



MARYLAND FORESTRY ECONOMIC ADJUSTMENT STRATEGY

2021

WHAT IS THE FORESTRY EAS?



WHAT IS THE FORESTRY EAS?

- What is an Economic Adjustment Strategy (EAS)?
- Why are we doing one now for Maryland?
- What results do we expect?



PROJECT OBJECTIVE & GOALS

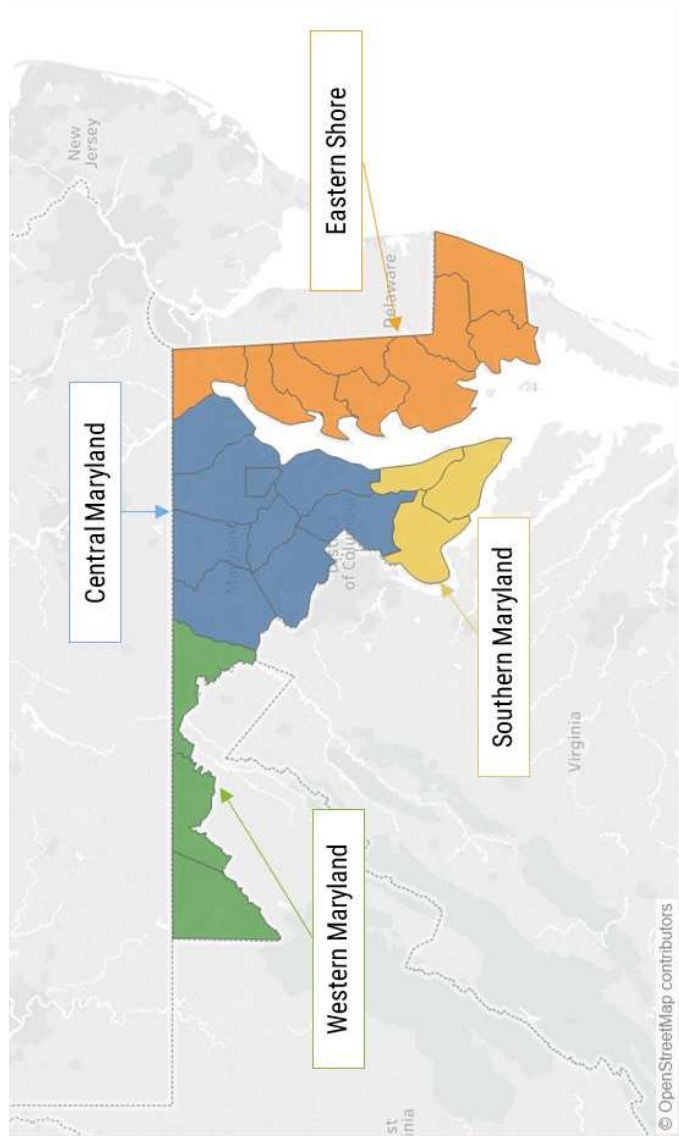
Create EAS that strengthens the long-term economic viability of Maryland's forest products industry and to create jobs and business growth in Opportunity Zones.

- Statewide analysis of forestry industry and market
- Strategies for advancing forest products sector
- Plan for retention and growth of forest products sector
- Recommendations to counter long-term trend of diminishing markets

WHAT DOES
THE DATA
TELL US?



MARYLAND'S TIMBERSHEDS



ECONOMIC CONTRIBUTION OF FORESTRY INDUSTRY



Source: IMPLAN, 2016



IMPORT ROLE IN THE LOCAL ECONOMY



Create jobs



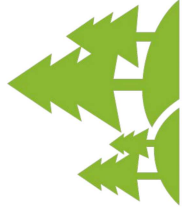
Stimulate spending



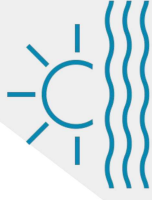
Provide inputs

- Manufacturing drives the state's forestry industry
- Forestry and logging have a greater economic output multiplier
- Small entrepreneurial companies drive the market
- A few large players have outsized impacts on statistics
- Our local timbersheds are highly correlated to nearby regions

SUSTAINABLY AND ACTIVELY MANAGED FORESTS...



Safeguard Forests

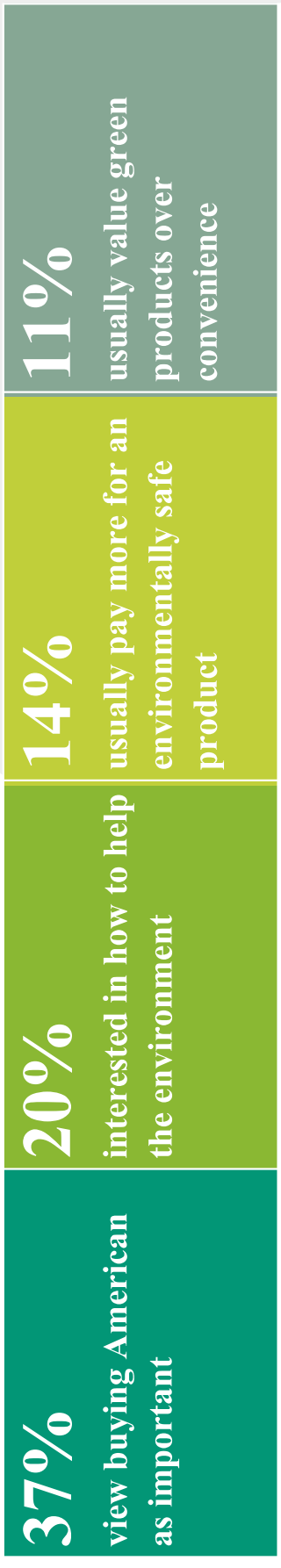


Support the
Chesapeake Bay



Mitigate Climate
Change

MARYLAND CONSUMER DEMAND



Source: ESRI Business Analyst, 2020

DEMAND TRENDS

GREEN BUILDING
MATERIALS
10% CAGR
2020-2025

BIOFUEL
6.9%
CAGR
2020-2027

WOOD PELLETS
9.1%
CAGR
2019-2026

WOOD SLABS
5% CAGR
2020-2030

CROSS-LAMINATE
D-TIMBER
15.1%
CAGR
2017-2025

THERMALLY
MODIFIED WOOD
5.2%
CAGR
2020-2025



THE FOREST INDUSTRY IN MARYLAND

Key Industry Stats



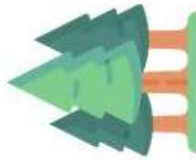
1,065
Firms



9,145
Employees



\$2.2 B
Revenue



5.67 BCF
Timber



2.15 MM
ac.
Timberland

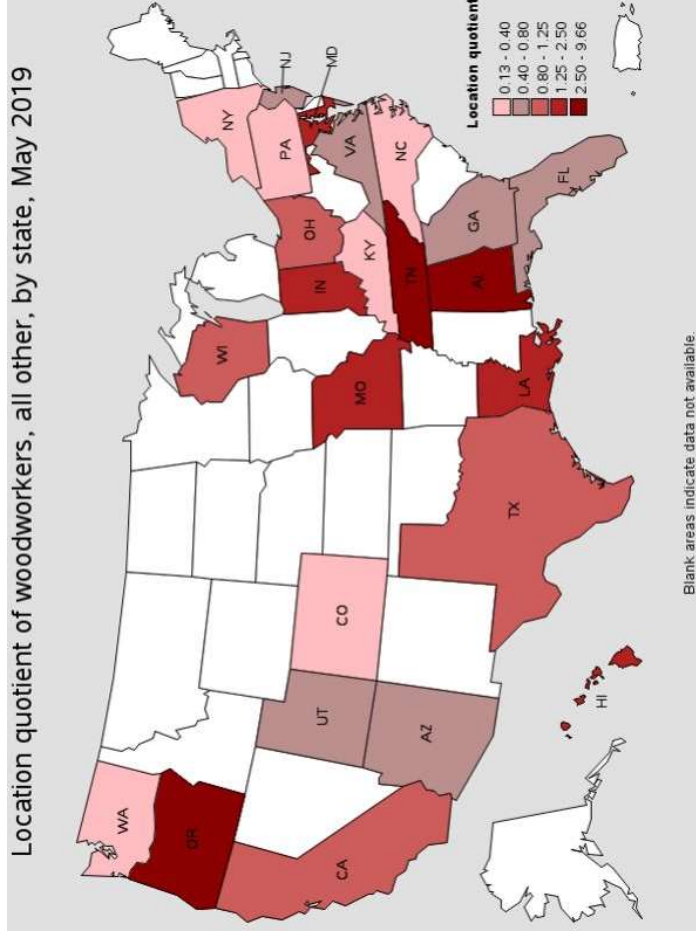


14,833
Private Forest
Landowners



INDUSTRY CONDITIONS

- A cottage industry
- Lack of business transition
- Workforce concerns
- Growing timber supply
- Timber mortality concerns

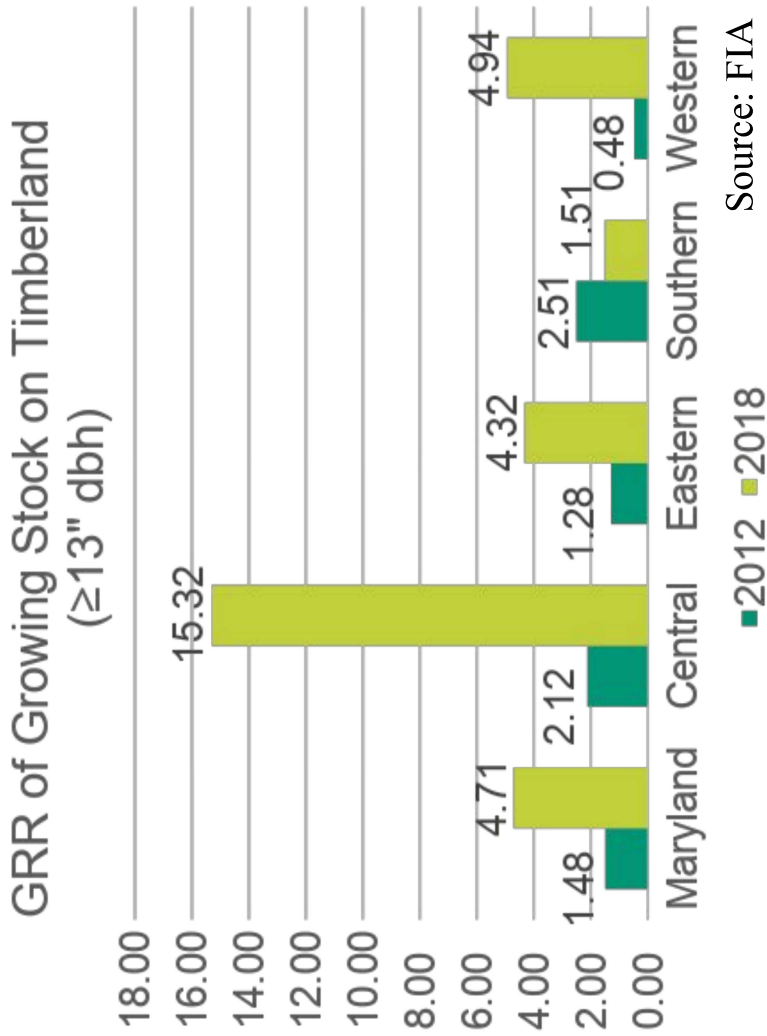
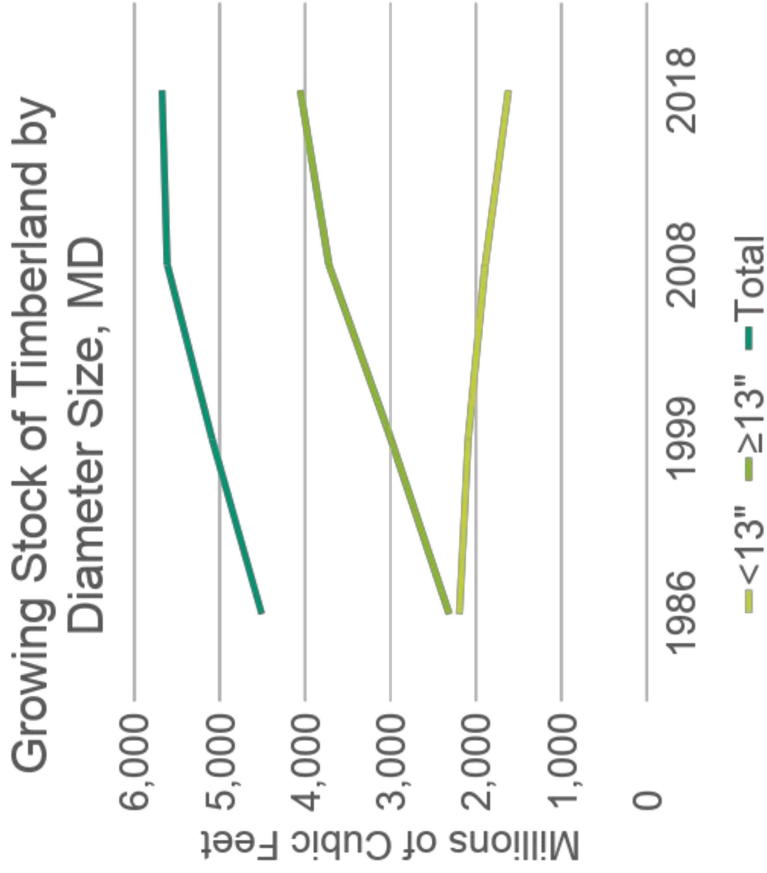


Source: BLS



DATA PREVIEW

Opportunity with Larger Trees

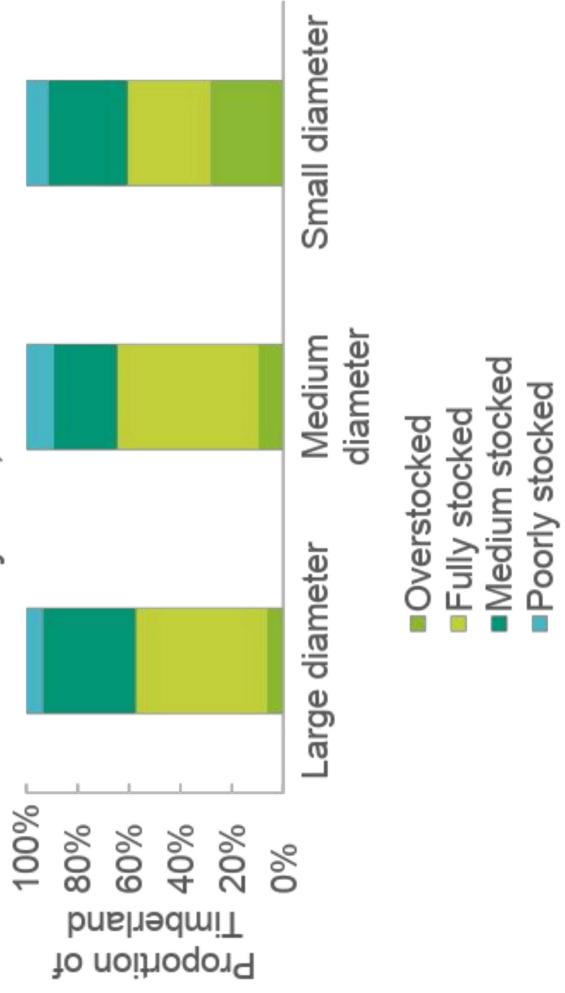




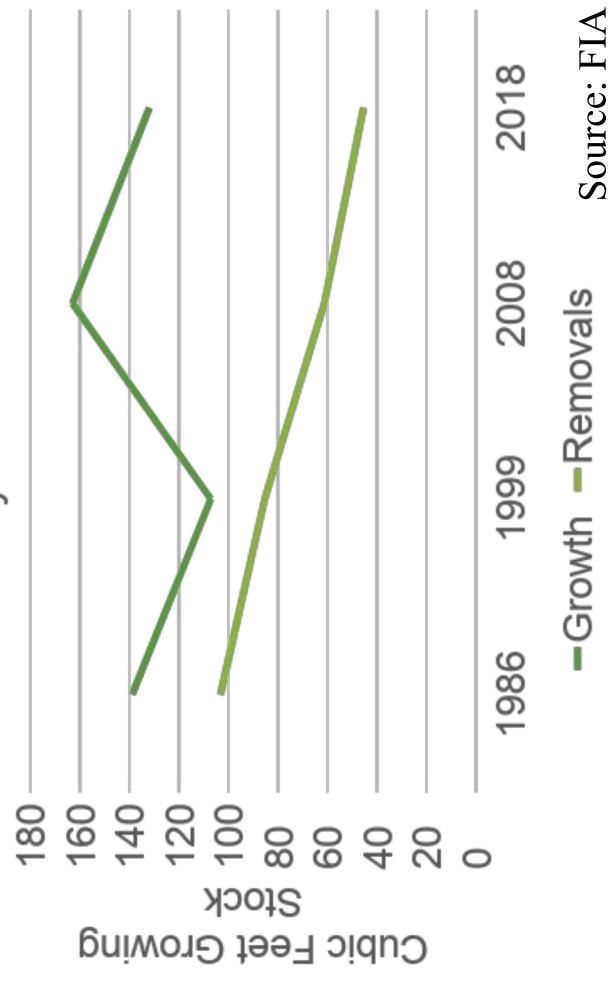
DATA PREVIEW

Overstocking of Small Diameter Trees and Declining Harvests

Distribution of timberland (acres) by stocking class & stand-size class, Maryland, 2018



Growth and Removal Trends, Maryland

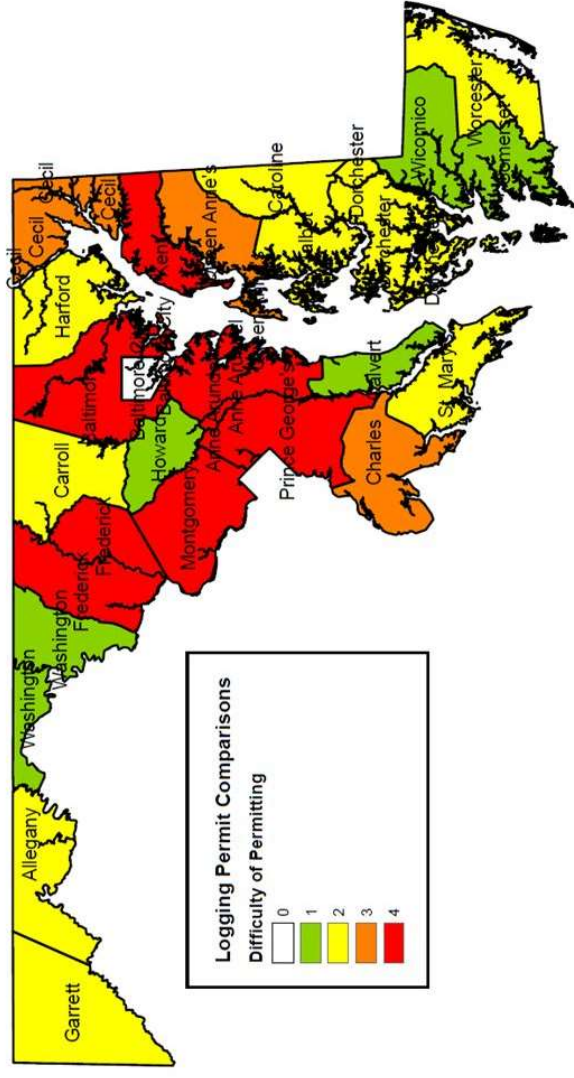


Source: FIA



PUBLIC CLIMATE

- Limited public support
- Lack of united timber advocacy
 - Varied business objectives
 - Small operators
 - Disaggregated sectors
- Possible increased regulatory restrictions





ECONOMIC FACTORS

Landowner Objectives

- Market conditions
- Logistical challenges
- Competition from adjacent states
- Timberland availability

Past Activities (last 5 years)	Likely Activities (next 5 years)
1. Cut trees for own use	1. Getting rid of invasive species
2. Getting rid of invasive species	2. Cut trees for own use
3. Improving wildlife habitat	3. Improving wildlife habitat
4. Constructing or maintaining trails	4. Constructing or maintaining trails
5. Collecting nontimber forest products	5. Eliminate unwanted insects/diseases

Source: USDA FS NWOS, 2013



THE WESTERN MD INDUSTRY



101
Firms



1,317
Employees



\$303.6
MM
Revenue



1.12 BCF
Timber



570,759
ac.
Timberland



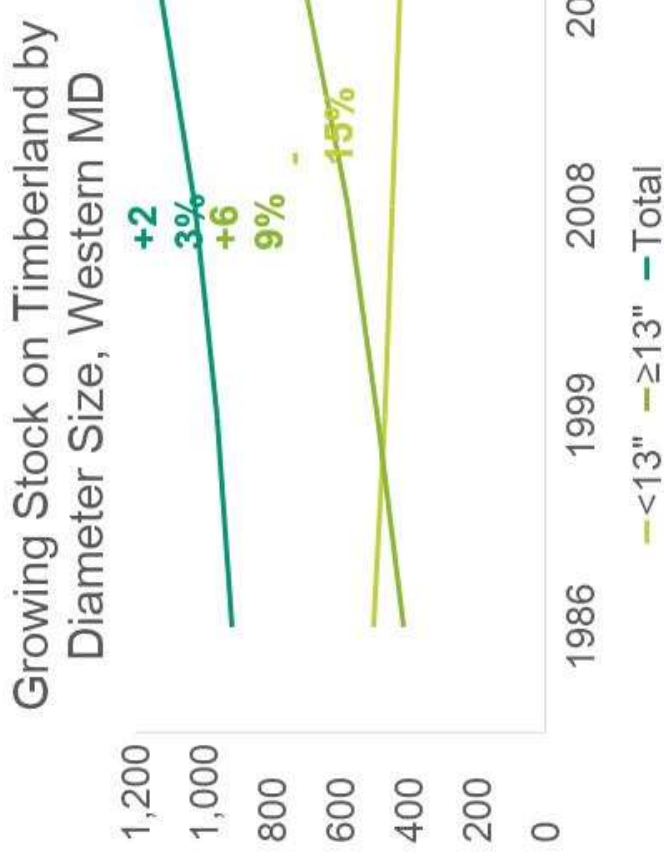
3,167
Private Forest
Landowners



STATE OF THE WESTERN MD INDUSTRY

Recovering from Disruption

- Loss of the Luke paper mill was a disruptive change
- Challenges
 - Declines in sawmill capacity
 - Limited timber availability due to small tract sizes
 - Business transition concerns.
- Looking for ways to add higher value to the resource
 - Applied research at regional universities
 - Business recruitment
- Growing volume and size of timber stands
- Opportunities for increased mill capacity





THE EASTERN SHORE INDUSTRY



128
Firms



822
Employees



\$112.4
MM
Revenue



1.89 BCF
Timber



729,135
ac.
Timberland



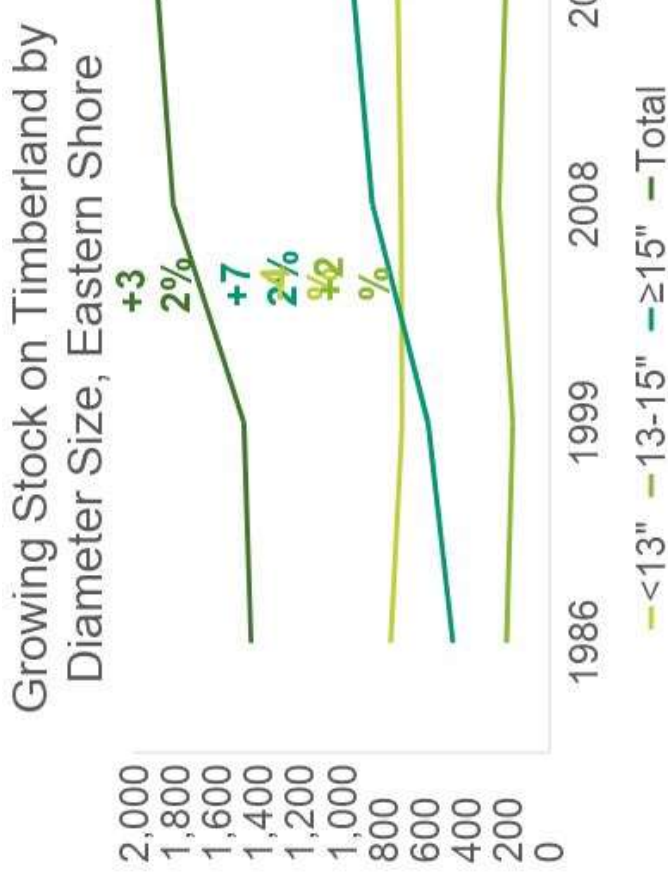
4,786
Private Forest
Landowners



STATE OF THE EASTERN SHORE INDUSTRY

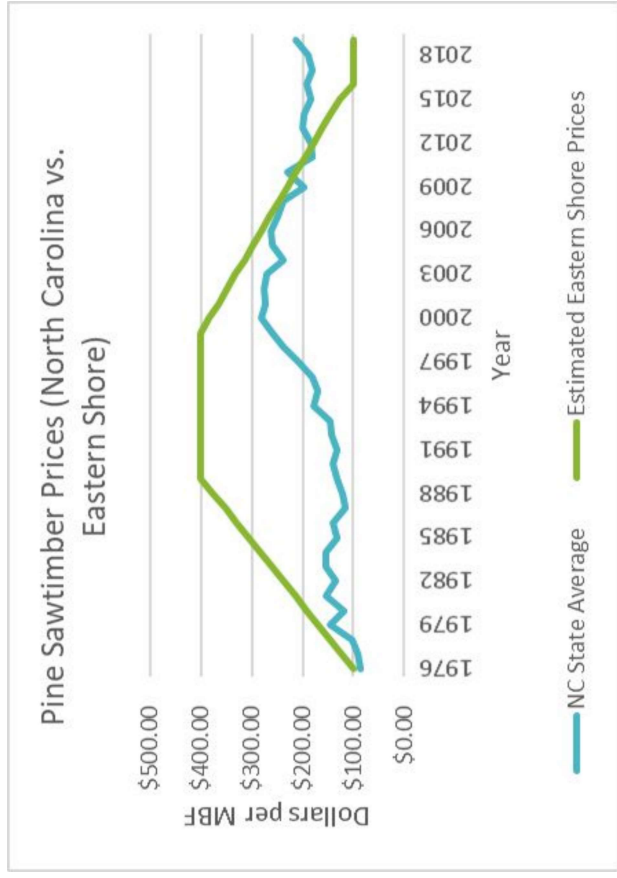
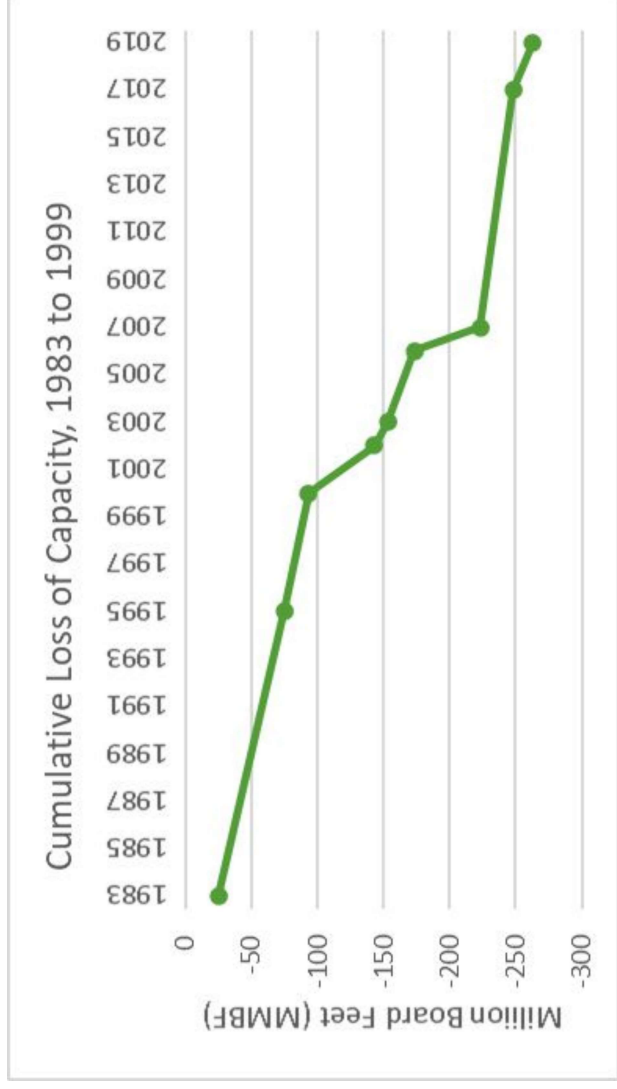
Adapting to Geographic and Economic Challenges

- Home to one-third of the state's timber resources
- Challenges
 - Geography
 - Mill closures
 - Limited capacity to process large timber
 - Changing land ownership patterns
- Opportunities for entrepreneurs
- New mills opening
- Large standing inventory; high-quality softwood



DATA PREVIEW

Impact of Eastern Shore Mill Closures





THE SOUTHERN MARYLAND AND INDUSTRY



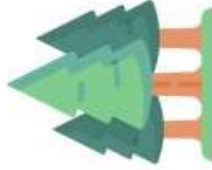
61
Firms



279
Employees



\$31.6
MM
Revenue



914.0
MMCF
Timber



303,678
ac.
Timberland



1,158
Private Forest
Landowners

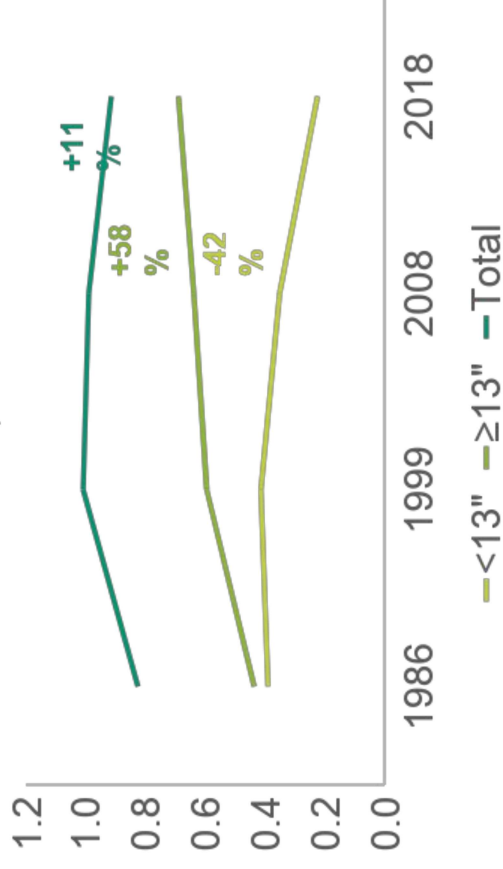


STATE OF THE SOUTHERN MD INDUSTRY

A Niche Oriented Industry

- Small, farm-level mills primarily owned by the plain sect community
- Rely heavily on mills in Virginia and Pennsylvania
- High development pressure
- 11 mills (31.5 MBF capacity)
- Proximity to high value consumer market
- Strong Amish and Mennonite community structure
- Strong existing local product brand

Growing Stock on Timberland by Diameter Size, Southern MD



Source: FIA



THE CENTRAL MARYLAND AND INDUSTRY



775
Firms



6,727
Employees



\$1.77 B
Revenue



1.75 BCF
Timber



550,194
ac.
Timberland



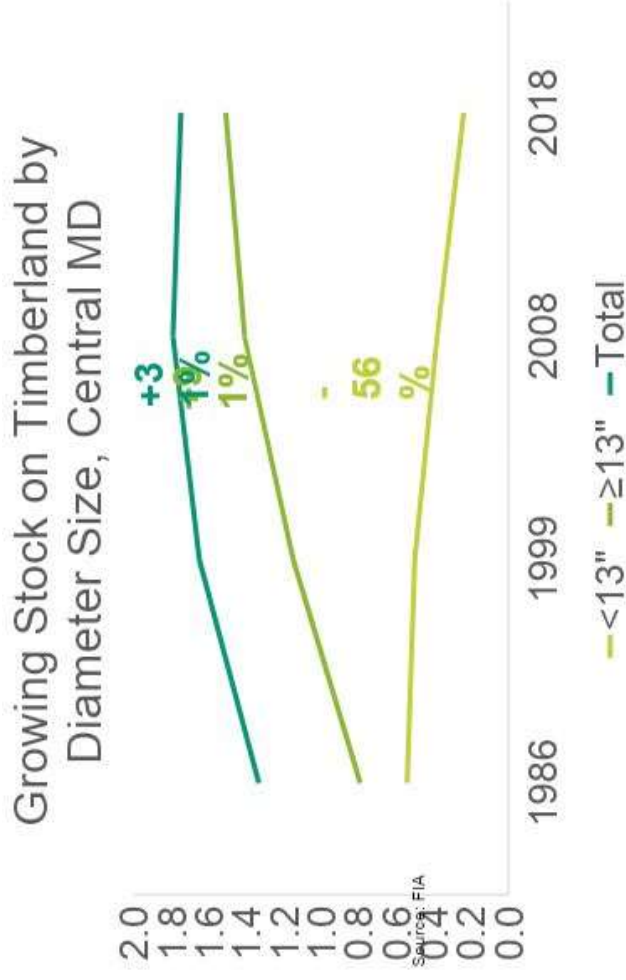
5,722
Private Forest
Landowners



STATE OF THE CENTRAL MD INDUSTRY

Positioned for Innovation

- Densely populated area
- Access to large consumer markets
- Focused on secondary manufacturing
- Lots of urban wood waste
- Access the Port of Baltimore, logistics and rail networks, industrial real estate
- Opportunities for advanced materials, biomass energy, innovative wood products



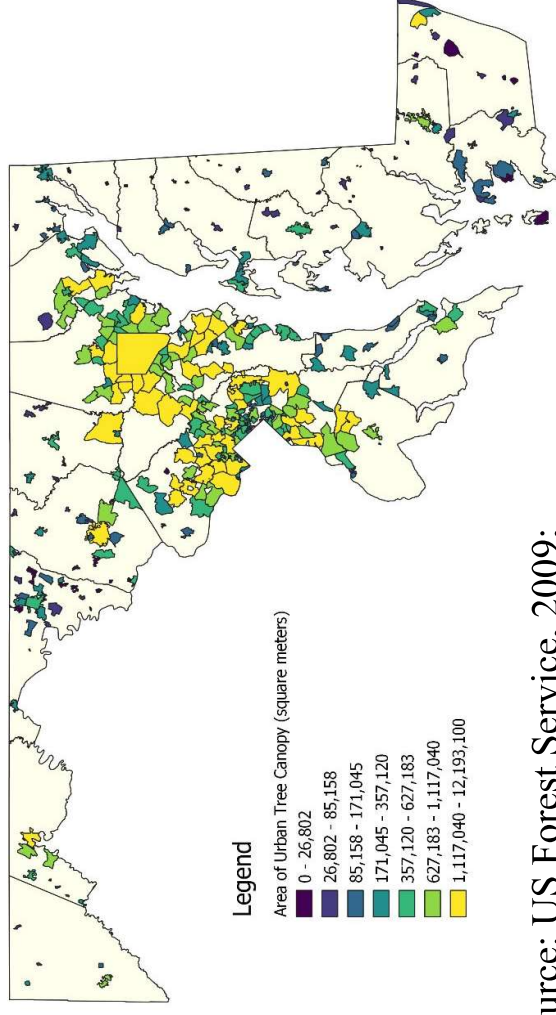
Source: FIA

LOCAL OPPORTUNITI ES



URBAN WOOD AGGREGATION

- Take advantage of urban wood resources
- Linked system of urban wood aggregation facilities
- Enable traceability, transaction, and certification

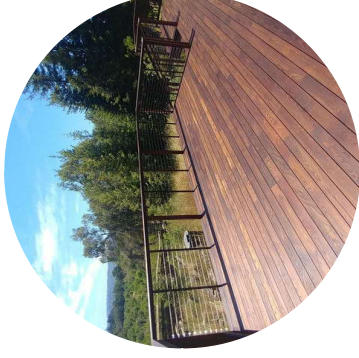


Source: US Forest Service, 2009;
National Land Cover Database, 2001



UNIQUE BUILDING PRODUCT PROMOTION

- Key species: yellow-poplar, sweetgum, white oaks, pines
- Promote the manufacturing of:
 - Mass timber
 - Thermally modified wood
 - Hardwood CLT
 - Panel veneers
- Niche market: decking, outdoor panels, bridges, acoustic walls, and small building kits
- Use assets like the Home Innovation Research Lab



Thermally Modified
Wood

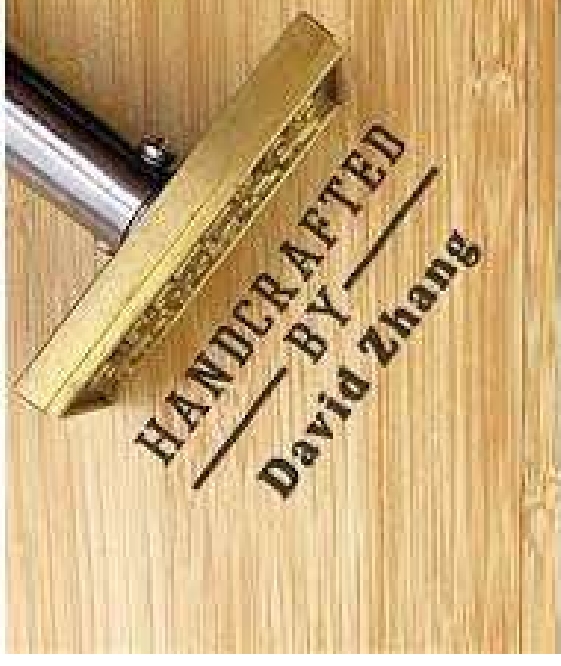


Hardwood CLT



WOOD PRODUCT BRANDING

- Key conditions
 - Existing strong regional identity
 - Many small vertically integrated mills
 - Large consumer market
- Branding and marketing program is a logical next step.
- Markets likely to respond to such activities are:
 - Furnishings
 - Cabinets
 - Small wares





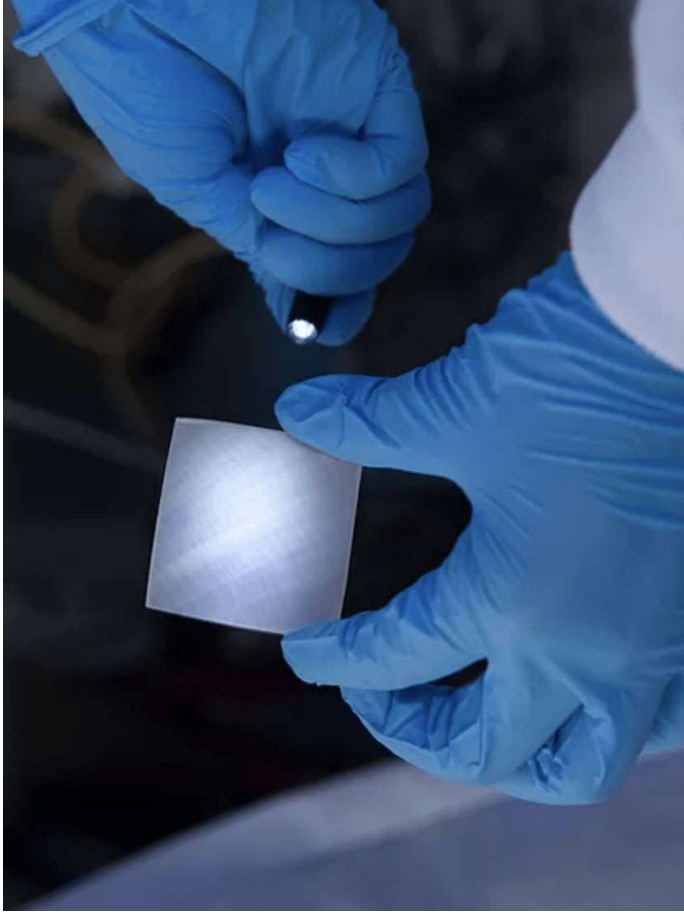
COMMUNITY SCALE BIOMASS CHP

- Abundant low-value species
- Increasing supply of urban wood waste
- Support the adoption of community-scale CHP projects associated with new commercial, industrial, and residential building projects.
- These systems could supply heating, refrigeration, and electricity to micro-grids while supporting regenerative forest uses.



ADVANCED MATERIALS

- Develop advanced materials (cellulose-based nanotech)
 - Transparent wood
 - Insulating wood
 - Lightweight and high-strength wood
- R&D and supporting services
- Establish a supply chain for advanced materials manufacturing
- Retain innovative firms
- Bring products to market





COLLABORATIVE SOLUTIONS

- Workforce programs
 - Untangled Minds
 - WorkKeys
- Logistics and Procurement
 - Supply chain transparency
 - Traceability
- Timber Exchange through Baltimore
 - Revitalizing secondary manufacturing in Baltimore
 - Demand for both high-quality pine timber as well as chips and biomass
 - Excess urban wood that can serve Eastern Shore's demand

STATE OUTCOMES



WHAT OUTCOMES ARE WE SEEING

- Risk Assessment
- New Mill Investments
- Biomass Projects
- ESG Certification Processes
- Secondary Manufacturing

STRATEGIES, INITIATIVES, & ACTIONS

OVERARCHING GOALS



Support the existing entrepreneurs who anchor the industry and keep liquidity in local markets.



Raise awareness of the wood products industry by building more supportive relationships within and outside of the industry and by focusing on the renewable nature of the resource.



Encourage innovation in emerging sectors through entrepreneurial support and a renewed focus on technology commercialization.







Enhance local and international market opportunities by building a brand linked to the industry's stewardship of natural resources and local economies.
























INITIATIVES AND ACTIONS













Initiatives				
A. Increase knowledge of the public and policymakers about the forest industry.	✓	✓		✓
B. Foster a more supportive state and local policy environment.	✓	✓	✓	✓
C. Improve supply-chain coordination.	✓	✓	✓	✓
D. Expand the use of renewable biomass energy.	✓	✓		✓
E. Enhance Maryland forest product industry's export competitiveness.	✓	✓	✓	✓

INITIATIVES AND ACTIONS






Initiatives				
F. Support entrepreneurial success for wood products businesses.	✓		✓	
G. Improve the adoption of technology and innovative practices.	✓	✓	✓	
H. Expand domestic marketing opportunities.	✓	✓	✓	✓
I. Create a workforce for the future.	✓		✓	

Initiative A: Increase knowledge of the public and policymakers about the forest industry.	
1. Develop concise cost/return information for standard forest management options in Maryland.	
2. Develop summaries of all applicable cost-share and other public programs that benefit forest landowners.	
3. Develop information on compatibility of conservation, wildlife management, and recreation programs with forest management.	
4. Host annual-tours of local forest and wood product businesses for opinion leaders through county forestry boards and MFA.	
5. Arrange for media coverage of favorable forest management stories or industry advancements.	
6. Develop educational materials and activities such as interpretive signs, experiential learning modules, and exhibits for state forests.	
7. Partner with Chesapeake Bay advocacy groups to highlight the importance of forest management in recovering the health of the Bay.	
8. Work with other states and national organizations to raise awareness of carbon trading programs for small acreage landowners.	
9. Educate local officials on the benefits of wood energy and its importance to Bay health and local economies.	







Initiative B: Foster a more supportive state and local policy environment.			
1.	Expand communications to build stronger relationships between the forest product industry and local economic development.		
2.	Expand incentive programs targeting industry growth.		
3.	Allow wood and wood residues as qualifying biomass to support the achievement of Maryland's Renewable Energy Portfolio Standard.		
4.	Establish an informal "timber caucus" within the legislature to provide expertise and leadership on forestry issues.		
5.	Create a buy-local purchasing preference for forest products.		
6.	Establish regular communication with state forest managers' local timber needs and planned sustainable harvest volumes.		
7.	Maintain regular updates on costs and benefits of timber sales on state forest lands.		
8.	Recognize forest markets and industry needs through land acquisition.		
9.	Coordinate and unify the activities of forestry organizations.		
10.	Build coalitions with agriculture groups and supportive environmental interests.		
11.	Review all current statutory authorities for forestry to clean up outdated language, resolve conflicts, and eliminate obsolete provisions.		
12.	Improve demand or local, sustainable forest products through changes in LEED or alternative standards.		
13.	Develop consistency in local forest management regulations.		
14.	Establish <i>Models and Guidelines</i> for inclusion of working forests and timber land in local comprehensive plans.		

Initiative C: Improve supply chain coordination.	
1. Create a program or responsibility area that improves value chain integration.	   
2. Pilot a traceability platform that increases supply chain coordination and transparency.	   
3. Encourage adoption of common certification standards compliant with European Union standards.	   








Initiative D: Expand the use of renewable biomass energy.





<p>1. Educate policymakers and the public regarding woody biomass as renewable energy fuel, working with a State Wood Energy Team.</p>	
<p>2. Utilize pilot projects to demonstrate efficacy of both CHP and thermal projects.</p>	
<p>3. Encourage greater utilization of urban wood waste as a fuel source.</p>	
<p>4. Encourage the development of a sustainable and reliable on-demand supply of wood fuels.</p>	
<p>5. Improve renewable energy policies and incentives to support woody biomass energy.</p>	

Initiative E: Enhance Maryland forest product industry's export competitiveness.





















<p>1. Develop an Industry Support Program Targeting Business Readiness and Export Promotion.</p>	
<p>2. Attract or Develop Phytosanitary Services.</p>	
<p>3. Create a Sustainable Forestry Risk Assessment to identify reliability of Maryland as a supply for sustainably sourced wood.</p>	
<p>4. Pilot a Trace and Track Program.</p>	
<p>5. Coordinate Certifications and Traceability.</p>	
<p>6. Develop focused support in international marketing.</p>	









Initiative F: Support entrepreneurial success for wood products businesses.

1. Encourage the next generation of forest product business owners.	 
2. Enhance virtual business development services for fast growth companies.	 
3. Improve entrepreneurial finance opportunities.	  

Initiative G: Improve the adoption of technology and innovative practices.	
1. Create a wood products innovation team.	
2. Prepare a technology-capable workforce.	
3. Develop funding to support innovation and technology adoption.	
4. Support the growth of innovative secondary manufacturing businesses.	

Initiative H: Expand domestic marketing opportunities.

1. Pilot a traceability platform to meet consumer demand.	   
2. Create a resource hub for the Maryland forest industry.	   
3. Create a branding program for local wood that supports the health of the Chesapeake Bay.	   
4. Encourage expansion of urban wood sorting facilities.	   
5. Support rapid county level adoption of the 2021 International Building Codes.	   

Initiative I: Create a workforce for the future.	
1. Identify critical labor force skill gaps by <u>timbershed</u> .	 
2. Support access to and development of enhanced management capability.	 
3. Work with regional partners to create Centers of Workforce Excellence.	 
4. Develop Career and Technical Education (CTE) modules for youth and adult learning.	 



RELATIONSHIP TO OTHER PLANS

EAS Crosswalk, Coordination, and Synergy

- Numerous action plans exist for elements of the industry.
 - Maryland's 2020 Forest Action Plan
 - Maryland Strategic Forest Land Assessment
 - Work Plan of the Sustainable Forestry Subcommittee of the Maryland Sustainable Growth Commission
 - Prospectus for Advancing Bio-Thermal Energy in Maryland
- Many initiatives link in concept but not in practice.
- Coordination of assets and effort is essential.



ROLE OF MFA

Examples of Action

- Coordinate implementation with state agencies
- Lead public outreach efforts
- Bridge gaps between:
 - Regions of the state
 - Elements of the supply chain
 - Rural and urban markets
- Create tools to support “track and trace” requirements
- Encourage more supportive public policy



DISCUSSION & FEEDBACK