Country profile / Latvia
COST ACTION E53
Sopron, Hungary
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Global forests... and Latvia

Area – 64 589 km²
Population ~2.3 mill. (2005)
Language – Latvian
Capital – Riga
Currency – LVL (1 EUR ~ 0.7 LVL)
GDP growth – 9.5% (2005)
Forests in Latvia

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1930</td>
<td>24%</td>
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<tr>
<td>1933</td>
<td>25%</td>
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<tr>
<td>1949</td>
<td>27%</td>
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<tr>
<td>1961</td>
<td>36%</td>
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<tr>
<td>1973</td>
<td>38%</td>
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<tr>
<td>1983</td>
<td>41%</td>
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<td>2003</td>
<td>45%</td>
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</tbody>
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Forest Tree Species distribution, %

- Pine: 38.0%
- Spruce: 19.4%
- Birch: 29.3%
- Other: 13.3%

Ownership of Forest land, % (2003)

- State owned forests: 50.2%
- Private forests: 42.0%
- Other: 7.8%

Current increment and the volume of timber harvest million m3 per year

- Timber harvest: 11.7
- Gross current increment per year: 16.5
Production volume of processing industry in 2005

- Other products: 75%
- Sawmilling, planing and impregnation: 13%
- Veneer and plywood: 5%
- Wood and wood products: 21%
- Carpentry and joinery products: 2%
- Furniture: 4%
- Other wood products: 0.5%
- Wood packaging: 0.5%
Export of wood products in 2005

- **Fuelwood**: 8.6%
- **Sawntimber**: 40.1%
- **Roundwood**: 13.2%
- **Furniture**: 10.4%
- **Further processing products**: 38.1%
- **Plywood**: 8.5%
- **Carpentry and joinery products**: 7.6%
- **Packaging**: 3.1%
- **Chipboard**: 2.0%
- **Profiles**: 1.6%
- **Structural timber elements**: 0.6%
- **Matches**: 0.2%
- **Fibreboard**: 0.1%
- **Veneer**: 1.0%
- **Other wood products**: 3.0%
Development of sawmilling industry

Sawn wood, 1000. m³*

* - 10 largest companies are making more than 50% of whole volume
Structure of sawmilling industry

- Sawntimber production volume in 2005 reached 4.2 million cubic meters.
- Large sawmills – capacity up to 200,000 cubic meters sawntimber annually, standardised products.
- Small and medium size companies – providing customised products.
Quality control in wood processing sector

- Image/volume scanning of sawlogs (measurement and quality control), sawntimber (WoodEye), veneer for plywood production (surface scanning);
- In-line moisture control (Wagner, AB Brokhuis)
Quality control in wood processing sector

- Sawntimber grading:
  - Visual grading according to customer specifications (BS 4978, LVS 184 etc.);
  - Machine strength grading (large sawmills or service providers; Computermatic, Ersson, Dynagrade);
  - Change of standard (EN 519 expired, EN 14081 introduced).
The dependence between bending strength and modulus of elasticity of spruce (*Picea abies*) as well as of pine (*Pinus sylvestris*) grown in Latvia has been summarised. Based on about 300 and 100 test results available for spruce and pine, respectively, the conclusions were:

- There is good correlation between bending strength and the local modulus of elasticity.
- The differences between bending strength and modulus of elasticity of spruce (*Picea abies*) grown in Latvia and Nordic countries is within reasonable agreement.
- Hence, it is reasonable to include Latvia in the Nordic common growth area when settings are determined for grading machines which uses the modulus of elasticity to estimate the bending strength.
- Settings based on modulus of elasticity and derived for spruce (*Picea abies*) may be used also for pine (*Pinus sylvestris*). However, if more optimal settings are needed they shall be derived in accordance with the relevant European standards.
- Report has been presented in CEN TC124/WG2/TG2 meeting, May 2003
R&D institutions within forest and wood sector in Latvia

- State Forest Research institute SILAVA
- Latvian State Institute of Wood Chemistry
- Forest Faculty of Latvian Agricultural University
- Forest and Wood Product Research and Development Institute
Forest and Wood Product Research and Development Institute

- Forest and Wood Product Research and Development Institute (FWPRDI) has been developed during implementation of the Phare 2001 ESC programme for Latvia in 2004
- Continuous cooperation between industry, represented by Latvian Forest Industry Federation (LFIF) and Latvian State Forest JSC “Latvijas Valsts Meži”, and academic society represented by the Forest Faculty of Latvia University of Agriculture
- Institute was registered in December 2004 as commercial company
Fields of activities of laboratories

- wood and wood based product microstructure and physical properties research
Fields of activities of laboratories

- mechanical tests and research of the wood and wood based product mechanical properties
Fields of activities of laboratories

- determination of the material classes for the reaction to fire and research
Accreditation of laboratories

- according to the standard LVS EN ISO/IEC 17025:2005
- mechanical tests of solid and glue laminated wood and wood based panels in bending, tension, compression and shear according to various EN standards
- Single Burning Item (SBI) test according to EN 13823
- furniture strength and durability tests
- surface resistance to wear tests according to EN standards
- together more than 30 testing methods were approved by the Latvian Accreditation body LATAK
Capacity

- permanent staff of 16 employees
- experts from related academic, research institutions and professional organisations are involved for implementation of specific projects
- laboratories are equipped with updated facilities, appliances and devices with total area over 1000 m²
- further training facilities equipped with updated presentation and computer technologies
- location at University with Forest Faculty and Wood Processing Department
- relation to industry: directly to companies and professional organisations
- established contacts and cooperation with similar institutions abroad
Thank you for your attention !!!