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Forestry & QC of wood products:

Status-quo in Greece

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1. Present situation of Greek forests

Use	Land area (ha)	% of total
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%)

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 performs 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	→	8.5	(% of total area)
Aleppo pine, P. brutia	→	9.1	
Black pine	→	4.4	

HARDWOODS

Beech	→	5.2	
Oaks	→	22.6	
Coppice	→	**48.4**	

3. Annual production of Greek forests (in 2004)

ROUNDWOOD

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

INDUSTRIAL WOOD (wood going for chipboard & MDF)

Softwoods	→	48,500
Hardwoods	→	39,500

FUELWOOD

Softwoods	→	64,000
Hardwoods	→	693,000

Note: Imported ca. **400,000** m^3 **sawnwood** and ca. **2,300,000** m^3 **roundwood** mainly from Sweden, Bulgaria, Romania, Serbia, Finland and Russia.

4. Structure of Greek wood enterprises (in 2006)

Sawmills

- 135 sawmills, mainly small enterprises.
- Only 3 enterprises with an annual production higher than 30,000 m^3 roundwood.
- Only 10 sawmills with a capacity of 5,000-30,000 m^3, while the rest are very small.

Sawmills

- Big sawmills import also tropical roundwood from Africa.
- Level of automation - machinery: medium
- Due to climatic conditions, most sawmills carry out air drying, while kiln drying is rare.
- Equilibrium wood MC in Greece is at ca. 10-15% !
- **Bluestain** in softwoods causes big economical damage.

Pallets – boxes enterprises

- **60** small enterprises.
- Use mainly poplar and 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 for 2 companies with automated lines.

Parquet 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.
- Level of automation: Medium.

5. QC for 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 do grading by visual inspection.
- Most sawmills use old machinery.
- Most enterprises are becoming ***commercial*** companies and imports of timber & wood products are booming !

II. Problems related to wood moisture

- Most enterprises do 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).
- Electrical hygrometers are not very common in use. 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.

III. QC 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 specialised technical personnel.

QC for wood products in Greece:
Expectations for the near future

- Wood enterprises are starting collaborations with Forest Research Institutes and University Institutes in order to get technical assistance in QC matters.

- Very common to accept a Qualification system coming from one importing country (e.g. Quality classes I, II and “unsorted” are in common use when talking about softwood lumber coming from Scandinavia!)

Thank you for your attention !

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