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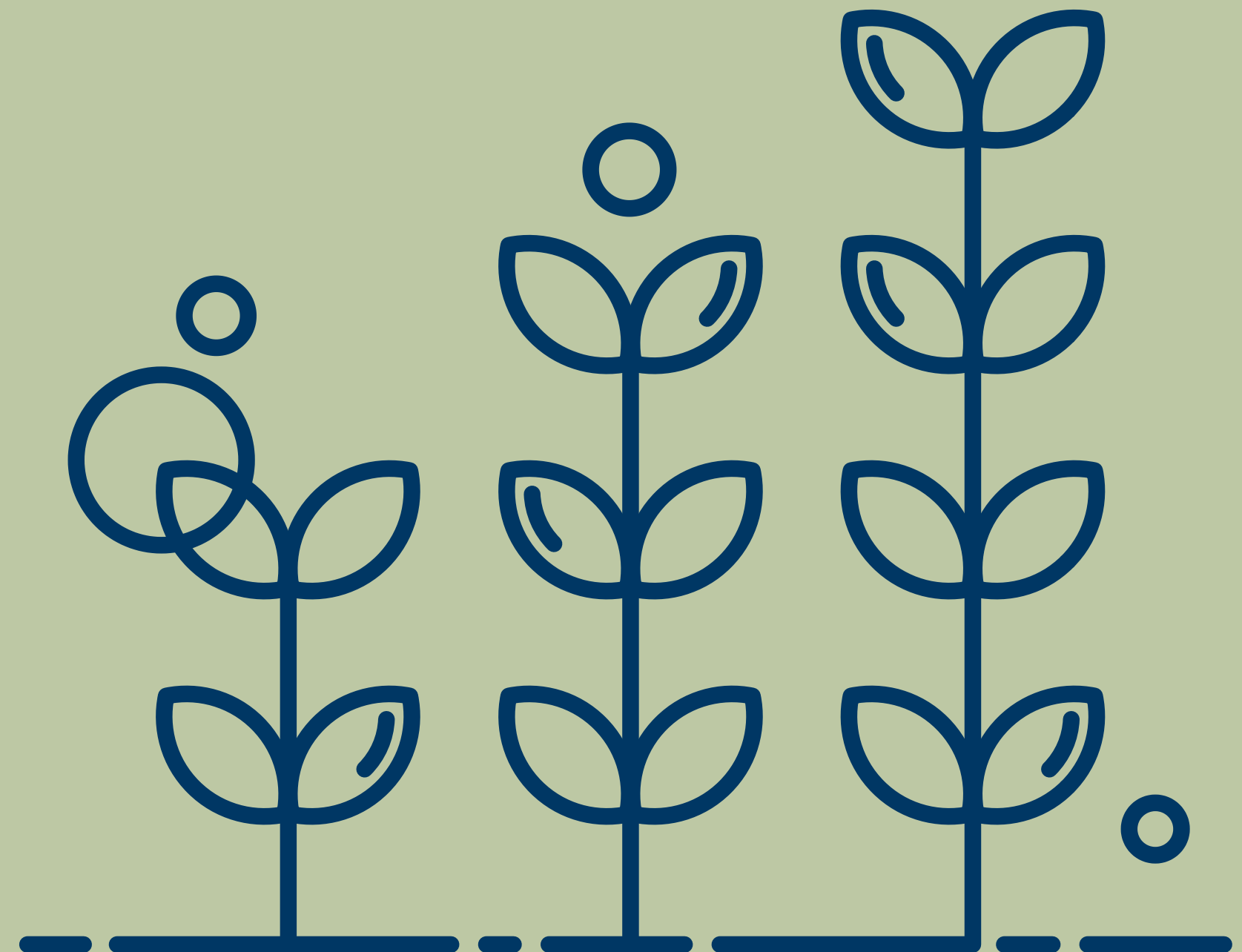
# The Tree Planting Pipeline: Challenges to Nurseries and Seedlings

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February 4, 2026

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# Who is GPI?

- Accelerate the transition to net-zero carbon emissions for the benefit of people, the economy, and the environment
- Work with and convene partners to create actionable change--in the Midwest and beyond
- Our programs work across the major emission sectors: transportation, electricity, industry, buildings, and agriculture and forestry



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# Twofold Approach to Change

Help states, cities, tribal nations, utilities, and others develop and implement their clean energy and climate plans.

Create the system conditions necessary for the most promising low-, zero-, and carbon-negative technologies to scale up more quickly than they otherwise would.

(e.g., changes in practices, policy, or regulation & demonstrations that solve market failures or remove barriers).





# Our tools and services

Applied research and analysis

Facilitation and stakeholder engagement

Consensus-oriented multi-interest advocacy

Expert technical assistance

Communications, network-building, and knowledge-sharing



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# State Tree Planting Goals



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# States Deployment Initiative

Established by the Conveners Network to help states take advantage of the EPA Carbon Pollution Reduction Grant Program

Provides a facilitated forum in which state officials can hear what other states are doing, raise questions and issues, and benefit from technical and expert assistance

Emphasis on multi-state collaboration



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# State Tree Planting Goals

34 states include tree planting goals in their climate action plans

Tree planting for reforestation, afforestation, restoration, and urban canopy expansion

Five states have goals to support/expand seedbanks and tree nurseries



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# State Tree Planting Goals

Northeast: Delaware (1m), Maryland (5m)

West: California (4.2m+), Oregon (100-200 trees/acre restoration)

South/Southeast: North Carolina (1m), Virginia (600k)

Midwest: Iowa (1m), Wisconsin (100m by 2030)



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# **The Challenge:**

**Not enough seeds and seedlings to  
meet projected tree planting goals**



# Supply Chain Pinch Points

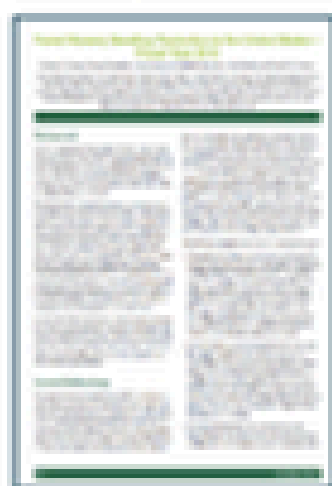


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# Consensus on Challenge

Since 2021, analyses and reports across the US are agreeing on the need for increased nursery capacity

*Forest Nursery Seedling Production in the US*  
RNGR, 2012



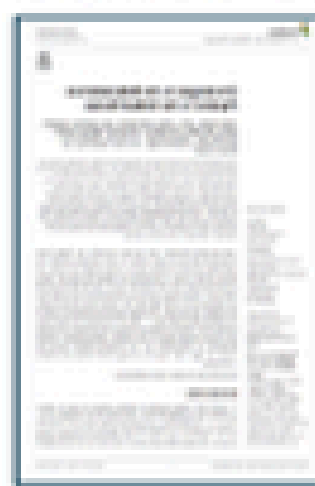
*National Survey of State Nurseries*  
NASF, 2016



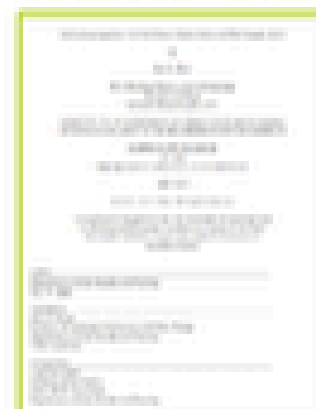
*Ramping up Reforestation American Forests,*  
2021



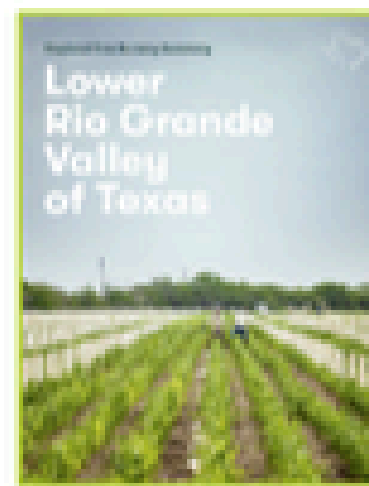
*Challenges in the Reforestation Pipeline*  
Fargione et al., 2021



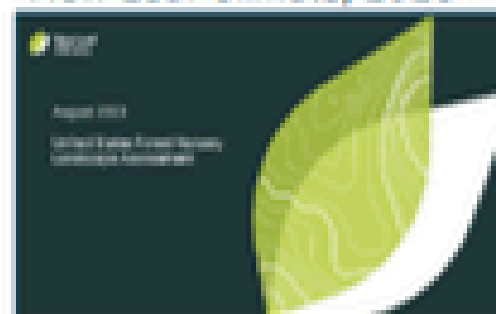
*Capacity in Northeast Plant Supply Chain*  
Allen et al., 2022



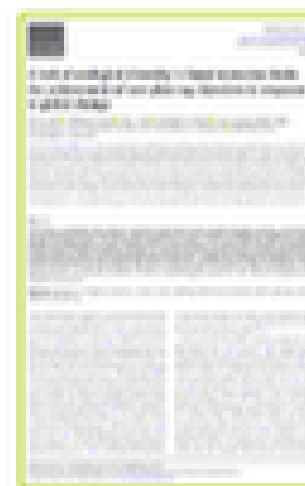
*LGRV Tree Nurseries American Forests,*  
2022



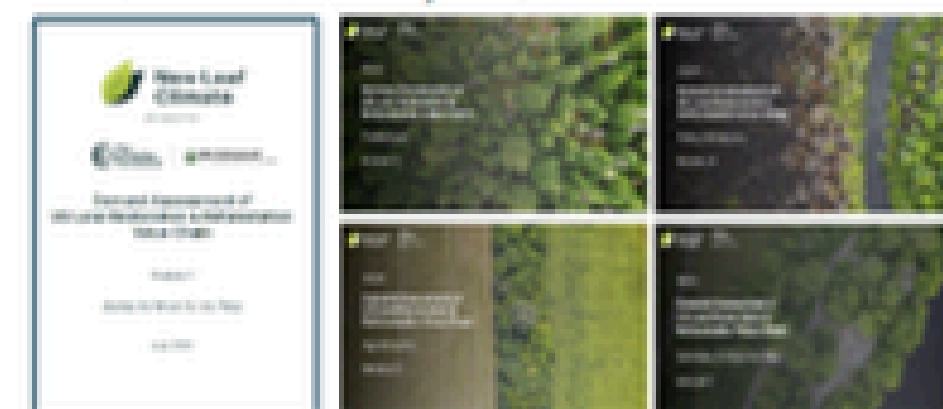
*Forest Nursery Landscape Assessment*  
New Leaf Climate, 2023



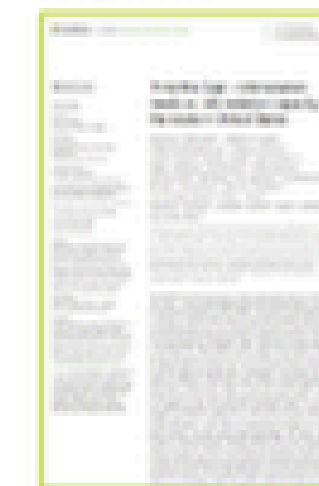
*A Lack of Ecological Diversity in Nurseries*  
Clark et al., 2023



*Seedling Demand Assessment Modules 1-5*  
New Leaf Climate, 2024-2025



*Reforestation Needs vs. Capacity in the West*  
Dobrowski et al., 2024



*Reforestation Capacity Survey*  
Arbor Day Fdn., 2025



Pre-2020

2021

2022

2023

2024

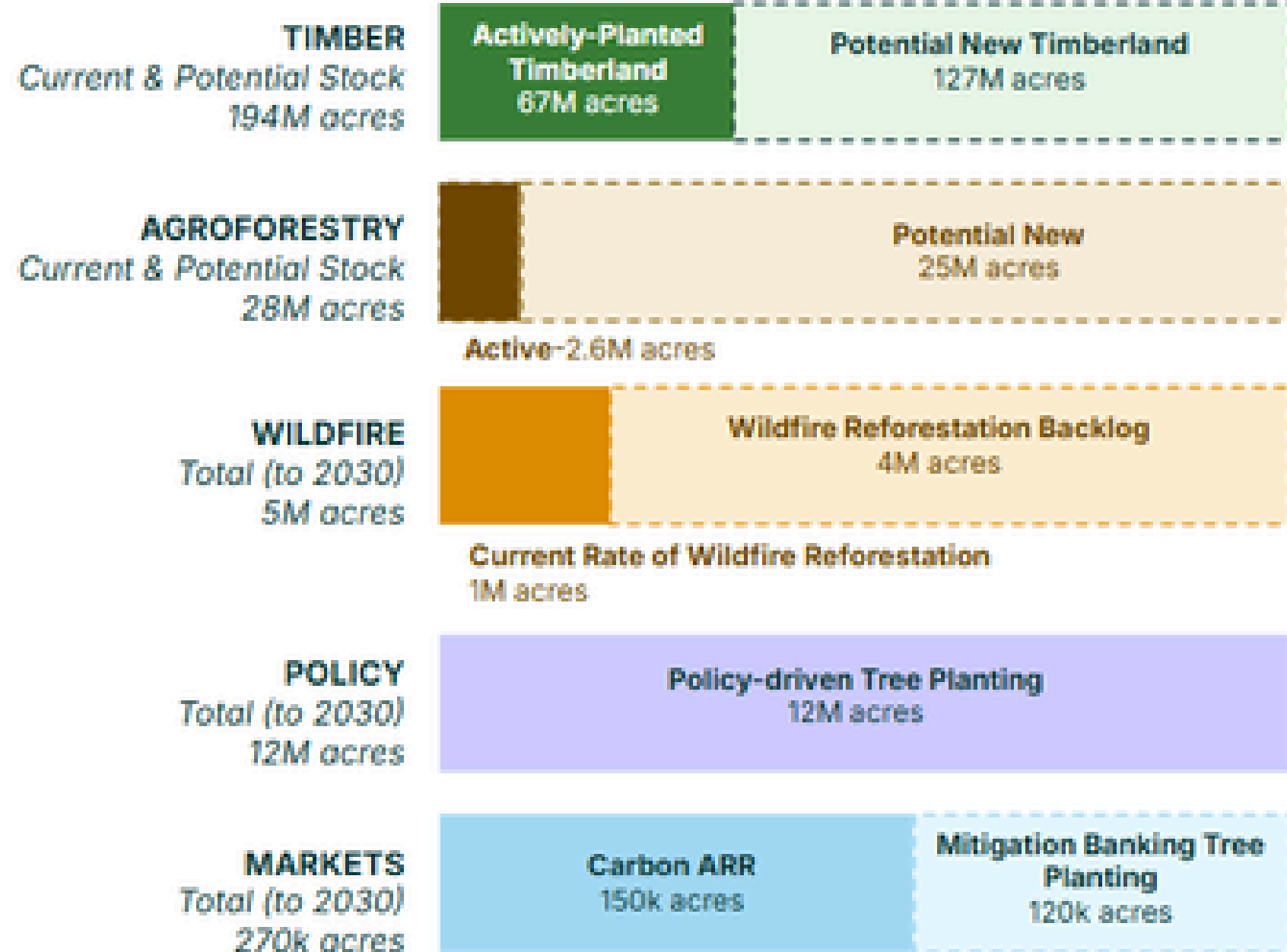
2025

Tomorrow

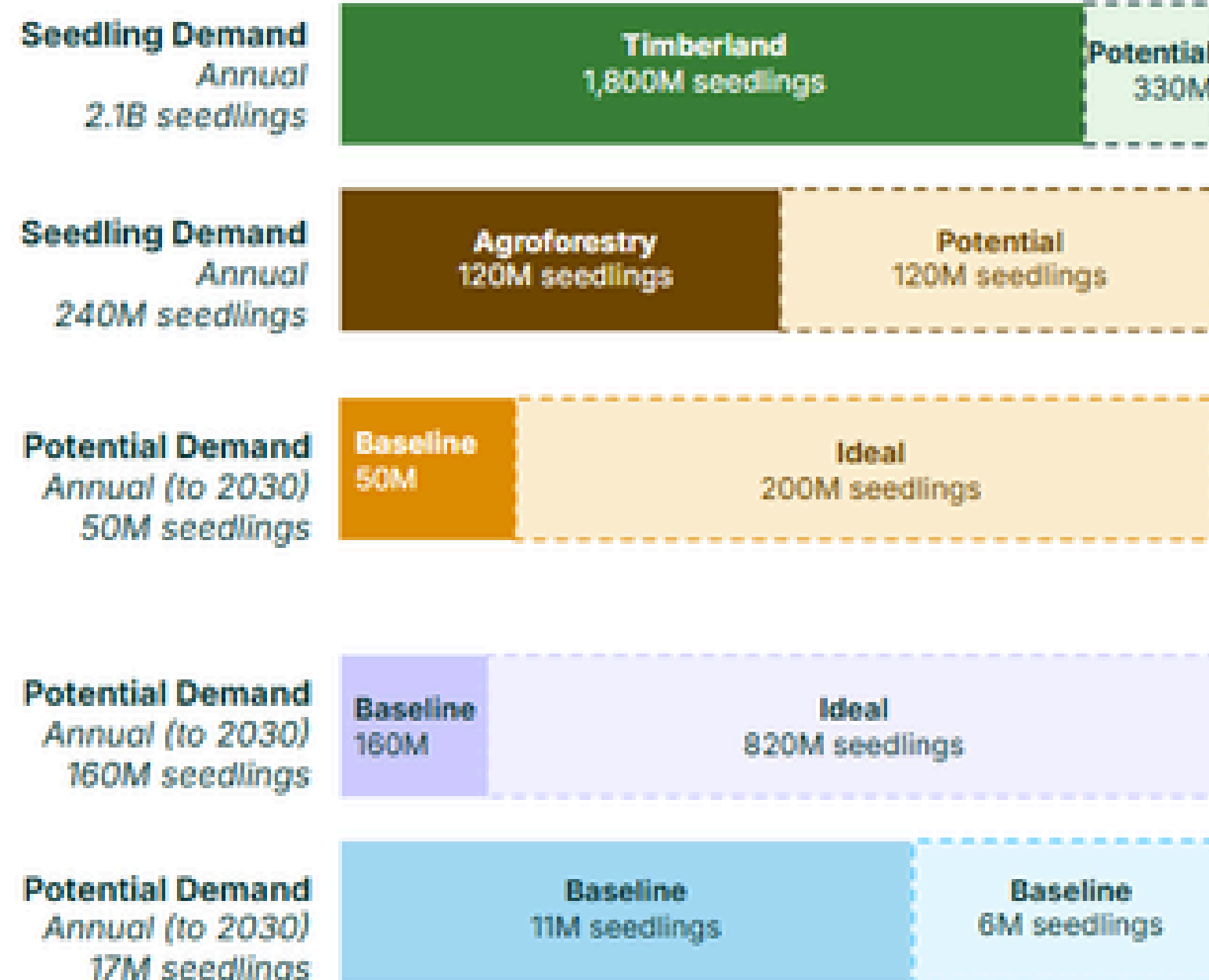


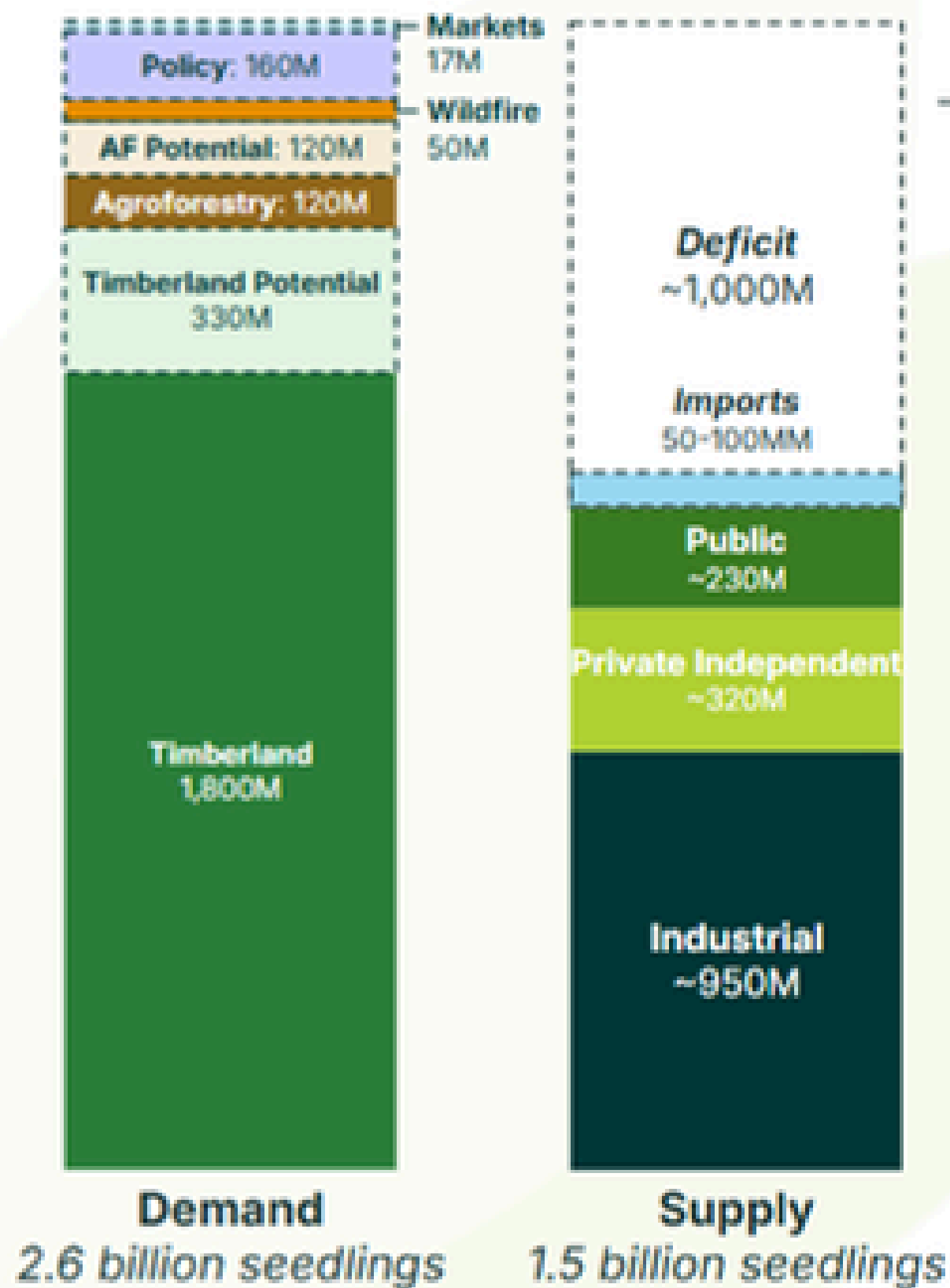
# Seedling Demand

## Restoration Pipeline (acres)



## Potential Demand (seedling)





Total annual supply of 1.5 billion seedlings is roughly **1 billion seedlings short** of **potential** annual restoration needs across the US.



To put that in context, the **potential** seedling shortfall is equivalent to:

**1 billion seedlings**

or

 **ArborGen** Blenheim  
(50M seedlings/year)

or

 **USFS** Coeur d'Alene  
(20M seedlings/year)

or

**Total production of all independent nurseries**  
(316M seedlings/year)

**x 22**  
Large-scale industrial nurseries

**x 55**  
Typical federal/state nurseries

**x 3.5**



# State Nursery Landscapes

Nursery landscapes are vastly different from state to state, even neighboring states

A common trend across the country includes the recession of state-operated nurseries

No “one size fits all” approach (OR State/NY PPP grants for increased capacity; impacts in MN when nursery closes)



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# Colorado Nursery Landscape

State nursery underfunded/understaffed

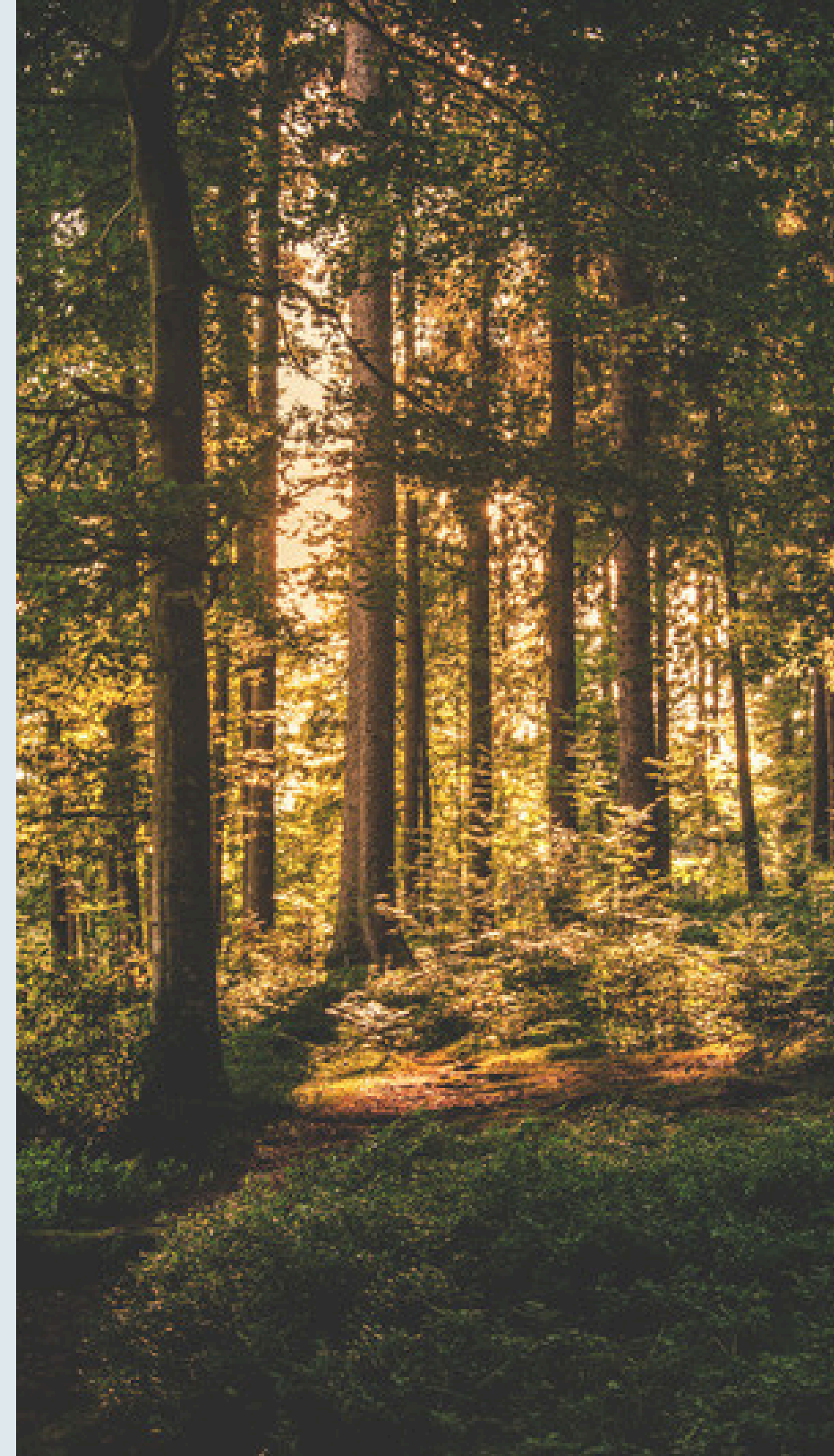
2022: \$5m in funding

2023: \$5.3m in additional funding

Private competition and cooperation



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# Seedling and Nursery Collaborative



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# Seedling and Nursery Collaborative

Address seedling and sapling supply chain pinch points through a private-public partnership approach

Work at the collaborative level to knowledge-share and facilitate regional partnership

Provide targeted state-level assistance to address obstacles to tree planting supply



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# Collaborative Goals

Meet the demand of seed collection and replanting projects and goals through supporting seedbanks and nurseries



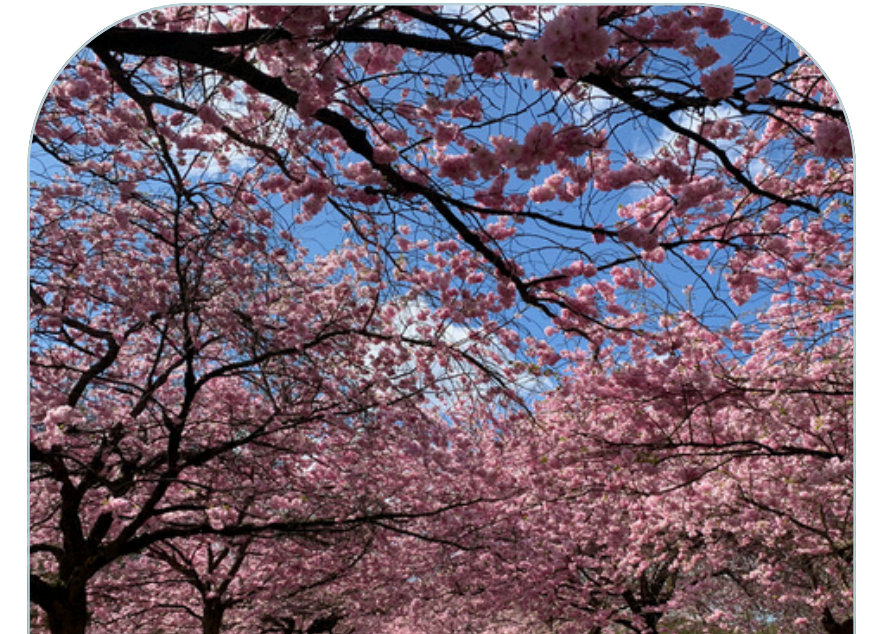
Develop a replicable model for public -private partnership to increase seedbank and nursery capacity at the state level.



Develop best practices and policy recommendations at the state level to support increased seedbank and nursery capacity.



Facilitate a multi-state network of states with tree planting goals for restoration, reforestation, and afforestation.



Support workforce development, both professional and volunteer, from seed to tree.



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# A Successful Collaborative

Convenes partners and stakeholders for regional meetings

Conducts independent research and analysis to advise seedling supply chain

Develops financial analyses that address risk management, investment capital, and workforce issues

Recommends policy through white papers and stakeholder engagement



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# State Level Focus

Understanding state and municipal level activities is imperative to understanding regional seedling supply and demand

Increase collaboration and transparency between actors may increase the timeliness in response of restoration and tree planting

Scalable process that focuses on in-person convenings and tailored research products



# What we have done so far

Convened state officials and held initial discussions around:

- State-level climate and forest planning goals
- The role of states in expanding nursery capacity
- Financial, legislative, and policy barriers
- Nursery production cycles and relationship with demand
- Communication gaps between state agencies, private/public entities
- Workforce challenges



# What we are doing next

## Research

- Aggregate state and local tree planting demand
- Market innovation: practices and policies whitepaper

## Convening

- Continuing to engage states on relevant issues and provide a forum for them to talk to and learn from each other



# What we are doing next:

## State-level deep dives

### Convening:

- Pulling together state officials, tribal nations, and other stakeholders to discuss the nursery supply chain within one state

### Research:

- Seed collection supply chain assessment
- nursery stakeholder mapping and supply analysis
- Funding and incentive analysis
- Workforce landscape analysis

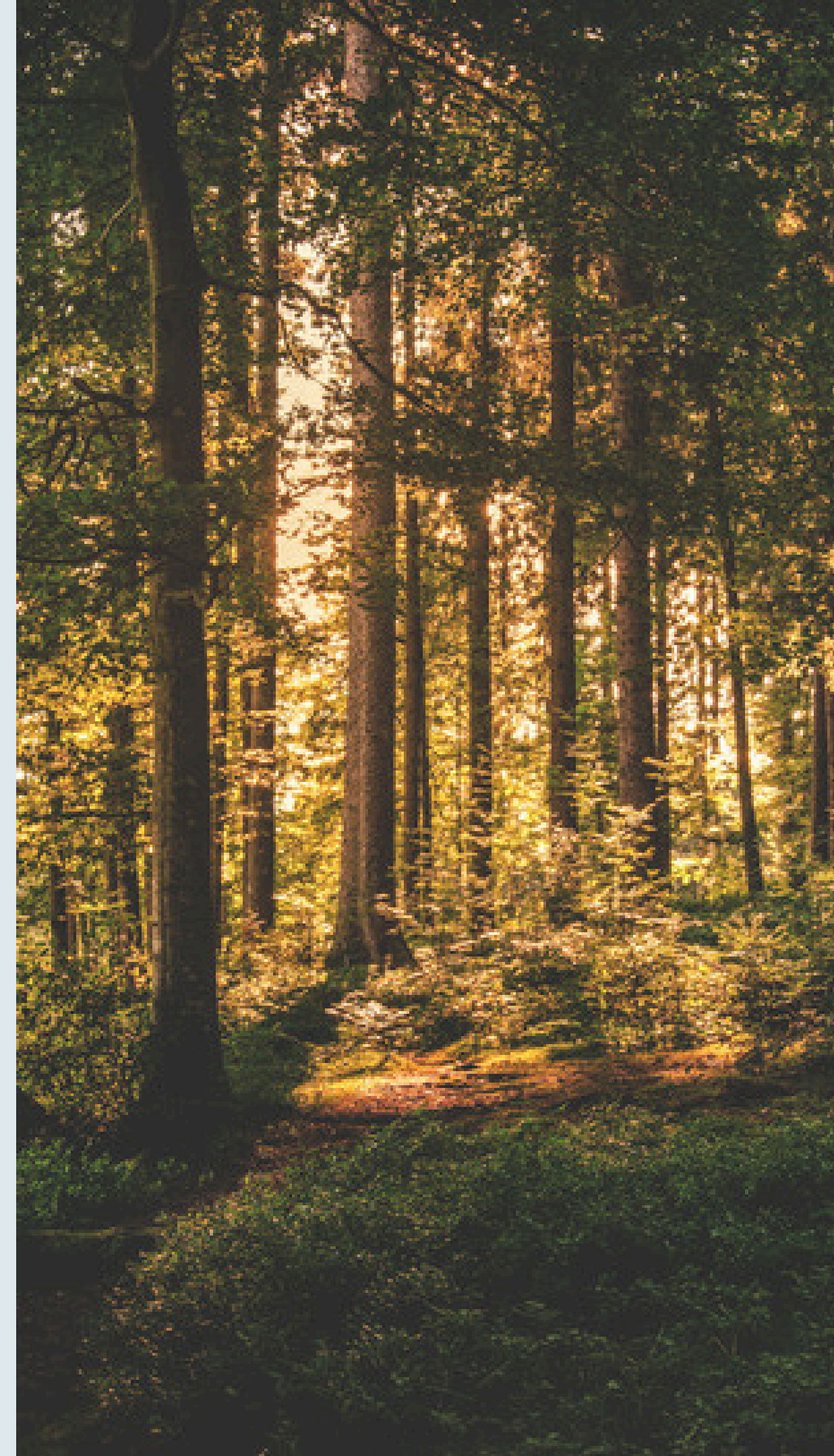


# Moving Forward

Readiness for shifting ecosystems and climate-induced mortality necessitates increased cooperation between public and private entities at different scales

States want to be informed and prepared to commit to climate action

Climate action is not zero sum--we can create stable markets, good jobs, and sustain local economies while achieving climate goals



# Questions?



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# THANK YOU

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