Forestry & market of wood products in Greece

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## Present situation of Greek forests

<table>
<thead>
<tr>
<th>Use</th>
<th>Land area (ha)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests</td>
<td>3.359</td>
<td>26.0</td>
</tr>
<tr>
<td>Agricultural land</td>
<td>4.720</td>
<td>36.6</td>
</tr>
<tr>
<td>Grazing land</td>
<td>1.396</td>
<td>10.8</td>
</tr>
<tr>
<td>Settlements</td>
<td>271</td>
<td>2.1</td>
</tr>
<tr>
<td>Other uses</td>
<td>3.154</td>
<td>24.5</td>
</tr>
</tbody>
</table>
Mainly in mountainous areas:
- Elevation < 600 m. → 41% of forest area
- Elevation > 600 m. → 59% of forest area

Located at high slopes:
- at slopes >25% → 70% of forests

Mainly natural forests (*natural*: 96%, *plantations*: 4%)
Characteristics of Greek forests

1. Forests with high slopes
Characteristics of Greek forests

2. Forest fires during the summer
Present situation of Greek forests

- Forests in **continual deterioration** due to poor management, competitive agricultural and settlement uses, intense pasture and summer fires.

- High slopes make harvesting extremely difficult, occurring only during May – Sept. when climatic conditions are favourable (**inappropriate period**)!
General remarks:

Quality of harvested wood shows the following disadvantages:

→ large percentage of **immature wood**.

→ wide annual rings.

→ **lots of defects** \( (knots, compression wood) \).
Forest area by wood species:

**SOFTWOODS**
- Fir, *Abies cephalonica* → 8.5 (% of total area)
- Aleppo pine, *Pinus brutia* → 9.1
- Black pine, *Pinus nigra* → 4.4

**HARDWOODS**
- Beech, *Fagus sylvatica* → 5.2
- Oaks *Quercus sp* → 22.6
- Coppice → 48.4
**ROUNDWOOD**

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity (in m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softwoods</td>
<td>248,000</td>
</tr>
<tr>
<td>Hardwoods</td>
<td>133,000</td>
</tr>
</tbody>
</table>

**INDUSTRIAL WOOD** (wood going for particleboard & MDF)

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softwoods</td>
<td>48,500</td>
</tr>
<tr>
<td>Hardwoods</td>
<td>39,500</td>
</tr>
</tbody>
</table>

**FUELWOOD**

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softwoods</td>
<td>64,000</td>
</tr>
<tr>
<td>Hardwoods</td>
<td>693,000</td>
</tr>
</tbody>
</table>

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*** Imported ca. 400,000 m$^3$ sawnwood and ca. 2,300,000 m$^3$ roundwood mainly from Sweden, Bulgaria, Romania, Finland, Russia etc.***
4 Structure of Greek wood enterprises (in 2010)

Sawmills

- ~100 sawmills, mainly *small enterprises*.
- Only 3 *enterprises* with an annual production higher than 30,000 m³ roundwood.
- Only 10 sawmills with a capacity of 5,000-30,000 m³ while the rest are very small.
Sawmills

• Big sawmills import few tropical roundwood from Africa.

• Level of automation & machinery: *medium*

• Most sawmills carry out *air drying*, while *kiln drying* is rare.

• Equilibrium wood MC is ~12-14%

• *Bluestain* in pinewood causes big economical damage.
**Pallets – Boxes enterprises**

- **60** small enterprises.

- Use mainly poplar & pine wood.

- **7** medium-size enterprises producing more than 100,000 pieces annually.

- **19** companies carry out *heat treatment* process.

- **Level of automation: Low** - except **2** companies with automated lines.
Parquet (flooring) enterprises

- **30** small enterprises, except for 2 big companies.
- Use mainly **oak wood**.
- Use also imported tropical species, mostly from South East Asia and Africa.
- Automation: **Medium**
Quality control & wood products in Greece

I. Sawn timber

• Not known **industrial machine grading** systems in Greece.

• 3 big enterprises use **automatic optimised sawing pattern** technologies; most carry out sawing based on operator’s experience.

• 2 sawmills apply **grading** by **visual inspection**.

• Most sawmills use old machinery.

• Most enterprises are becoming **commercial** companies and imports of timber products are increasing.
II. Problems related to wood moisture

- Most enterprises carry-out **air drying under roof** due to favourable climatic conditions, or even in open field!
- **Kiln drying is rare** (except for parquet enterprises and manufacturers which use tropical lumber).
- Furniture makers prefer to keep the lumber in their warehouses for some period for conditioning, prior to use.
- **Builders** (e.g. roofs) do not demand certain wood MC although they usually prefer imported timber (e.g. Sweden) due to its higher quality.
- **Bluestain in black pine** is a serious problem.
Air drying --- Bluestain in pine wood
III. Quality control relating to wood products

• Harvested timber delays to reach sawmills.

• Due to soil and steep forests, timber contains much of compression wood.

• Fir and black pine wood contain high number of knots and its quality is rather low.

• Due to improper drying and wood abnormalities and defects, often fir and pine sawn timber suffers from twisting and distortion.

• Most sawmills lack a modernised machinery.
Compression wood --- Knots
Market of wood products in Greece: Expectations for the near future

- Heavily dependent on imports from other European countries and Asia (China, Indonesia etc).

- Even lower quality of sawn timber, due to the deterioration of local Greek forests.

Thanks for your attention!