

# Maryland Forestry Economic Adjustment Strategy Summary

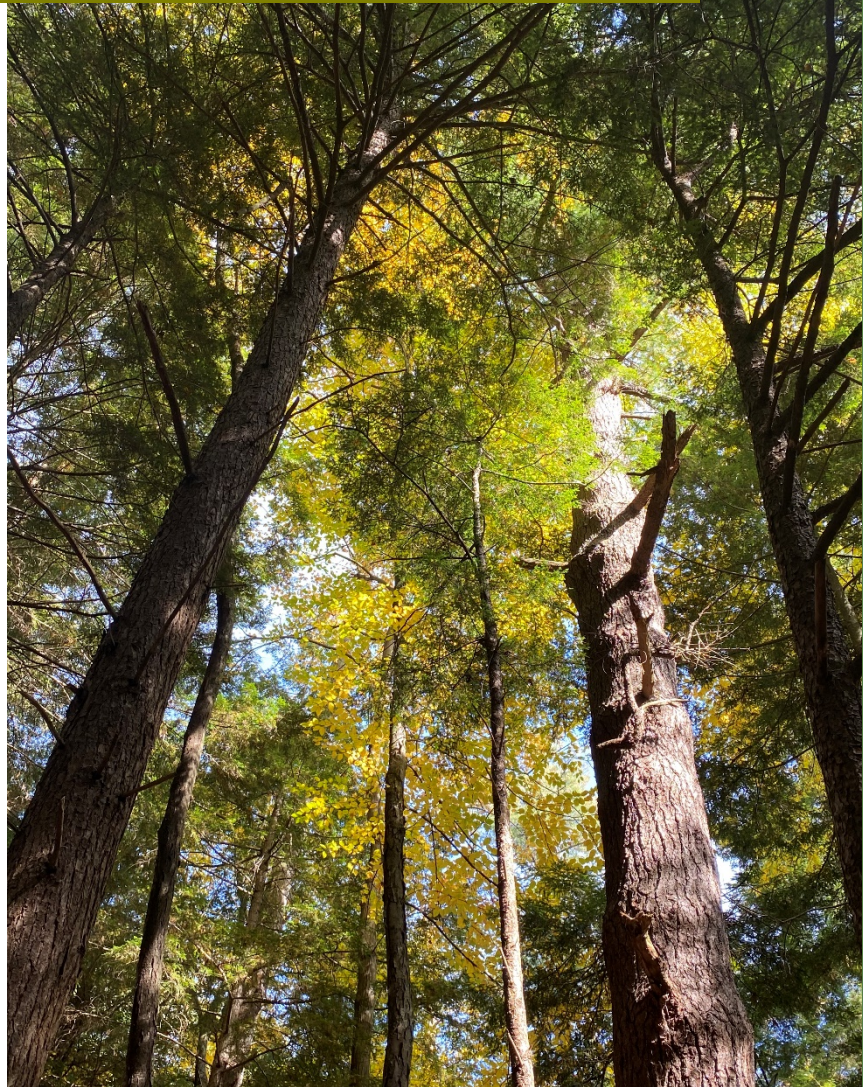


Photo: Elizabeth Hill

ACDS, LLC

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# Introduction

## Background

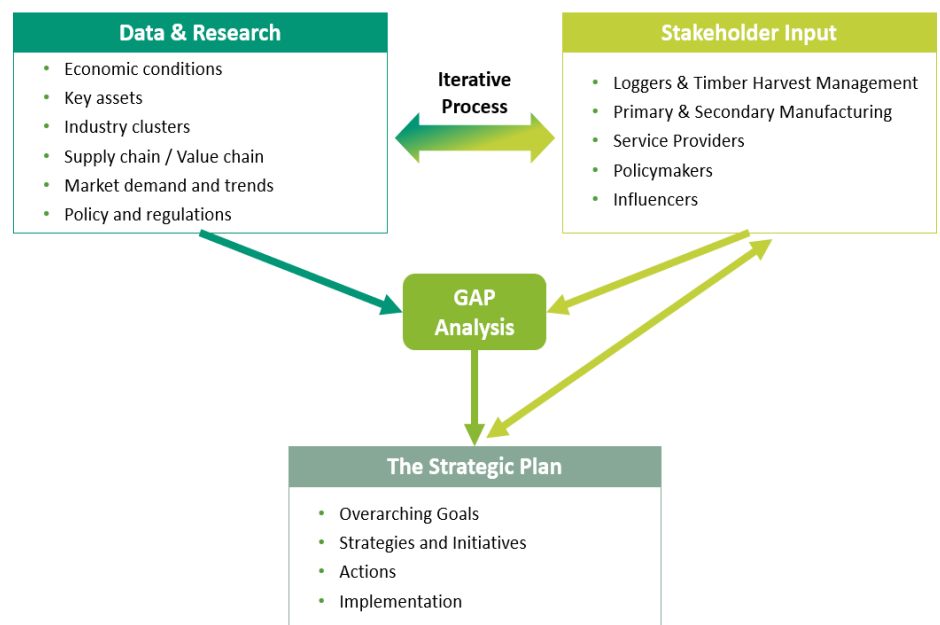
Maryland supports one of the most diverse and prolific forest ecosystems in the United States. It stretches from the Eastern Shore’s pine stands renowned for quality and density to Western Maryland’s Appalachian hardwoods recognized worldwide as premier inputs for fine furniture and cabinetry. However, the industry is shrinking. This decline hits Maryland’s rural communities hard, where job loss and economic transition can be painful and difficult from which to recover.

In response to these difficulties, Western Maryland RC&D and the Maryland Department of Natural Resources contracted with ACDS, LLC to develop an Economic Adjustment Strategy (EAS) for the industry with funding from the U.S. Department of Commerce Economic Development Administration. These projects assess the impacts on community and industry caused by negative consequences of the sector’s decline and make recommendations for both industry and community-level economic recovery. The intent is for the EAS to serve as an action plan for recovery while establishing the community level collaboration necessary to motivate change and increase investment in the state’s Opportunity Zones.

## What is an Economic Adjustment Strategy?

The Maryland Forestry EAS process began in March of 2020 with a top-to-bottom analysis of the wood products value chain. The first step was an evaluation of the standing timber resource across the state and within specific timbersheds. This was followed by an effort to understand the current and historical conditions facing the sector as well as positive changes that will rebuild and modernize the state’s forest products industry and support the return of the strong entrepreneurial culture that is so important to much of rural Maryland. As with any EAS, the process was driven by public engagement. That input led to the development of specific recommendations designed to attract capital to the industry, through new business attraction or expansion of existing companies.

The EAS focuses on improving the sector by providing a roadmap of nine initiative areas with 53 specific actions that leverage Maryland’s leadership in an industry that currently contributes \$3.86 billion to the state economy. It focuses on both short-term project support and long-term infrastructure and research and development efforts to guarantee a robust future for the industry for many years to come.



# Maryland

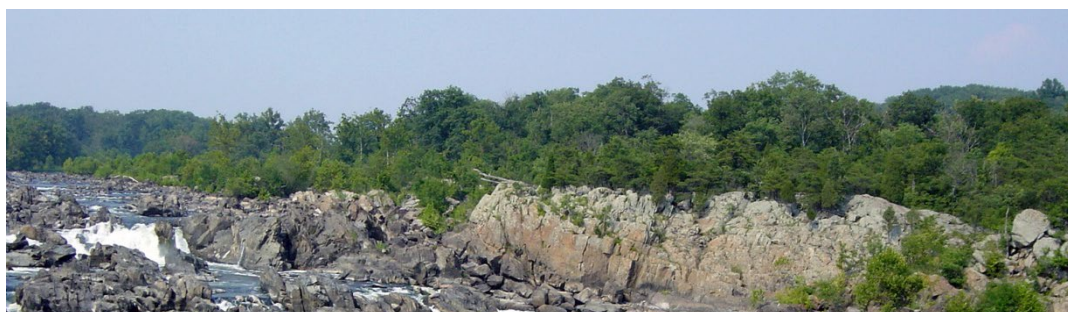


Photo: Kenn Kiser from Freemages.com

## Coordinated Effort Needed to Strengthen Industry

Maryland’s forest products industry contributed \$3.86 billion and 16,500 jobs to the state economy in 2016. Besides its economic impacts, the industry is essential for safeguarding forestland, supporting the Chesapeake Bay, and mitigating climate change. Supporting active timber harvest management and viable markets is critical for sustaining these benefits for future generations.

Unfortunately, the Verso Luke Mill’s closure in Western Maryland meant the end of the commodity-based forest products industry in the state. What remains is a diverse collection of small entrepreneurs, family-owned sawmills, and secondary manufacturers. These firms drive the sector and produce goods like furniture, wood shavings for animal bedding, construction timbers, millwork, flooring, converted paper products, and many other items.

Moving forward, Maryland has the opportunity to leverage its human capital, infrastructure, logistics networks, R&D capabilities, and entrepreneurs to turn the corner on a declining industry. However, it will require a concerted and coordinated effort to overcome institutional, economic, industry, social, and regulatory barriers to progress.

### TIMBER RESOURCE

*Key species:* yellow-poplar, pines, oaks, maple, and sweetgum

*Sawlogs:* 40%

*Pulpwood:* 60%

### TIMBER TRENDS

*Growing timber inventory*

*Increasing tree size*

*Increase in high-grade sawtimber*

*Overstocking of small diameter trees*

*Declining removals*

*Opportunities for harvests*

### OPPORTUNITIES

Maryland Forest Product Brand

Biomass Energy

Centralized Information Hub for the Industry

Carbon Credit/Offset Program

Supply Chain Coordination

Hardwood Exports

Mass Timber

Support Secondary Manufacturing

### INDUSTRY STATS

*Revenue:* \$2.2 B

*Firms:* 1,065

*Employees:* 9,145

*Timberland:* 2.15 MM ac.

*Timber:* 5.67 BCF

*Private Forestland Owners<sup>1</sup>:* 14,833

<sup>1</sup> Greater than 10 acres

### KEY ASSETS

Port of Baltimore

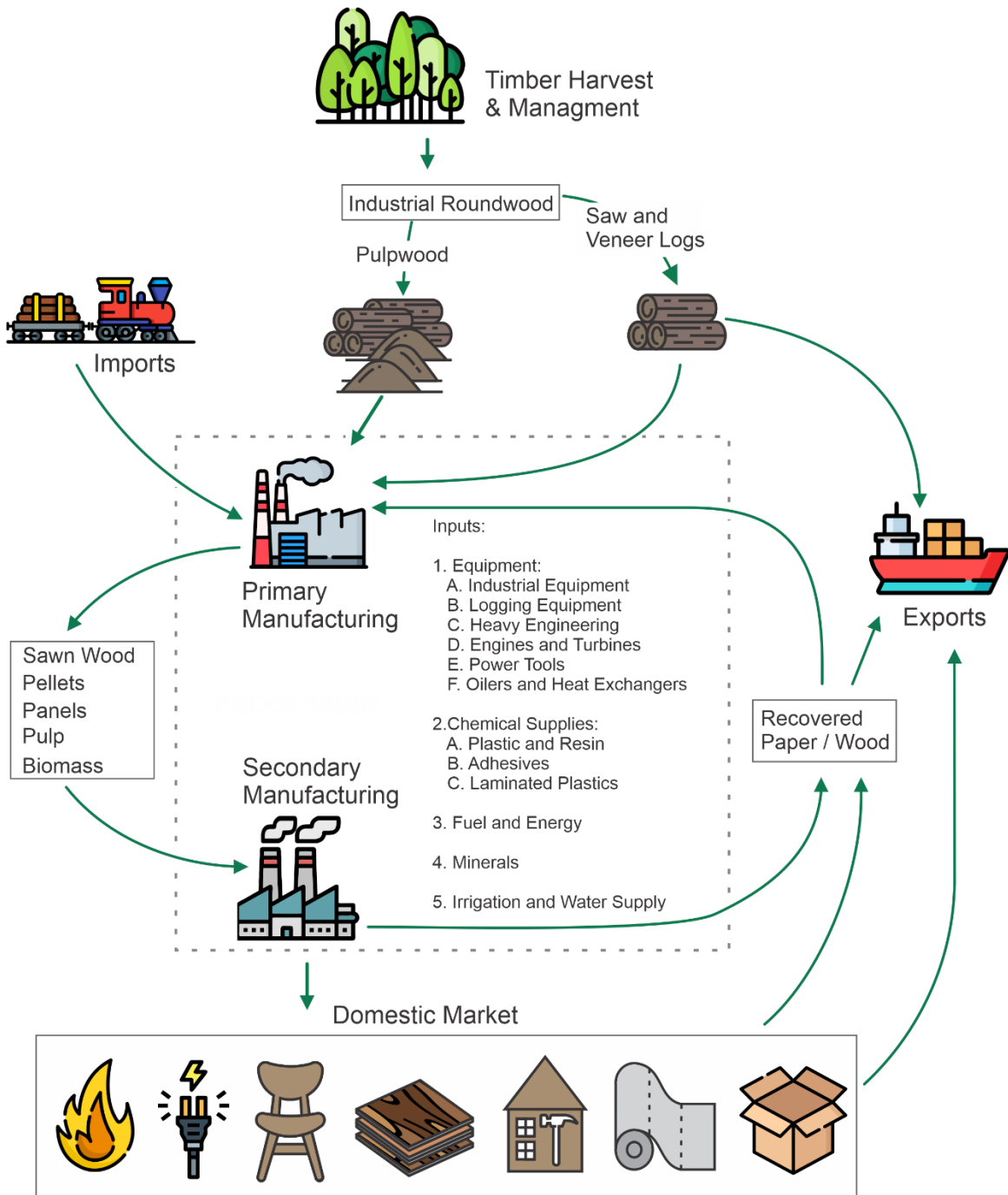
Logistics and rail networks

Proximity to market

Strong R&D sector

Strong specialization in secondary manufacturing

# Log Flows in Maryland



## Vision Statement

The Economic Adjustment Strategy envisions a future in which the economic activities associated with Maryland’s forest products industry supports vibrant communities and strong industry growth while also contributing to a healthy Chesapeake Bay.

## Mission Statement

Take advantage of unique assets, resource diversity, and environmentally engaged consumers to build sustainable markets for Maryland’s forest product entrepreneurs.

The EAS accomplishes this by focusing development efforts on a set of overarching goals that tie together the industry’s common interests, community, and public policy. These goals are summarized below.

### Overarching Goals





Though the statewide wood products industry is large and disaggregated, there are shared goals endorsed by businesses across all elements of the value chain. These goals are summarized in the table below.

	<p><b>Support the existing entrepreneurs</b> who anchor the industry and keep liquidity in local markets.</p>
	<p><b>Raise awareness of the wood products industry</b> by building more supportive relationships within and outside the industry and focusing on the resource’s renewable nature.</p>
	<p><b>Encourage innovation in emerging sectors</b> through entrepreneurial support and a renewed focus on technology commercialization.</p>
	<p><b>Enhance local and international market opportunities</b> by building a brand linked to the industry’s stewardship of natural resources and local economies.</p>

These goals motivate the nine initiatives and fifty-three actions presented in the full Economic Adjustment Strategy.

## Initiatives

Accomplishing the future vision will involve the following initiatives, all of which align with one or more of the overarching goals.

Initiatives				
<b>A.</b> Increase knowledge of the public and policymakers about the forest products industry.	✓	✓		✓
<b>B.</b> Foster a more supportive state and local policy environment.	✓	✓	✓	✓
<b>C.</b> Improve supply-chain coordination.	✓	✓	✓	✓
<b>D.</b> Expand the use of renewable biomass energy.	✓	✓		✓
<b>E.</b> Enhance Maryland forest product industry's export competitiveness.	✓	✓	✓	✓
<b>F.</b> Support entrepreneurial success for wood products businesses.	✓		✓	
<b>G.</b> Improve the adoption of technology and innovative practices.	✓	✓	✓	
<b>H.</b> Expand domestic marketing opportunities.	✓	✓	✓	✓
<b>I.</b> Create a workforce for the future.	✓		✓	

## SUPPORTING THE OPPORTUNITIES

There are numerous opportunities to support the growth and development of the Maryland forest products industry. These include support for both traditional domestic and international markets. Products include posts and beams, bedding, furniture, cabinetry, and building products as well as emerging and high technology sectors such as renewable energy, advanced materials, nanoscale manufacturing components, and petro-chemical alternatives. To support these endeavors, there are important precursor policy and economic development activities outlined in the full report. Those requiring immediate action include:

- Create statewide wood innovation and wood energy teams.
- Expand use of statewide incentives for forest industry development activities, especially in Opportunity Zones.
- Develop a Thermal Renewable Energy Credit (TREC) for thermal energy produced as a by-product of electricity generation using qualified woody biomass.
- Update Maryland's definition of "Qualified Biomass" to include all wood and wood residues.
- Include the forest products industry in the states' economic development strategy.
- Create a state purchasing preference for Maryland forest products modeled after the "Farm to Institution Bill" passed by the state legislature.
- Establish models and guidelines to assist Maryland counties with the inclusion of forest-related activities within comprehensive plans in a manner consistent with the inclusion of agriculture.
- Shift Maryland Green Building standards to favor local wood products.

# Western Maryland



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## Recovering from Disruption

Western Maryland is home to a strong historical forest industry. Predominantly hardwood, the timber volume is growing, especially with the closure of the Verso Luke Mill. The loss of the paper mill was a disruptive change to landowners, loggers, timber harvest management, and the rest of the economy. It incurred the loss of demand for a million tons of pulpwood and further increased timber export to mills in West Virginia, Pennsylvania, and Ohio.

The industry has also experienced various challenges over the years, including declines in sawmill capacity, limited timber availability due to small tract sizes, and business transition concerns. Despite this, regional assets can be leveraged to recover and strengthen the industry.

To recover lost demand, the industry is looking for ways to add higher value to the resource through applied research at regional universities and business recruitment. Targets could include companies that are focused on advanced materials made from timber. The region's unique location enables strong cooperative efforts with The Greater Cumberland Committee, West Virginia University, and the Appalachian Hardwood Council, which can further enhance the timber economy.

### TIMBER RESOURCE

*Key species:* oaks, yellow-poplar, cherry, maple

*Sawlogs:* 25%

*Pulpwood:* 75%

### TIMBER TRENDS

*Growing timber resource*

*Trees are growing larger*

*Increase in high-grade sawtimber*

*Declining removals*

*Opportunities for harvests*

*Net exports of timber*

### INDUSTRIES IMPACTED

*Logging (1133):* cut timber, transport timber, and produce wood chips in the field

*Sawmills and Wood Preservation (3211):* saw logs into various products including wood chips

*Engineered Wood Mfg. (321213):* producing mass timber components (e.g., CLT, Glulam, I-joists)

## INDUSTRY STATS

*Revenue:* \$303.6 MM

*Firms:* 101

*Employees:* 1,317

*Timberland:* 570,759 ac.

*Timber:* 1.12 BCF

*Private Forestland Owners<sup>1</sup>:* 3,167

<sup>1</sup> Greater than 10 acres

## KEY ASSETS

5 Sawmills (14 MBF capacity)

CSX Rail line

Forestry programs at FSU and Allegany College

Vacant Luke Mill

Community supports forestry and related activities



## Key Opportunities

### Wood Pellet Manufacturing

The Verso Luke Mill facility can be repurposed to produce more environmentally friendly wood pellets and other advanced materials. Wood pellet manufacturing uses similar equipment to pulp manufacturing and can be augmented with pyrolysis capabilities to produce advanced wood pellets. Specifically, there are opportunities to attract businesses that have developed proprietary processes to produce advanced wood pellets and chemical products without generating toxic by-products such as black liquor. Ultimately, wood pellet manufacturing can power regional- and community-level bioenergy projects.

### Hardwood CLT

There is an opportunity to attract hardwood cross laminated timber (CLT) manufacturing to take advantage of the region's yellow poplar resource. Yellow poplar is the most promising species since it is strong, abundant, inexpensive, and has good mechanical properties compared to softwoods. About 24% of Maryland's hardwood inventory is yellow poplar. (1.13 billion cubic feet). Western Maryland has 86.4 million cubic feet, Central Maryland has 503.0 million cubic feet, and Southern Maryland has 406.5 million cubic feet.

### Biomass Energy and Biochar Project Development

With the current availability of one million tons of pulpwood, Western Maryland has the potential to support and develop significant wood energy projects. With the appropriate supply chain elements in place, the region's wood supply could be used to supply inputs to a regional network of community and institutional heat and power systems or a large, utility-scale energy project. Biochar is a by-product that can have agricultural and stormwater mitigation applications. Some of its benefits include increased nutrient and water retention, improved soil structure and biology, and decontaminated soil and water.

### Advanced Materials and Wood Products Development

There is an opportunity to augment existing R&D efforts in Western Maryland and establish connections with other innovative businesses in Maryland using wood to develop advanced materials (e.g., transparent wood, insulating wood, lightweight and high-strength wood). These companies are often unaware of the timber resources and manufacturing capabilities required to scale. R&D and supporting services will play a critical role in establishing a supply chain for advanced materials manufacturing, retaining innovative firms, and bringing products to market.

## SUPPORTING THE OPPORTUNITIES

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- Economic Development Strategies
  - Create a wood innovation team.
  - Develop project development planning support.
  - Support grant writing for regional projects.
  - Target industry recruiting.
  - Develop adult and continuing education for industry workforce support.
  - Educate local officials and public about the benefits of renewable energy.
- Policy Strategies
  - Develop a TREC for thermal energy produced as a by-product of electricity generation using qualified woody biomass.
  - Expand definition of *Qualified Biomass* in the Renewable Portfolio Standard.
  - Create a state purchasing preference for Maryland wood products.
  - Improve permitting of logging permits and zoning allowances for wood energy.

# Eastern Shore

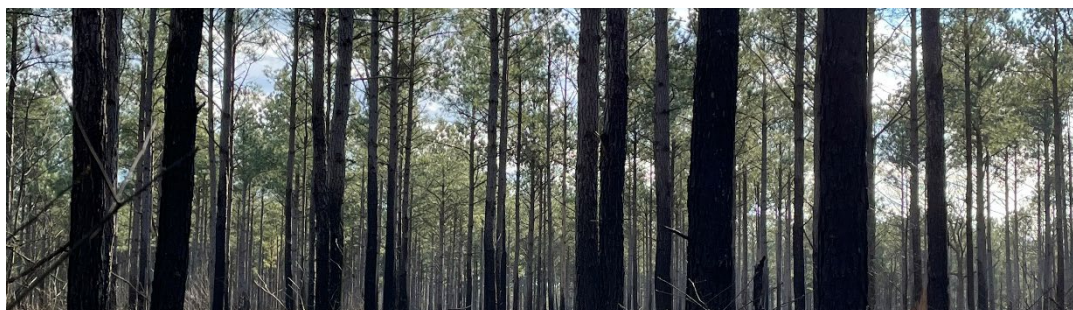


Photo: Elizabeth Hill

## Adapting to Geographic and Economic Challenges

The Eastern Shore is home to one-third of the state’s timber resources, but mill closures, limited capacity to process large timber, and changing land ownership patterns have created challenges. Despite this, the industry has been adapting and taking advantage of new opportunities.

Forest industry raised questions about timber availability, particularly from public lands. DNR lands are not quite 20% of Eastern Shore forests, but they are a backbone for wildlife habitat, rare species delisting efforts, and an increasingly important wood supply. Continued land conservation will help keep forests rural, but industry concerns highlight the need for closer coordination on public land wood supply. Private landowner trends toward managing forests for wildlife also affect harvest rates and types.

Still, as timber resources have grown, existing firms and new entrepreneurs see opportunities to harvest accessible timber, process it in primary mills, and use it for products like pilings, furniture manufacturing, wood pellets. Within the last year, piling manufacturing has expanded and a new pellet mill was built. A sawmill is also reopening in 2021 and connections are being made across the Bay. To ensure long term stability and growth, technical and professional support is required to tackle the impacts of new technologies, policies, and regulations.

### TIMBER RESOURCE

*Key species:* pines, soft maple, sweetgum, and oak

*Sawlogs:* 36%

*Pulpwood:* 64%

### TIMBER TRENDS

*Growing timber resource*

*Trees are growing larger*

*Increase in high-grade sawtimber*

*Declining removals*

*Opportunities for harvests*

### INDUSTRIES IMPACTED

*Logging (1133):* cut timber, transport timber, and produce wood chips in the field

*Sawmills and Wood Preservation (3211):* saw logs into various products including wood chip and shavings

*Other Wood Product Mfg. (3219):* millwork, flooring, cut stock, and other products

*Poultry (1123):* raising poultry for meat and egg production

### INDUSTRY STATS

*Revenue:* \$112.4 MM

*Firms:* 128

*Employees:* 822

*Timberland:* 729,135 ac.

*Timber:* 1.89 BCF

*Private Forestland Owners<sup>1</sup>:* 4,786

<sup>1</sup> Greater than 10 acres

### KEY ASSETS

9 mills (>31 MBF capacity)

High-quality softwood inventory

New capital investment and plant modernization

Diversified product and market base

Large standing inventory

## Key Opportunities

### Support Expansion of Forest Products Industry

After undergoing consolidation due to mill closures, new investment is reinvigorating the Eastern Shore's forest product industry. Existing entrepreneurs and new start-ups plan to continue this growth trajectory. As operations grow and new players enter the market, entrepreneurs are seeking support in several key areas. With increased competition for forested areas, it is critical to ensure that sufficient access is provided for industry to safeguard long term investment. Second is the nature of regulatory controls for both land use and plant and equipment operations. For instance, without primary milling operations listed as an allowed use in zoning, growth and expansion becomes time-consuming and costly or restricted entirely. Lastly, the need to have a ready and qualified workforce is becoming a growth limiter. Expanding programs like Untangled Minds and WorkKeys may be necessary to sustain expansion.

### Logistics Solutions

The peninsular location of most mills on the Eastern Shore can make efficient logistics a significant challenge. As a result, it affects both the cost and availability of inputs as well as access to markets. Finding a systems-based solution that fits the full transportation and procurement needs of the industry would be beneficial. Such a system would have embedded traceability and record-keeping systems to support the supply chain transparency required for building products, consumer products, and export markets.

### Timber Exchange Through Baltimore

Baltimore and the surrounding urban areas are seeing a rebirth in secondary manufacturing and export capability as well as interest in biomass energy. These trends are creating demand for both high-quality pine timber as well as chips and biomass. Simultaneously, urban and suburban tree harvesting is making an excess supply of hardwood species that may serve the Eastern Shore's unsupplied demand. Developing marketing, procurement, and transportation linkages to bolster domestic trade between these timber sheds would be beneficial.

## SUPPORTING THE OPPORTUNITIES

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- Economic Development Strategies
  - Fund expansion of workforce development programs such as Career and Technical Education in partnership with industry.
  - Host tours of local forest products supply-chain businesses.
  - Expand relationships between economic development and the industry.
  - Pilot logistics and traceability platform to improve market efficiency.
  - Expand the capability of the Maryland Forest Industry Resource Viewer to support improved resource access and long-term planning.
- Policy Strategies
  - Improve zoning ordinances to support development and expansion of primary and secondary mills.
  - Develop conservation easements that encourage healthy forests and renewable timber harvest in lieu of continued fee simple state land acquisitions.
  - Update state forest land acquisition policies to consider economic impact on the industry.
  - Develop consistency in Maryland forest management regulations.
  - Shift Maryland toward green building requirements that favor local wood products.
  - Improve policies that allow wood energy projects.

# Central Maryland



Photo: Andy Cook, Baltimore City Government

## Positioned for Innovation

Central Maryland is densely populated and urbanized. The region has a few small sawmills, which face limited growth opportunities due to small tract sizes and burdensome local logging regulations. Instead, 87% of the firms are involved in making products such as millwork, flooring, panels, cabinets, furniture, pallets, prefabricated homes, and converted paper products.

Since most timber removals come from residential removals and real estate development, manufacturers depend on importing timber from other regions. Still, there is significant interest in using the 1.1 million fresh-tons of urban wood waste generated each year along with repurposing reclaimed wood from urban renewal projects. Much of this urban wood supply comes from arborists and municipalities, which can be used to fuel innovative secondary markets and biomass energy.

Ultimately, the region is positioned to develop innovative forest product businesses, supply chains, and value chains. The regional firms can access the Port of Baltimore, logistics and rail networks, industrial real estate (Tradepoint Atlantic) and a strong R&D sector at federal labs and research institutions. In the past, many innovations developed in Central Maryland have been capitalized elsewhere. Moving forward, there are opportunities to retain talent and the resulting economic impacts.

### TIMBER RESOURCE

*Key species:* yellow poplar, oaks, maple, and mixed urban tree canopy

*Sawlogs:* 50%

*Pulpwood:* 50%

### TIMBER TRENDS

*Growing timber resource*

*Trees are growing larger*

*Increase in high-grade sawtimber*

*Declining removals*

*Opportunities for harvests*

### INDUSTRIES IMPACTED

*Landscaping Services (561730):* provide landscape and tree care services

*Engineered Wood Mfg. (321213):* making mass timber components (e.g., CLT, Glulam, I-joists)

*Other Wood Product Mfg. (3219):* making millwork, flooring, cut stock, and other products

*Furniture Mfg. (3371):* making household and institutional furniture

## INDUSTRY STATS

*Revenue:* \$1.77 B

*Firms:* 775

*Employees:* 6,727

*Timberland:* 550,194 ac.

*Timber:* 1.75 BCF

*Private Forestland Owners<sup>1</sup>:* 5,722

<sup>1</sup> Greater than 10 acres

## KEY ASSETS

6 mills (11 MBF capacity)

Port of Baltimore

Logistics and rail networks

Proximity to market

Strong R&D sector

Specialized in other wood product manufacturing jobs

## Key Opportunities

### Urban Wood Aggregation

Most urban wood waste is landfilled, incinerated, or converted to compost, mulch, and firewood. However, there are opportunities to convert urban wood into lumber and secondary or niche products that garner higher prices. Accomplishing this requires investing in hard and soft infrastructure to aggregate, sort, pre-process, and distribute urban wood for optimal use. Sort yards such as Baltimore City's Camp Small, workforce development, and coordination with arborists and local governments will be crucial for aligning the supply chain. Innovation Works is already coordinating the key players to re-establish the region as a center for wood product manufacturing.

### Wood Product Manufacturing

Given the region's assets and urban wood resources, several opportunities warrant additional research and investment. These include thermally modified wood, a cooperage, and a woodworking incubator or accelerator. Thermal modification can turn low-value wood into a high-value and environmentally friendly product. A cooperage can use short-length logs generated by arborists to make staves and barrels to supply a burgeoning local craft beverage industry. Finally, an incubator or accelerator would provide essential equipment, skills training, and business development support to create jobs in manufacturing millwork, flooring, panels, furniture, and other secondary products.

### Wood Energy and Biochar

Much of the urban wood waste remains low-grade or non-merchantable. Wood thermal facilities can use this wood waste to generate affordable and clean electricity, steam, heat, and biochar. The local supply presents opportunities for community-scale combined heat and power plants and medium-scale operations co-located with manufacturing. Also, biochar is a by-product that can have agricultural and stormwater mitigation applications. Some of its benefits include increased nutrient and water retention, improved soil structure and biology, and decontaminated soil and water.

## SUPPORTING THE OPPORTUNITIES

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- Economic Development Strategies
  - Create a wood innovation team.
  - Target industry recruiting.
  - Develop adult and continuing education for industry support.
  - Develop workforce development programs in partnership with CTE programs.
  - Educate local officials about the benefits of biomass energy and biochar.
- Policy Strategies
  - Expand definition of *Qualified Biomass* in the Renewable Portfolio Standard to include invasive species. Encourage waste-to-energy and zero-waste initiatives to reduce the share of woody biomass in municipal solid waste.
  - Explore the development of a carbon offset program involving hardwood products.
  - Preserve industrial zones for wood product manufacturing.
  - Educate landowners and residents on the benefits of using urban wood waste.
  - Encourage mass timber construction.

# Southern Maryland



Photo: Edouard Tamba on Unsplash

## A Niche Oriented Industry

Southern Maryland is characterized by small, farm-level mills which are primarily owned by the Amish and Mennonite communities. A number of small logging firms meet local mills' needs but rely heavily on mills in Virginia and Pennsylvania for adequate product demand. With high development pressure, loggers in this region often compete with land clearing companies to supply timber. This stifles timber prices, which in turn hampers sustainable forest management.

The Verso closure also impacts the region since that mill drew significant volumes of pulpwood from Southern Maryland. The timber resource, particularly oak and poplar, offer opportunities for expansion of the primary manufacturing sector. There are also opportunities for community-scale, biomass energy projects. Outside its former role with Verso as a pulp supplier, there are few relationships between the Southern Maryland industry and the rest of Maryland.

Within the region, Amish and Mennonite businesses make green lumber for heavy construction and building materials, small structures, furniture, cabinets, and other consumer wares. Such operations are horizontally integrated, harvesting wood from their own property, milling the timber, which is then made into specialized, niche products.

### INDUSTRY STATS

Revenue: \$31.6 MM

Firms: 61

Employees: 279

Timberland: 303,678 ac.

Timber: 914 MMCF

Private Forestland Owners<sup>1</sup>: 1,158

<sup>1</sup> Greater than 10 acres

### KEY ASSETS

11 mills (31.5 MBF capacity)

Proximity to high value consumer market

Strong Amish and Mennonite community structure

Strong existing local product brand

### TIMBER RESOURCE

Key species: yellow poplar, sweetgum, white oaks, pines

Sawlogs: 45%

Pulpwood: 55%

### TIMBER TRENDS

Trees are growing larger

Increase in high-grade sawtimber

Net export of timber resource

Opportunities for harvests

### INDUSTRIES IMPACTED

Sawmills and Wood Preservation (3211): saw logs into dimensional lumber

Veneer, plywood and engineered wood product manufacturing (3212): make veneer, plywood, structural wood members, panels

Other Wood Product Mfg. (3219): millwork, flooring, cut stock, and other products

Furniture Mfg. (3371): make household and institutional furniture

## Key Opportunities

### Urban Wood Aggregation

Rapid urbanization in the region means that Southern Maryland should consider joining Central Maryland in creating a linked system of urban wood aggregation facilities tied together by shared software systems. Such systems would enable traceability, transaction, and certification for clients ranging from DIY woodworkers to wood energy projects.

### Unique Building Product Promotion

With a unique species mix dominated by yellow poplar, Southern Maryland would benefit from promoting the manufacturing and sale of mass timber and other unique building products such as thermally modified wood, hardwood cross laminated timber (CLT), and panel veneers. In addition to serving niche markets for uses such as decking, outdoor panels, bridges, acoustic walls, and small building kits, they would increase the need for species like yellow poplar that have seen steady declines in demand and market price. Building or expanding mills for this purpose may require the adaptation of local zoning ordinances.

### Develop a Wood Product Branding

The strong regional identity, combined with small vertically integrated mills and a large consumer market, makes the development of a branding and marketing program a logical next step in supporting sales growth. Furnishings, cabinets, and small wares are the most likely markets to respond to such activities. As these markets expand, small manufacturers indicate that more advanced workforce skills will be necessary.

### Wood Energy at the Community Scale

With abundant low-value species and an increasing supply of urban wood waste, the region should support the adoption of community-scale wood energy 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.

## SUPPORTING THE OPPORTUNITIES

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- Economic Development Strategies
  - Work with regional and statewide partners to develop a local wood branding program akin to local food marketing programs.
  - Fund expansion of workforce development programs in partnership with industry and CTE programs.
  - Host tours of local forests and wood product businesses.
  - Expand relationships between economic development and the industry.
  - Educate the public on the connection between forest health and water quality.
- Policy Strategies
  - Improve zoning ordinances to support development and expansion of primary and secondary mills.
  - Develop consistency in local forest management regulations.
  - Create a Maryland wood products purchasing preference.
  - Update definition of *Qualified Biomass* in the Renewable Portfolio Standards to include all wood products.
  - Develop consistency in Maryland forest management regulations.
  - Shift Maryland toward green building requirements that favor local wood products.
  - Improve policies that allow small CHP projects.

# Implementation

## Implementing the Plan

Maryland’s Forestry EAS recommends nine initiatives with fifty-three actions that will provide a long-range plan for solidifying and enhancing the state’s forest products industry. To successfully implement the recommendations, industry, agencies, communities, and related non-governmental organizations must effectively collaborate, communicate, and coordinate to put the plan into action.

### Focus on Impact

Strategic plans are commonly developed by a single entity, which simplifies implementation. However, with this EAS, implementation is tricky because it involves specific actions from disparate and often disconnected organizations. Each organization has its own mission, vision, work plan, and resource limits. None has a specific mandate to implement the EAS successfully, and there is currently no entity stepping forward to take up the mantle.

Given this challenging starting position and the very limited resources and capacity of the entities with stated interests in positive outcomes, it is important to focus on achieving several quick wins in a few, high impact areas. The following table highlights those actions, associated with possible implementation partners, that can bring the greatest benefit to the EAS and can be supported within existing resources or by outside funding.

The following table is a list of the actions that should be implemented as quickly as possible. The balance of the recommended initiatives and actions may be executed in the future, time and resources permitting

Immediate Actions	Responsible Agencies and Partners	Potential Funding
<p>Legislative Actions</p> <ul style="list-style-type: none"> <li>Extend Thermal Renewable Energy Credits (TREC) to woody biomass.</li> <li>Change definition of “Qualified Biomass” in Renewable Portfolio Standards to include all wood and wood by-products.</li> <li>Update Green Building Standards to encourage greater use of local timber.</li> <li>Support greater presence of wood and forest products in Climate Action Bill.</li> <li>Establish an informal Timber Caucus.</li> </ul>	<p>Agencies:</p> <ul style="list-style-type: none"> <li>Dept. of Commerce (DOC)</li> <li>Dept. of Natural Resources (DNR)</li> <li>Dept. of Environment (MDE)</li> <li>MD Energy Administration (MEA)</li> <li>Department of Planning (MDP)</li> </ul> <p>Industry:</p> <ul style="list-style-type: none"> <li>Maryland Forests Association (MFA)</li> <li>Association of Forest Industries (AFI)</li> </ul>	<p>Not applicable</p>



Immediate Actions	Responsible Agencies and Partners	Potential Funding
<p>Administrative Actions</p> <ul style="list-style-type: none"> <li>• Improve access to phytosanitary facilities at or near the Port of Baltimore.</li> <li>• Expand funding for forestry-related economic development actions.</li> <li>• Add forest products to state Economic Development Strategy.</li> </ul>	<p>Agencies:</p> <ul style="list-style-type: none"> <li>• DOC</li> <li>• DNR</li> <li>• MDE</li> <li>• MD Dept. of Transportation Port Administration (MDOT MPA)</li> </ul> <p>Industry:</p> <ul style="list-style-type: none"> <li>• Tradepoint Atlantic</li> <li>• MFA</li> <li>• AFI</li> </ul>	<p>Public - agency budgets, incentive funds</p> <p>Private – corporate and philanthropic</p>
<p>Organize Industry Action</p> <ul style="list-style-type: none"> <li>• Coordinate supply chain development.</li> <li>• Provide policy support and advocacy.</li> <li>• Perform interagency and interregional liaison functions.</li> <li>• Support small contract carbon trading.</li> <li>• Conduct education and outreach.</li> <li>• Support applied research and development.</li> </ul>	<p>Industry:</p> <ul style="list-style-type: none"> <li>• MFA</li> <li>• AFI</li> <li>• Reclaimed Urban Wood Project (RUWP)</li> <li>• The Great Cumberland Committee (TGCC)</li> <li>• BalTerm – Baltimore Forest Products Terminal</li> </ul>	<p>Private – corporate and philanthropic</p> <p>US EDA technical assistance program</p> <p>Appalachian Regional Commission (ARC)</p>
<p>Entrepreneurial Incentives</p> <ul style="list-style-type: none"> <li>• Support emerging secondary manufacturing industries.                             <ul style="list-style-type: none"> <li>◦ Entrepreneurial support services</li> <li>◦ Business acceleration</li> <li>◦ Financial incentives</li> </ul> </li> <li>• Assist with biomass energy project development.</li> <li>• CEO roundtables to encourage business to business interaction.</li> </ul>	<p>Agencies:</p> <ul style="list-style-type: none"> <li>• DOC</li> <li>• MARBIDCO</li> <li>• Tri-county Councils</li> <li>• Local SBDC’s</li> <li>• Local economic development</li> <li>• Southern Maryland Agricultural Development Commission (SMADC)</li> </ul> <p>Industry:</p> <ul style="list-style-type: none"> <li>• MFA</li> <li>• RUWP</li> <li>• TGCC</li> </ul>	<p>Private – corporate and philanthropic</p> <p>US EDA technical assistance program</p> <p>ARC</p>
<p>Public outreach and education</p> <ul style="list-style-type: none"> <li>• Policymaker tours</li> <li>• Industry fact sheets</li> <li>• Media relations</li> </ul>	<p>Agencies:</p> <ul style="list-style-type: none"> <li>• DOC</li> <li>• DNR</li> <li>• MDE</li> <li>• MEA</li> <li>• MDP</li> <li>• MARBIDCO</li> <li>• Tri-county Councils</li> <li>• SMADC</li> <li>• TGCC</li> </ul> <p>Industry:</p> <ul style="list-style-type: none"> <li>• MFA</li> <li>• RUWP</li> </ul>	<p>Rural Maryland Council</p> <p>Private – corporate and philanthropic</p>
<p>Collaborative forest resource planning</p> <ul style="list-style-type: none"> <li>• Improve permitting processes for logging.</li> <li>• Better secure timber supply from state lands.</li> </ul>	<p>Agencies:</p> <ul style="list-style-type: none"> <li>• DNR</li> <li>• University of Maryland (UMD)</li> </ul>	<p>Not applicable</p>

Immediate Actions	Responsible Agencies and Partners	Potential Funding
<ul style="list-style-type: none"> <li>Formalize regular communication between state forest managers and the local industry.</li> </ul>	<ul style="list-style-type: none"> <li>MDP</li> <li>MDE</li> </ul> Industry: <ul style="list-style-type: none"> <li>MFA</li> <li>RUWP</li> </ul>	
Collaborative economic development planning <ul style="list-style-type: none"> <li>Develop targeted business recruitment, expansion, and retention plans.</li> <li>Create guidelines and standards for working forests in local comprehensive plans.</li> <li>Support forest products manufacturing as an “Allowed Use” in local zoning codes.</li> <li>Support cost reduction efforts to make industry more competitive, such as lower gas tariffs and simplified wood boiler permitting.</li> <li>Workforce development.</li> <li>Develop model zoning ordinances to support forest product value chain.</li> </ul>	Agencies: <ul style="list-style-type: none"> <li>DOC</li> <li>DNR</li> <li>Local economic development</li> <li>Secondary and post-secondary schools</li> <li>UMD</li> <li>Tri-county Councils</li> </ul> Industry: <ul style="list-style-type: none"> <li>MFA</li> <li>RUWP</li> <li>TGCC</li> </ul>	EPA - Smart Growth America Grant US EDA - TAP ARC Rural Maryland Council Private – corporate and philanthropic
Market development <ul style="list-style-type: none"> <li>Brand development.</li> <li>Improve international trade program.</li> <li>Increase supply chain visibility and traceability.</li> <li>Risk-based assessment certification.</li> </ul>	Agencies: <ul style="list-style-type: none"> <li>DOC</li> <li>DNR</li> <li>Tri-county Councils</li> <li>SMADC</li> <li>TGCC</li> </ul> Industry: <ul style="list-style-type: none"> <li>MFA</li> <li>RUWP</li> </ul>	US EDA ARC USDA – Wood Innovation Grant USDA – Rural Business Development Grant
Forest products innovation team <ul style="list-style-type: none"> <li>Create research and development teams with research institutions and federal labs.</li> <li>Develop incentive funds to pursue applied research in wood products and renewable energy.</li> <li>Create a technology transfer platform to ensure local intellectual property is used by local companies.</li> </ul>	Agencies: <ul style="list-style-type: none"> <li>DNR</li> <li>DOC</li> <li>UMD Center for Environmental Science (CES)</li> </ul> Industry: <ul style="list-style-type: none"> <li>MFA</li> <li>Innovation Works (IW)</li> </ul>	US EDA ARC USDA – Wood Innovation Grant USDA – Rural Business Development Grant
Wood energy team <ul style="list-style-type: none"> <li>Assist with project development.</li> <li>Engage in outreach and education.</li> <li>Support supply chain development and certification.</li> </ul>	Agencies: <ul style="list-style-type: none"> <li>DNR</li> <li>DOC</li> <li>UMD CES</li> <li>MEA</li> </ul> Industry: <ul style="list-style-type: none"> <li>MFA</li> <li>IW</li> </ul>	USDA – Wood Innovation Grant

## Develop Long-Term Support

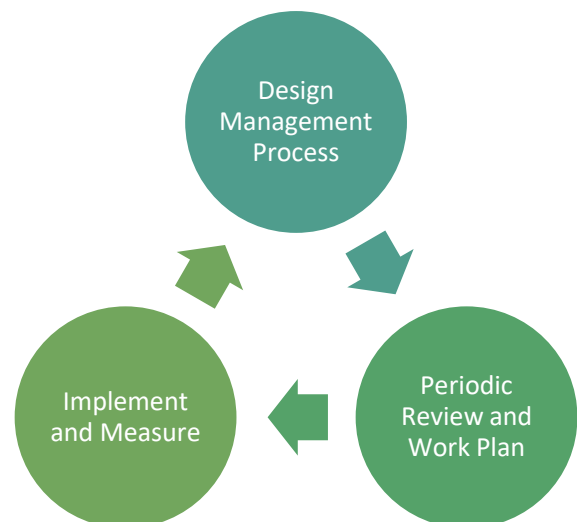
Successfully protecting and expanding the forest products industry will require increased value chain integration, which will enable businesses to capitalize on the advantages of the marketplace as well as long-term commitment by all levels of industry and government. The fiscal requirements for technology transfer, workforce development programs, and directed entrepreneurial support programs mean the EAS will need in-state industry coordination and sustained financial support.

Typically, this funding would be generated by industry itself, but with the Maryland industry's small and fragmented footprint, that is unlikely to happen in the near term. Thus, funding will have to be leveraged from existing sources with the expectation that modest increases in funding from programs like the Mel Noland Woodland Incentive Fund and private organizations like the Reclaimed Urban Wood Project can be used to match grant funds. New program funding may be discovered through nontraditional partnerships with conservation and other philanthropic organizations that do not have a longstanding relationship with forestry but can be encouraged to support the climate and healthy Bay objectives associated with the plan.

## Update the Plan

The EAS provides a future vision for the industry as well as a strategic direction for achieving that vision. Because the industry is dynamic, both the vision and strategy will change in unexpected ways. These changes will require amendments to the strategy.

Developing a process to accommodate ongoing changes while keeping the EAS relevant is critical to its success. A long-term EAS steering committee, made up of relevant stakeholders, should be established to update the strategy, develop annual work plans, and coordinate implementation. At a minimum, the committee should produce an annual work plan that includes specific actions, a budget note, staffing requirements, and other information as needed. Periodic review of the full EAS is also expected and should follow a three-year review schedule.



The graphic above summarizes the update process. The steering committee must spend time establishing a comprehensive set of process guidelines. For example, they may need to develop standard processes for collecting and reviewing implementation metrics and determining the points at which action is required. Similarly, they will need to develop policies and procedures for regional and industry-led reviews and a format for the work plan. Finally, they need to engage partners to design an effective way to implement the work plan.

## The Necessity of Coordinated Action

The Maryland forestry community is represented by many organizations and agencies, but while all are well intentioned, none are positioned to integrate the entire supply chain. Thus, the state lacks a single group with the vision, resources, and immediacy to oversee the process. The ACDS project team strongly urges the creation of a new forest products industry association or the expansion of an existing organization representing the interests of the full value chain across the entire state.

A broader advocacy organization led by the forestry community is needed to realize the opportunities outlined in this document. This kind of leadership is required, because many of the elements are inter-related and need to be developed in concert. Sufficient resources and investment in coordination across the value chain will unlock the benefits of well-managed forests to our rural and urban communities.