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*Forestry & market of wood
products in Greece*

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Forestry & market of wood products in Greece

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1 Present situation of Greek forests

Use	<u>Land area</u> (ha)	<u>% of total</u>
Forests	3.359	26.0
Agricultural land	4.720	36.6
Grazing land	1.396	10.8
Settlements	271	2.1
Other uses	3.154	24.5

Characteristics of Greek forests

- **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!**)

Present situation of Greek forests

General remarks:

Quality of harvested wood shows the following disadvantages:

- large percentage of **immature wood**.
- wide annual rings.
- **lots of defects** (*knots, compression wood*).

2 Main wood species

Forest area by wood species:

SOFTWOODS

Fir, <i>Abies cephalonica</i>	→	8.5	(% of total area)
Aleppo pine, <i>Pinus brutia</i>	→	9.1	
Black pine, <i>Pinus nigra</i>	→	4.4	

HARDWOODS

Beech, <i>Fagus sylvatica</i>	→	5.2	
Oaks <i>Quercus sp</i>	→	22.6	
Coppice	→	48.4	

3 Annual production of Greek forests

ROUNDWOOD

Softwoods	→	248,000	(in m ³)
Hardwoods	→	133,000	

INDUSTRIAL WOOD (wood going for particleboard & MDF)

Softwoods	→	48,500	
Hardwoods	→	39,500	

FUELWOOD

Softwoods	→	64,000	
Hardwoods	→	693,000	

*** Imported ca. **400,000 m³ sawnwood** and ca. **2,300,000 m³ 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.



Europallet



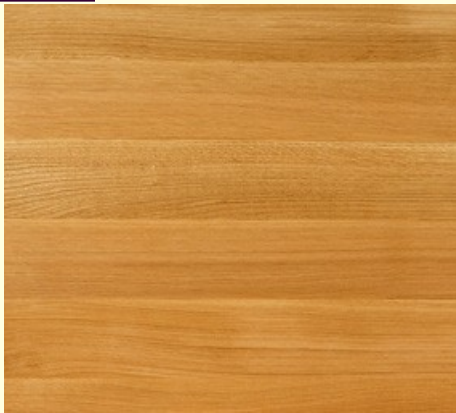
Boxes

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*

Merbau



Oak



5 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.

Old machinery --- Visual grading



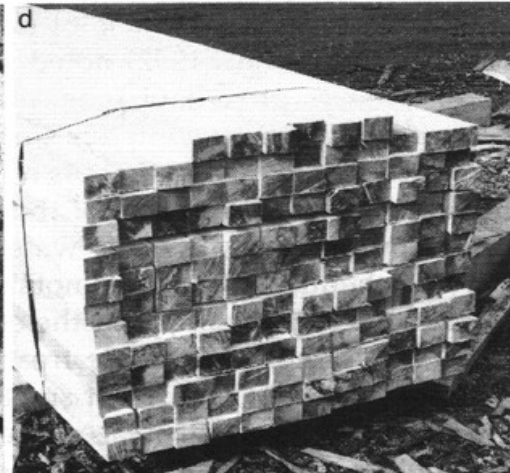
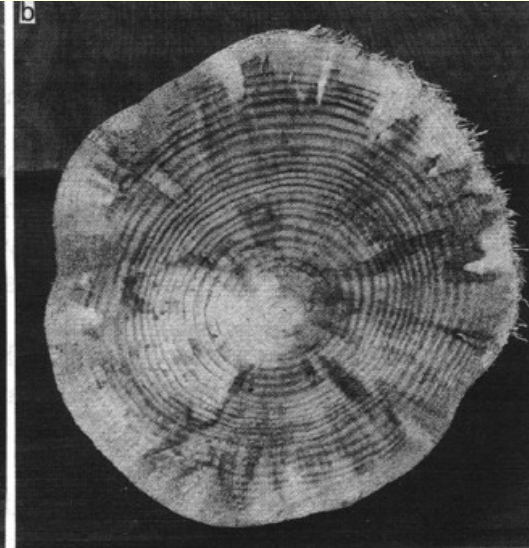
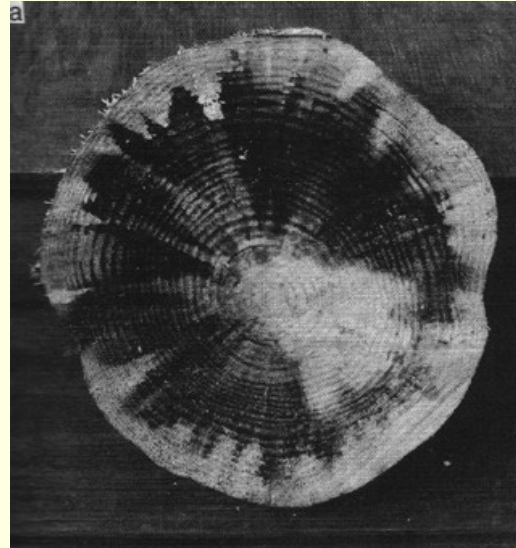
Old machinery



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!