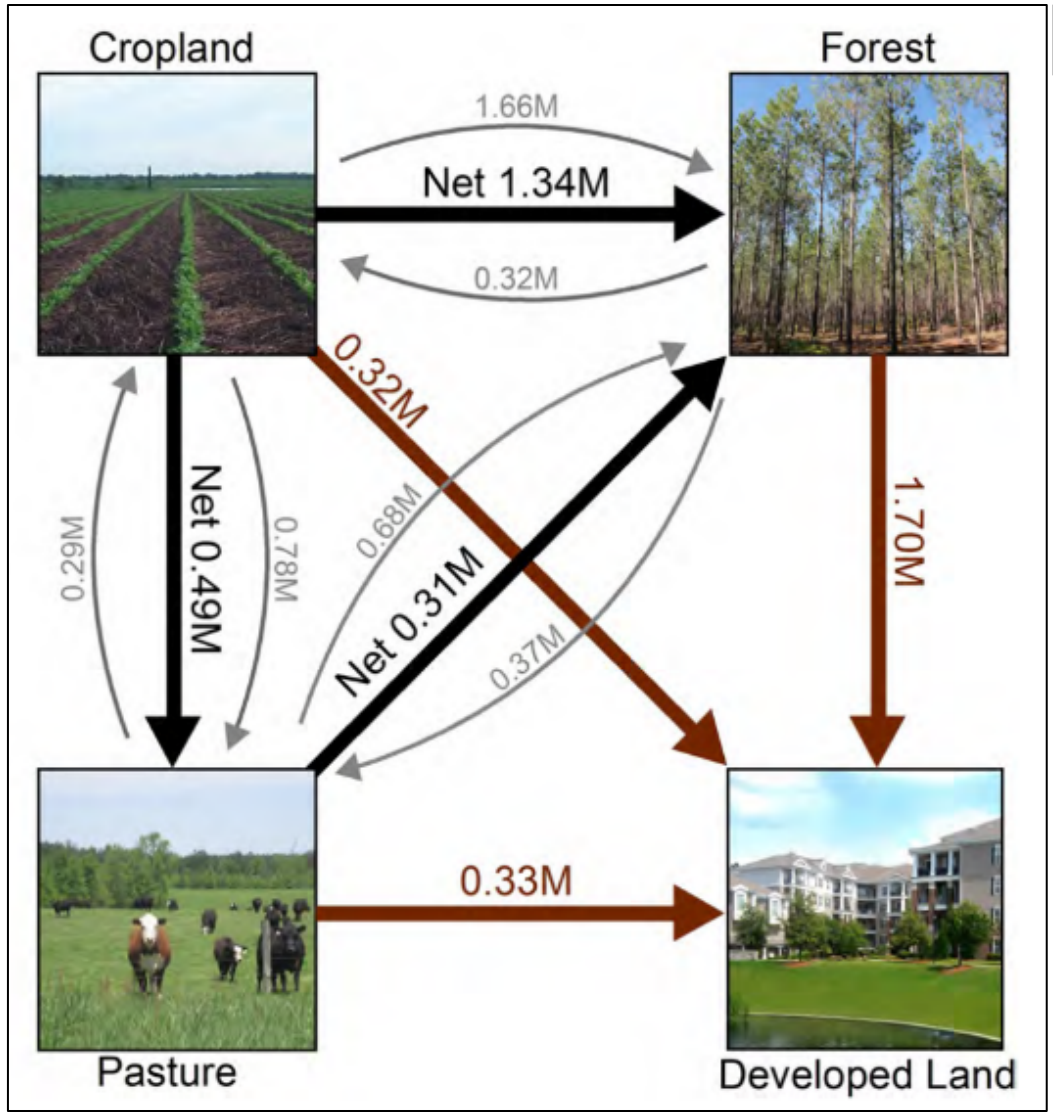
Land Use in Georgia





Source: NRCS

Land Use in Georgia

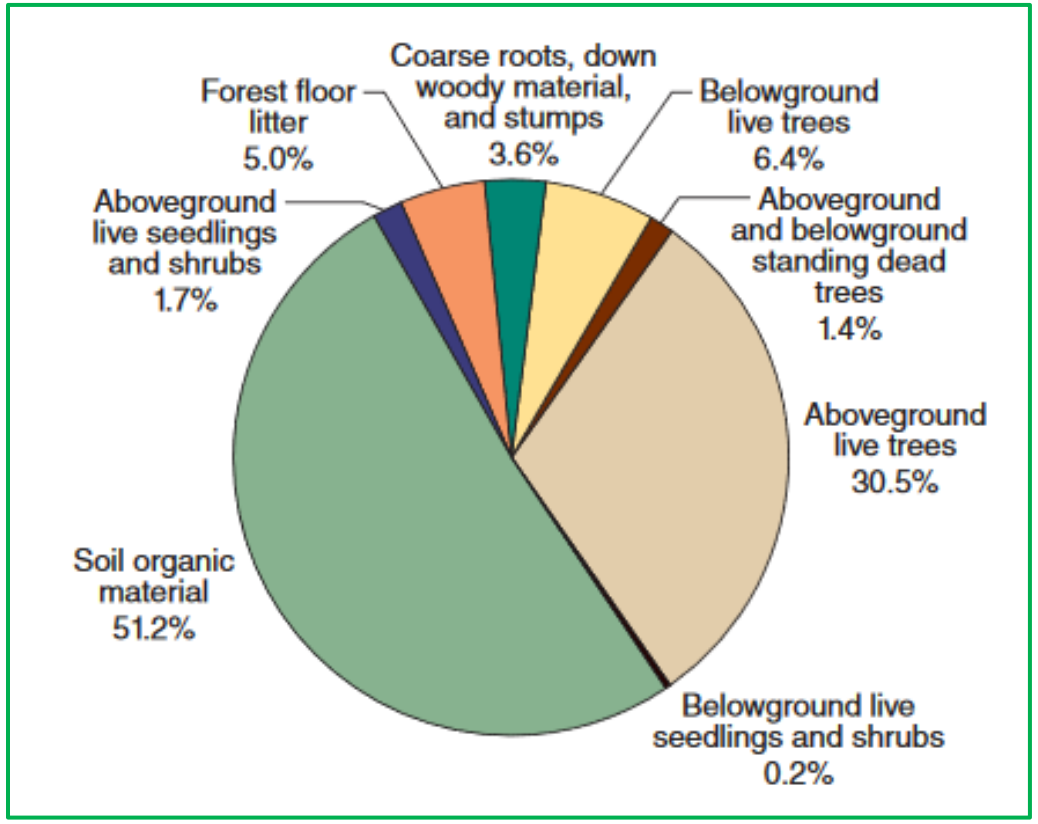


1982 - 2012

Source: NRCS

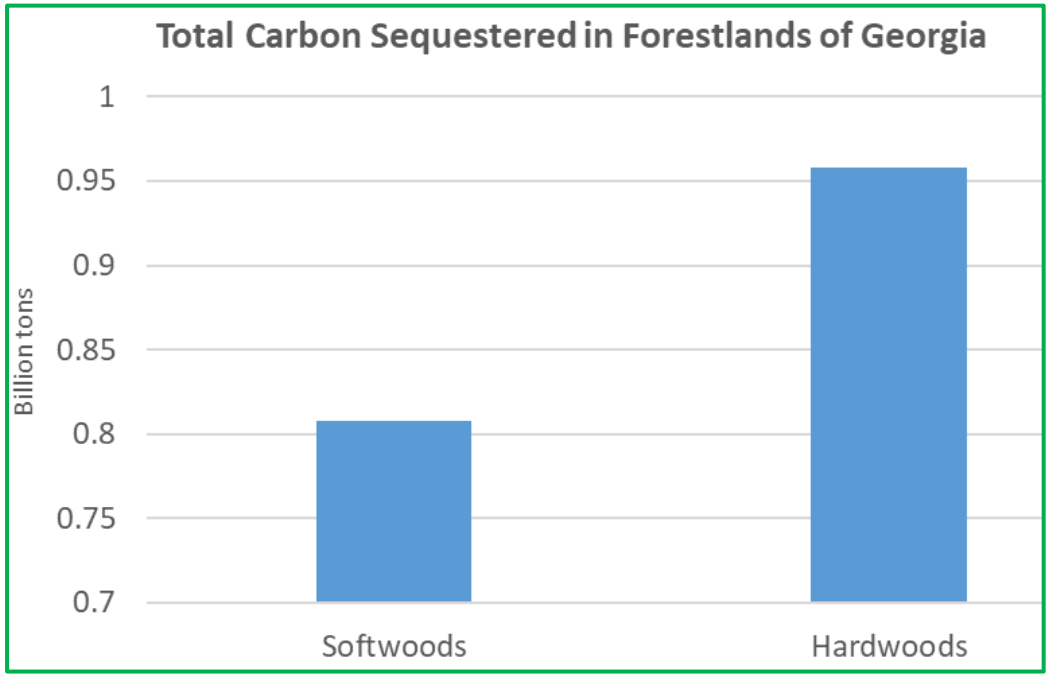
Carbon Stored in Georgia's Forestlands

Percentage of forest carbon in the aboveground and belowground portions of live and dead trees [diameter at breast height (dbh) ≥1 inch], seedlings and shrubs (dbh <1 inch), coarse woody material, forest floor litter, and soil organic material, Georgia 2014.



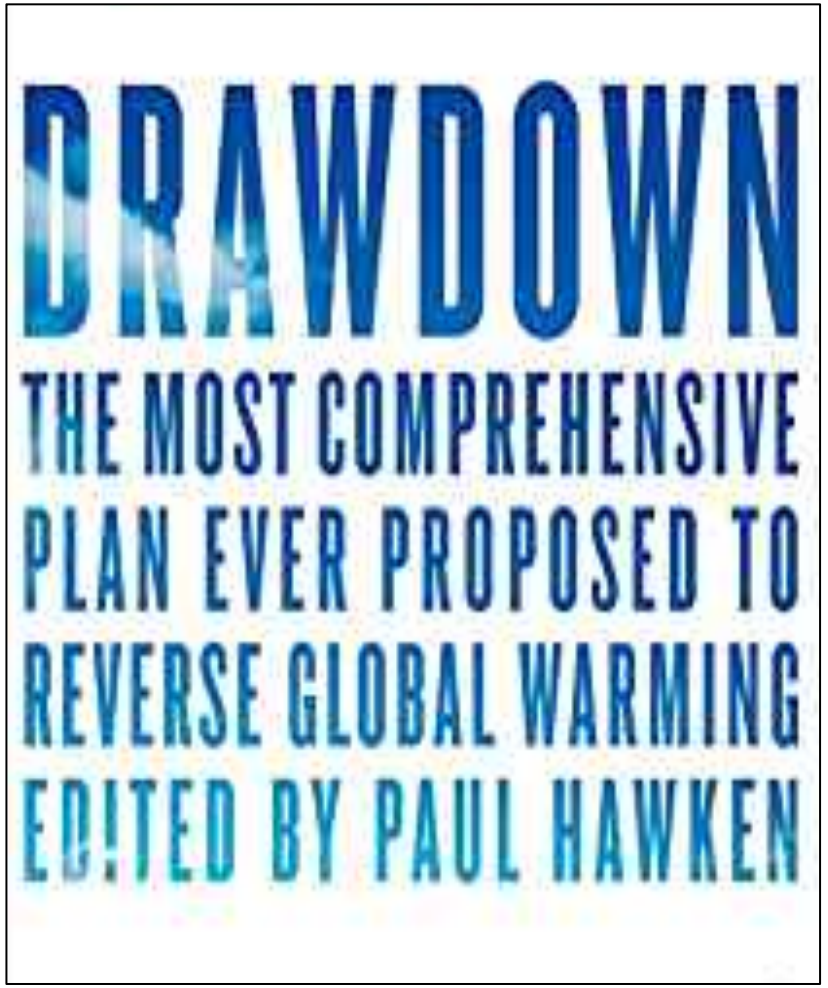
Source: FIA

Total Carbon: 1.8 billion tons



Drawdown Solutions (Forestry and Land Use)

1. Temperate Forests
2. Forest Protection
3. Afforestation
4. Recycled Paper
5. Building with Wood
6. Perennial Biomass
7. Intensive Silvipasture
8. Coastal Wetlands
9. Peatlands
10. Bamboo
11. Indigenous People
12. Tropical Forests



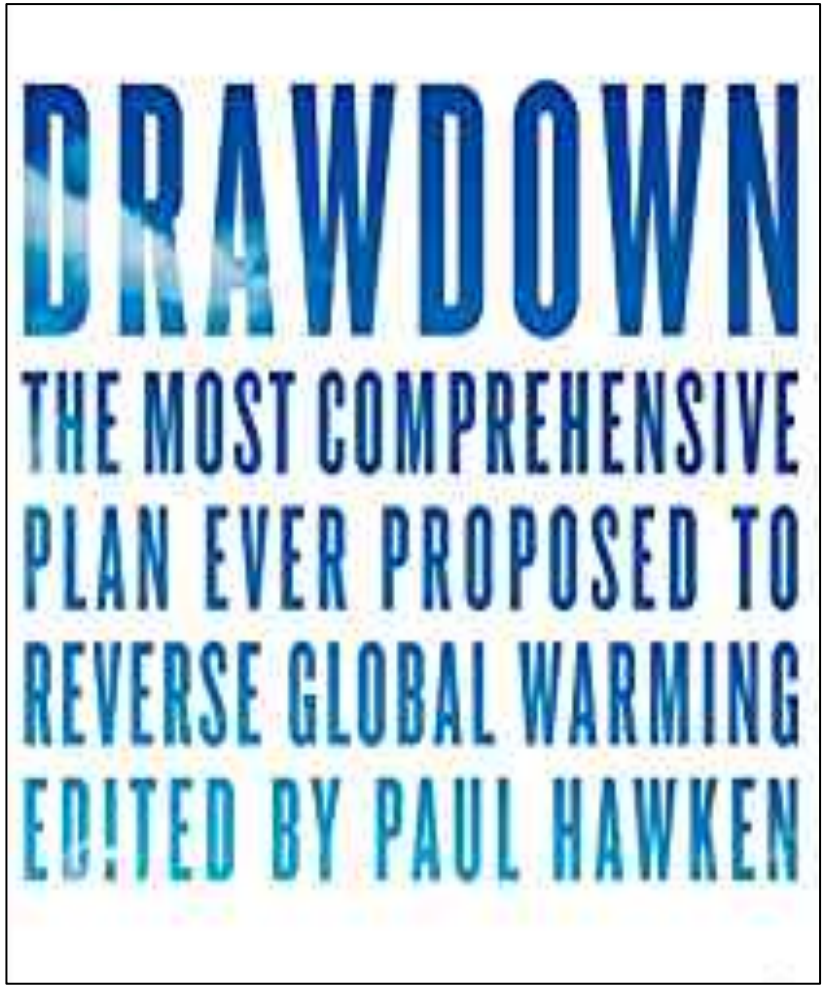
Drawdown Solutions (Forestry and Land Use - Experts)

1. Temperate Forests
2. Forest Protection
3. Afforestation
4. Coastal Wetlands

Response Rate: 40% (12/30)

Drawdown Solutions (Food Systems)

1. Reduced Food Waste
2. Plant-Rich diet
3. Silvopasture
4. Regenerative Agriculture
5. Tropical Staple Trees
6. Conservation Agriculture
7. Tree Intercropping
8. Managed Grazing
9. Clean Cookstoves
10. Farmland Restoration
11. Improved Rice Cultivation
12. Multistrata Agroforestry
13. Composting
14. Nutrient Management
15. Farmland Irrigation
16. Biochar



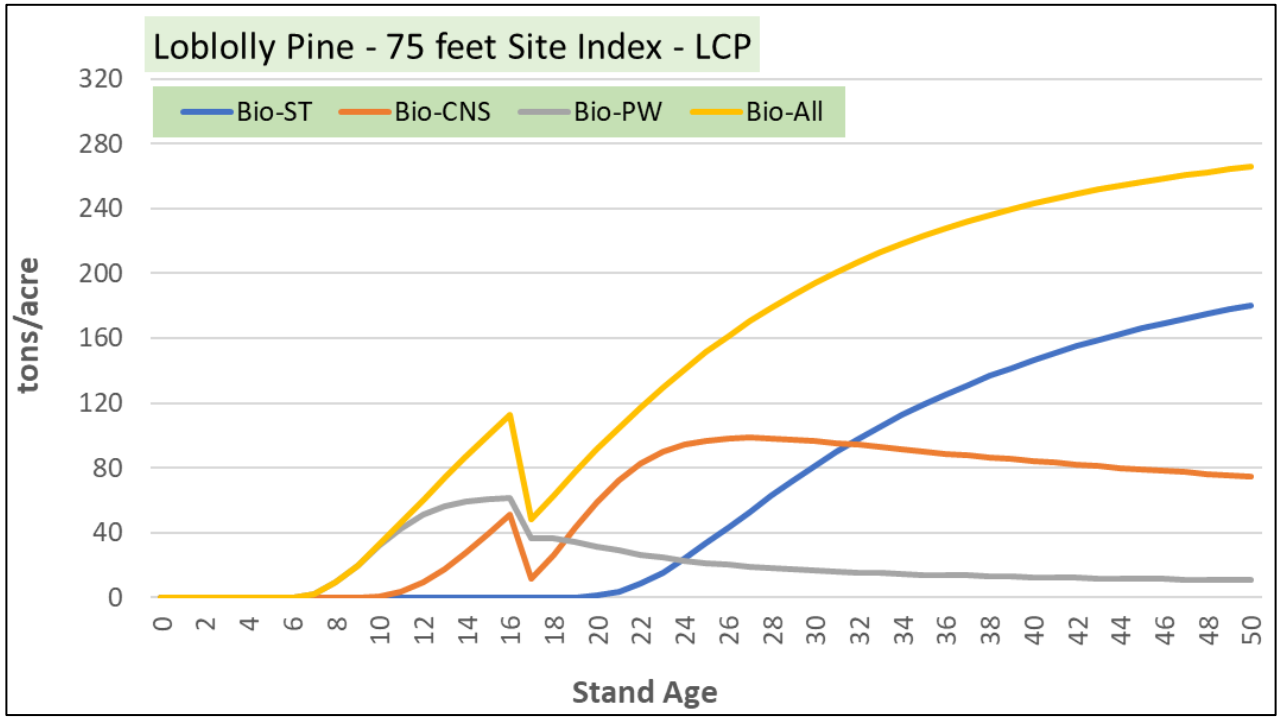
Drawdown Solutions (Food Systems - Experts)

1. Conservation Agriculture
2. Reduced Food Waste
3. Nutrient Management
4. Composting

Response Rate: 53% (16/30)

RESULTS

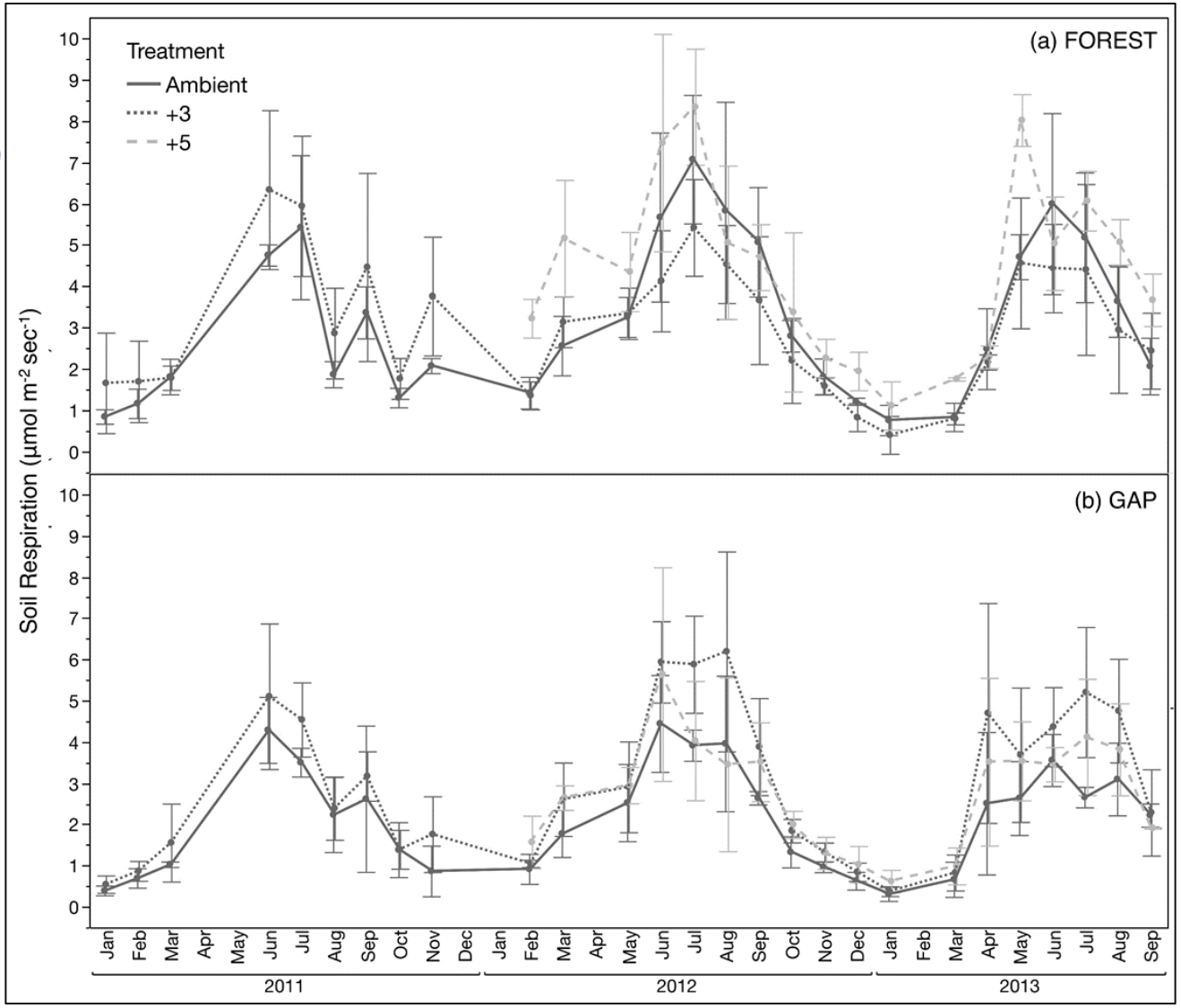
Drawdown Solutions (Cost of Stored Carbon)



Species	Site Index	NPV	Rotation Age	LEV	Rotation Age	Carbon Cost
Species	(feet)	($/acre)	(years)	($/acre)	(years)	($/ton CO_2)
Slash Pine	72	145.9	25	190.3	25	3.08
Loblolly Pine	75	409.3	28	509.3	27	2.43
Loblolly Pine	80	576.1	27	730.6	26	2.23

Drawdown Solutions (Afforestation)

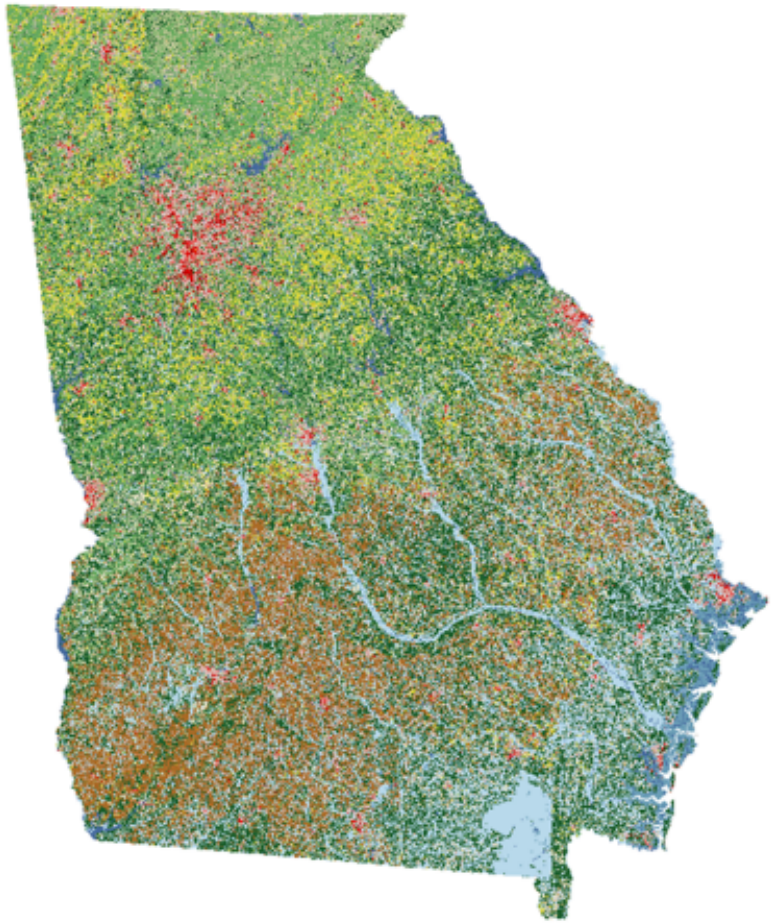
Soil Warming Experiment – On Unglaciated, Red Clay Soils



Machmuller et al. (2018)

Drawdown Solutions (Land Use)

Georgia Land Use, 2001



Georgia Land Use, 2016

Drawdown Solutions (Food Systems)

Georgia Solutions: **Top 2-4 solutions** from food systems will be assessed for estimating GHG emissions and potential abatement cost, if applicable.

the RAY C. ANDERSON foundation

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