Adapting, Improving, and Creating Maine’s New Forest Economy

University of Maine

Adam Costanza
Sustainable Manufacturing and Climate: Sustainability Metrics Program Manager

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A Big Footprint in North America

- 33 Member companies
- 81 Mills
- ~40% of P&P manufacturing
- ~40% of wood products manufacturing
- ~92 Million hectares of forests (227 Million acres)

- 103 Member companies
- 335 Mills
- ~80% of P&P manufacturing
- ~35% of pellet production
- 33 Million acres of forests

- 3 New Zealand Mills + Forestland
NCASI = Solutions

Solving problems, saving our Members time and money for 76 years. Our technical expertise encompasses all environmental aspects of the forest products industry.

- Regulations
- Wood products
- Sustainable Manufacturing
- Climate, Carbon & GHGs
- Forest management
- Air quality
- Water quality & Aquatic biology
- Chemical management
What Led You Here?

- Forest Products Industry (FPI) manufacturing or R&D
- Researcher, including students
- Forester, logger
- Ecology, wildlife
- Policy, business development, economist
- Curious outsider to FPI
How did we go from this:
What happened?!

- Change in market demand
- Great recession
- Environmental regulations
- Lagging infrastructure upgrades
- High energy prices
- Labor costs...
Maine’s Next-Gen Forest Economy

- **Adapting**
  to changing markets
- **Improving**
  on working models
- **Creating**
  novel products & solutions
Value of FPI in U.S. $284 Billion

Graphic Paper

Packaging

Specialty
Androscoggin: Verso  
Rumford: ND Paper  
Skowhegan: Sappi
Good → Better
Circular Economy: A Growing Mindset
Circular/Bio/Forest Economy
Forest Bioeconomy

**FPI Will Lead the Next-gen Bio-based Economy**

- Advanced fibers
- Cellulosic sugars
- Thermochemical fuels
- Lignin
- Extractives
- Cellulose nanocrystals (CNC)
- Cellulose nanofibers (CNF)
- Biocomposites
- Microfibrillated cellulose
- Biochar
- Wood fiber insulation
- Polylactic acid (PLA)
Collaborate With Experience

From: metsafibre.com/en/about-us/Production-units/Bioproduct-mill/Pages/Bioproducts.aspx
Collaborate With Experience
“Today, our forest products industry is experiencing a remarkable revitalization driven by world-class innovation. With the signing of this MOU, Maine will partner closely with Finland to share expertise, leverage resources, and implement best practices to grow our economies and ensure that our forests play as integral role in our future as they have in our past.”

Janet Mills - Governor of Maine
Creating The Future Forest Economy – VIDEO ATTACHED
Truly Novel = High Risk / High Reward
• Many players
• Tight IP control
• Tougher env. regulations
• Trade & tariffs
• Low unemployment
• Aging of expertise
• Fiber costs
• Competing products
• Forest health
• Supply chain...
Emerging Issue: PFAS

- Compiling and evaluating industry data
- Guidance on laboratory contracting and data auditing
- Supporting mill sampling activities
- In-house PFAS analysis (LC-MS/MS)
- Developing threshold values of regulatory interest for effluents, residuals, and products

PFAS Analysis – Sample Collection Instructions for Wastewater
- [ncasi.org/resource/ncasi-general-pfas-sampling-guidance](ncasi.org/resource/ncasi-general-pfas-sampling-guidance)

PFAS in the Environment – Review of the science and navigating regulatory activity
- [ncasi.org/events/pfas-in-the-environment](ncasi.org/events/pfas-in-the-environment)

PFAS: Recent Developments and Analytical Considerations
Sustainable Fiber Source & **Much More**

If the biogenic carbon cycle is in balance, atmospheric \( \text{CO}_2 \) levels do not change over time. Fossil carbon emissions always increase atmospheric \( \text{CO}_2 \).
Pests Are Here – More Will Come
Next-gen Products

Logging Supply

P&P Mills

Labor, Wages & Ages

Wood & Pellet Mills
Goal 5: Stay Organized, Focused, and Persistent...

Need tactics for:

- Being nimble
- Partnering
- Using experts in and outside Maine
- Incorporating the risk of inaction
- Missteps and improvement
- Beyond $12 Billion (and not just $)

"Strategy without tactics is the slowest route to victory. Tactics without Strategy is the noise before defeat."

- Sun Tzu
If you don’t have a firetruck, build one on the way to the fire.

— Carlton Owen, US Endowment
Let’s Keep Talking!

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919-941-6409
www.ncasi.org
acostanza@ncasi.org