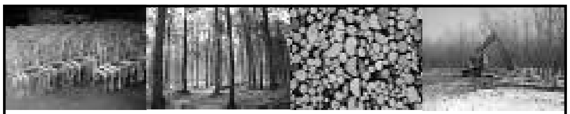


STRUCTURAL CHANGES IN THE ITALIAN FORESTRY SECTOR

Brasov, 7 October 2005

Davide Pettenella
Dipart.Territorio e Sistemi Agro-forestali
University of Padua
davide.pettenella@unipd.it

Paper organisation

- 10 main points to describe Italian forestry sector
- Structural changes:
  Driving forces:
  – Internal
  – External
- Hot topics

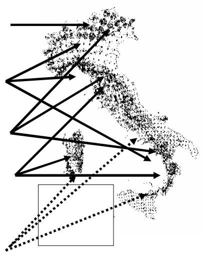
1. Diverse forest environments

Italian flora:
over 5,800 species
5,300 herbaceous and 500 woody

Europe: 7,500 species

5 <u>main</u> forests types:

- Boreal coniferous forests
- Alps and Apennines Pine forests
- Montane Beech forests
- Mixed Oak woods and other mesic forests
- Mediterranean evergreen forest



≅ 150 forest typologies defined at national level

2. Forests = mountain

95% of the forests in hilly and mountain regions:
= less developed areas
(income= tourism and some quality farm product)

→ multi-funcional forests (soil protection, water cycle regulation, fuelwood and timber production, recreation, …)

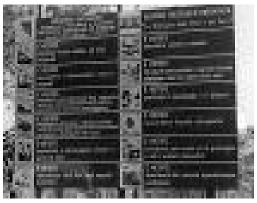
3. Local & small owners

forestland ownership:

- 60% private (former farmers): 3 ha/firm
- 40% public
  - Local municipalities
  - Local communities

→ Local interests are prevailing on general ones

Strong public "command and control" instruments



(air breathing is allowed)

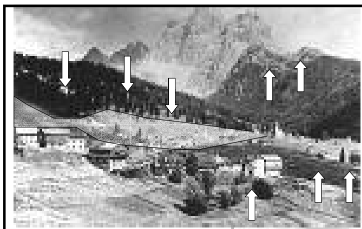
4. Expansion of forest cover

2-3 million hectares under natural conversion to forests (mainly in mountain areas)

1950 = 5.5 M hectares

2005 = 10.2 M hectares

Pink areas = mountain
Black spots = land under conversion



Selva: '50s → '90s

5. Decreasing active management

Positive impacts:

- increased stock
- biodiversity (? not always)

653 protected areas (21 National Parks)

Negative impacts (mainly in Mediterranean areas):

- fires
- un-controlled grazing
- loss of cultural heritage
- homogeneous landscape (→ problems for tourism)
- loss of employment opportunities

Wood production = 8 M cubic metres (60% fuelwood)

NAI = 25-35 M cubic metres

Removals/MAI = the lowest in Europe (after Slovenia – source: FAO)

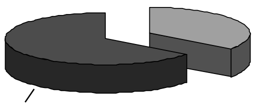
6. Fast growing plantations

Poplar plantations in the Po valley:

- Rotation period: 10 yr
- NAI: 15-20 cm/ha/yr
- IRR = 5-7%

New plantations of **walnut, cherry, ash, maple,...**

Removals of industrial roundwood in Italy



35% from the remaining 6,700,000 ha of forest land

65% from poplar plantations in the plain areas of the Po valley

= 70,000 ha

A clear trend: concentration of forest products supply

	% on total production	
	2000	*2050*
Primary forests	22	5
Secondary forests irregularly managed	14	10
Secondary forests regularly managed	30	10
Plantations with indigenous species	24	25
Plantations with exotic species	10	50

Source: Unasylva, 2001 (Sedjo)

About **34% of the total timber yield in the world actually comes from plantations** (3,5% of the total world forest area)

in 2050 **about 75%**

7. NWFP = commercial products & recreational services

- Change of property rights for many NWFP: from public good to private ones
- Income from mushrooms, chestnut, truffles >> than from timber production

8. A strong, dynamic, flexible wood-working industry

Basic structural data (M Euro)

Turnover	37,000
Exports	15,000
Imports	11,000
Employed	420,000
Firms	90,000

3-4% of the national industrial output

1st world exporter of furniture

the 2nd European importer of wood products

A very large forestry sector (even larger considering the “forest cluster”)

9. Large inports (6th world importer)→ enhanced substitution technology

- Medium Density Fibreboards
- Multi-laminar wood and veneer sheets
- Recycled paper for high AV products
- Engeneered products, Bi-laminated beams, KVH, “T beams”, etc.
- Particle-boards entirely made-up with recycled wood (“Ecological panel”)

10. Decentralisation

- A federal administrative structure in the forest sector
- … but still the State maintains a forest service (*Corpo Forestale dello Stato*)

→ Many different institutional arrangements in forest policy implementation at regional level

In the ’90 a structural change**: a shift of the focus of forest policies from the mountain to the plain area**

Which are the *driving forces?*

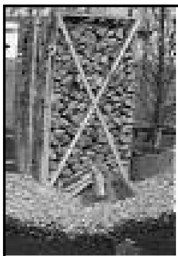
- External and
- Internal factors to the forestry sector

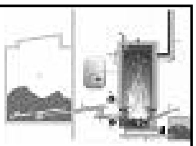
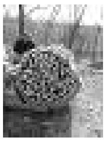
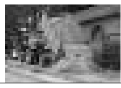
A. The *driving forces:* external factors to the forestry sector

The CAP reform (early ‘90s) = conversion of farm land into plantations

Reg. 2080/92: 105,000 ha of afforestation concentrated in plain area

Energy policy




- Growing interest by the private sector (small scale)
- SRF investments heavily supported by some Regional authorities (Lombardia, Veneto, Friuli Venezia Giulia)
- Large plants for electric power production (Calabria)

The growing demand for new recreational areas and for landscape restoration in peri-urban zones

- “Bosco di Mestre” (Veneto)
- “10 grandi foreste di pianura” (Lombardia)
- New management policy for the watershed of the Venice Lagoon

The need to restore caves and abandoned areas formerly used as industrial sites

Policies for the internalisation of Carbon sequestration function

ARD (art. 3.3 KP):

- **40,000 ha** of new plantations with the RDP funds (**1 Mt CO_2** - 200 MEuro)
- **60,000 ha** of new plantations created with Law 83/1989 (**1 Mt CO_2** - 300 MEuro)
- From Reg. 2080/92 plantations: **1 Mt CO_2**

→ plantations in plain areas

Forest management (art. 3.4):

- Italian cap is too too low

B. The *driving forces:* internal factors to the forestry sector

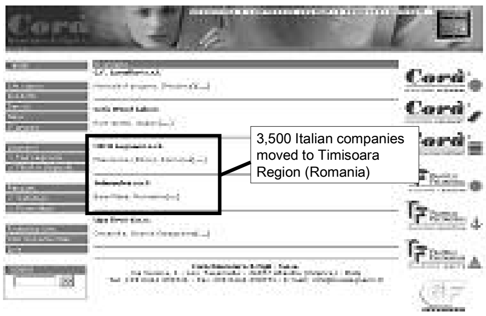
Reduction of domestic demand of high quality wood from mountain areas

Delocalisation

Innovation in wood processing industry (recycling wood fibre, substitution)

Low international prices

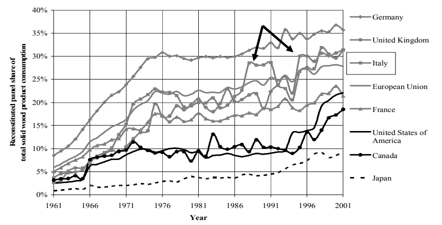
Delocalisation



Innovation in wood processing industry
(increasing use of recovered wood products, substitution)

Saving of virgin fibre and wood material

Growing environmental awareness



Reconstituted panel share of total solid wood product consumption (source: FAO - Whiteman, 2003)

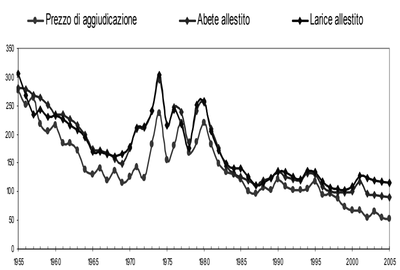
1.8 M tons/year of wood product consumption

Average real prices of conifer industrial roundwood in the Southern Alpine Region (1955-2005)

-82% standing prices (from **276** to **52** Euro/mc)

-68% spruce roundwood on the road side (from **282** to **90** Euro/mc)

-62,6% larch roundwood on the road side (from **306** to **114** Euro/mc)



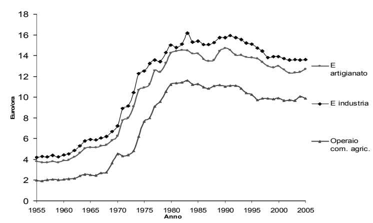
Source: Pettenella & Ciotti (an analysis of 1330 sales in Comelico - Veneto Region)

Labour costs (1995-2005)

+400% in the forest sector (from **1.97** to **9.87** Euro/h)

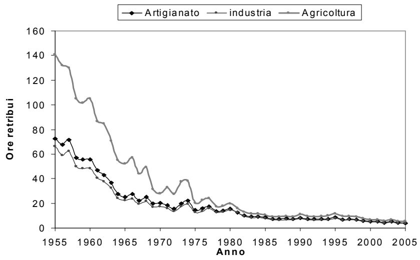
+232% in the wood working SME (artisans) (from **3.82** to **12.69** Euro/h)

+227% in the wood working industrial sector (from **4.16** to **13.61** Euro/h)



Value (at market prices) of 1 cm of wood =

- from 141 to a 5.3 hours of a forest worker
- from 66.4 to 3.8 hours of a wood working SME
- from 72.3 to 4.1 hours in the wood working industry



Hot topics

- Rural development policies in mountain areas: which role of the forest resources?
- Responsible management and trade of wood products: illegal logging, corruption, de-localisation and voluntary instruments for a responsible behaviour

Winter School