Efficiency Investment Opportunities that Promote Sustainable Forestry in Russia

Public Lands and Private Enterprises

by
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Investment Strategies for Local Economies
To begin, we’ll focus our sustainable forestry “spotlight” on 3 arenas:

✓ Better *resource* utilization.

✓ New *production* technology.
**Better resource utilization:**

- “Refining” Logs
- Trash to Cash
- “Character” Wood

And . . . just for fun – use US markets as examples.
Governments and Certification

- Trash logs
- Government “sells” for $.25¢ per m³
Log sort & sales yard sold for $80 per m³
# “Refining” Logs: Canada’s case study

## Price Differentials Due to Added Yard Sorts

<table>
<thead>
<tr>
<th>New Sort</th>
<th>Old Sort Price</th>
<th>New Sort Price</th>
<th>Differential (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balsam Fir Peeler</td>
<td>$74.03</td>
<td>$105.15</td>
<td>(+42%)</td>
</tr>
<tr>
<td>Spruce O/S (Dry)</td>
<td>$73.92</td>
<td>$93.09</td>
<td>(+26%)</td>
</tr>
<tr>
<td>Spruce Peeler (Dry)</td>
<td>$89.13</td>
<td>$111.19</td>
<td>(+25%)</td>
</tr>
<tr>
<td>Pine Peeler (Dry)</td>
<td>$79.17</td>
<td>$88.14</td>
<td>(+11%)</td>
</tr>
<tr>
<td>Spruce Bldg. Log (Dry)</td>
<td>$79.17</td>
<td>$111.75</td>
<td>(+41%)</td>
</tr>
</tbody>
</table>
Perception: Only wood with no defect is acceptable in the marketplace.

Facts:

✓ Top grade lumber will always have a market, but . . .
✓ More products are employing lower lumber grades, and . . .
✓ Some markets even pay a premium for “character” wood.
“Character” Wood

Traditional Character Marks:

- Sound knots (1” diameter or less)
- Small holes (pin holes; wormholes)
- Small pitch/gum pockets
- Mineral streak
- Mineral or sap stain
- Grain and color variations
“Character” Wood

Non-Traditional Character Marks:

- Large knots (> 1” diameter)
- Unsound knots
- Bark pockets
- Wane
- Split
- Large wormholes
- Short/shallow checks
- Spalty wood
## “Character” Wood: What is it Worth? Lots!!

<table>
<thead>
<tr>
<th>If production allows for:</th>
<th>% Increased yield in:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Common</td>
</tr>
<tr>
<td>• Marks up to 2” in diameter on both faces of dimension parts</td>
<td>+6.1%</td>
</tr>
<tr>
<td>• 2” marks on one face with other face clear</td>
<td>+3.2%</td>
</tr>
<tr>
<td>• Marks up to 1” in diameter on both faces</td>
<td>+3.3%</td>
</tr>
<tr>
<td>• 1” marks on one face with other face clear</td>
<td>+1.9%</td>
</tr>
</tbody>
</table>
Governments and Certification

New production technology:

- Small log processing.
- Compressed molded processing.
- Simple wood drying improvements.
**Small log & curve saw processing:**

- Efficiently processes 3” – 12” dbh logs, 4’ - 20’ lengths into lumber through single – pass system.
- Handles “sweep” & “snake” in logs by cutting along the curves. Significantly decreases wood loss, increases wood grade.
- Mills report increased recovery of 5% to 30%.
- Full system cost between US $750,000 to US $1mm.
Governments and Certification

The HewSaw Concept...

High Recovery. High Production.

Quality Lumber and Chips.

All from a single pass machine!
Governments and Certification

**Sorbilite: high-compression molding**

- Use wood, plastic, agricultural waste fibers.
- Make substrate & veneer overlay in single pass.
- Turn-key costs = US $2 million US.
Governments and Certification

Trim Block Dry Rack:

✓ Hollow aluminum racks for drying wet trim ends & shorts.

✓ Easy to handle.

✓ Dries multiple widths & lengths.

✓ Very affordable (US $100 each)
Recapping Investment Strategies for Local Economies:

- Better resource use:
  - Refining log sorts & sales
  - Turning trash to cash
  - Cashing in on “character” wood

- New production technology
  - Small log processing
  - New uses for wood fibers
  - Simple wood drying improvements.
Why Governments are Interested in Supporting Certification

Public Investment Strategies
Today, we will will look at:

✓ Examples of government activities in forest certification in:
  • US
  • Canada
  • South America

✓ Reasons for involvement in certification process.

✓ Impacts of involvement.
Why certification of public forestlands in the US?

- Outreach to private landowners to evaluate market-based tools to decrease forest fragmentation & conversion by offering:
  - Transparency to public
  - Reduced-risk learning

- Outreach to legislatures
- Outreach to public
- Fiduciary responsibility
Governments and Certification

Forestland Conversion in US:

- Forest fragmentation and conversion of private forestlands no small matter.
- 20 mm acres projected to be converted by 2020.
- Major net forestland losses occurring in 20 states across US.
Governments and Certification

**US states and fiduciary responsibility:**

- Maximize profitability generated from forest resources:
  - Short-term
  - Long-term

- Must calculate costs for non-sustainable practices:
  - Public pressures
  - Legal pressures

- Must respond to market opportunities.
US market demand for certified wood... no small impact:

✓ Prior to 1999: 2% of total solid wood flow in US

✓ Today: 25% & growing due to Do-It-Yourself (DIY) stores & home construction industry.

✓ Largest DIY store in US (Home Depot) generates:
  - 138 billion US in sales annually
  - 800 new stores each year
Federal agencies: $200 billion US/yr in purchases

“Greening of the Government Act”

By 2005 – at least 5% of wood products purchased by Federal agencies must come from wood resources which have been certified by a program which requires:

- 3rd – party assessments
- Adheres to FSC principles at a minimum
- Has chain-of-custody
- Has annual audits
Governments and Certification

1998 – end of 1999:

**Michigan:**
- 1mm acres
- CSA & FSC

**Pennsylvania:**
- 2.1mm acres
- FSC - only

**Minnesota:**
- 600,000 acres
- FSC - only

**New York:**
- 700,000 acres
- FSC - only
Beginning **2000**: mandate to look at . . .

- Different forest landscapes.
- Different geographic regions.
- Different forest ownerships (where public oversight is involved).
- Different forest management structures.
That lead us to:

- Other state lands across US
- Federal lands
- Native American Nations
- University research & teaching forests
Expanded projects on state lands:

Projects Completed

States electing to participate

Declined to participate

Over 2 million acres included in pilot projects
Project components:

**Washington:**
- 1.2 million acres
- FSC only (no SFI certifiers bid on RFP)
- Trust lands (first in nation)

**California:** (proposed)
- 70,000 acres (all state forests)
- FSC and SFI
- Major old growth stands
- Plus 3 university systems under consideration

**Maine:**
- 480,000 acres
- FSC and SFI (single contract)
### Project components:

<table>
<thead>
<tr>
<th>State</th>
<th>Details</th>
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</table>
| North Carolina | • 55,000 acres (all state forests)  
                  • FSC and SFI  
                  • Duke U., NC State U. |
| Vermont     | • 500 acres  
                  • Marsh Billings Rockefeller National Historic Park  
                  • FSC and SFI |
| Tennessee   | • 156,000 acres  
                  • FSC & SFI pre-assessment  
                  • FSC-only full assessment |
Governments and Certification

Native American Forests—US

- States with certified tribal forestlands
- Tribal projects underway

Represents 16 mm acres of tribal forestlands
Why certification of public forestlands in Canada?

- Majority of total forestland owned by the government.

- *Environmental pressures* endorsing logging restrictions extremely effective.

- Court determinations mandate forest management “agreement” with First Nations.

- Severe quota & tariff restrictions for non value-added product flow into US. Certification currently being considered a “value-added” designation.
Governments and Certification

Canadian FSC Certification:

**British Columbia:**
- 32mm acres

**Ontario:**
- Entire province
Forest certification efforts in South America:

**Bolivia:**
- National forestland management based on certification
- 6mm ha. to be certified by 2003

**Colombia:**
- New effort underway on 600,000 ha of private forestland
- Project focused on women’s health & family issues, and alternative crop generation (vs cocaine cultivation).
More and more public forestland managers are evaluating certification as a means to:

- Provide outreach to private landowners.
- Respond to market opportunities.
- Reduce environmental pressures.
- Increase public & political support.