




# “Quality control for wood and wood products”



**E53**  
Start date: 04/03/2006  
End date: 05/03/2010  
Year: 3

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## Scientific context and objectives

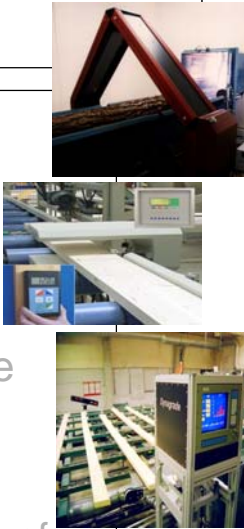
- **Research area: Wood technology**
  - The quality control of both the wood raw material and the final products is crucial for material efficiency and customer satisfaction
- **MoU objectives:**
  - To improve methods of quality control in processing associated with wood and timber
  - To ensure that timber products and components meet the requirements of the users
  - To promote the improvement of specifications for timber products

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**Working groups**

- 1) Scanning for wood properties
- 2) Moisture content and distortion
- 3) Strength, stiffness and appearance grading

– TG) Requirements and the specification of end-use related properties



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**WG2 Moisture content and distortion**




Photo by: Bob Ericson

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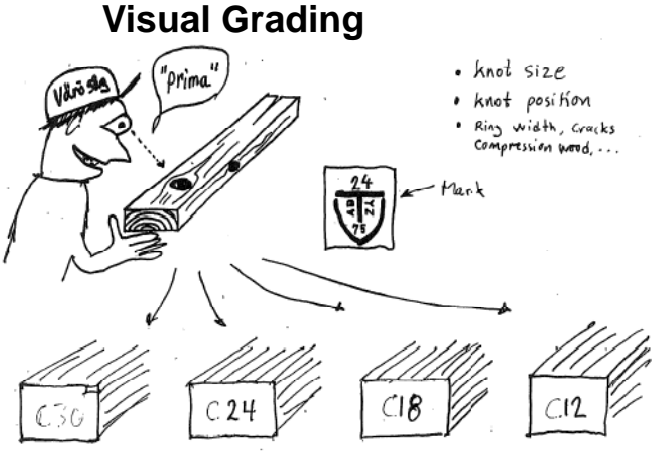


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**WG3 Strength, stiffness and appearance grading**

**Grading using vibrations**


**Visual Grading**



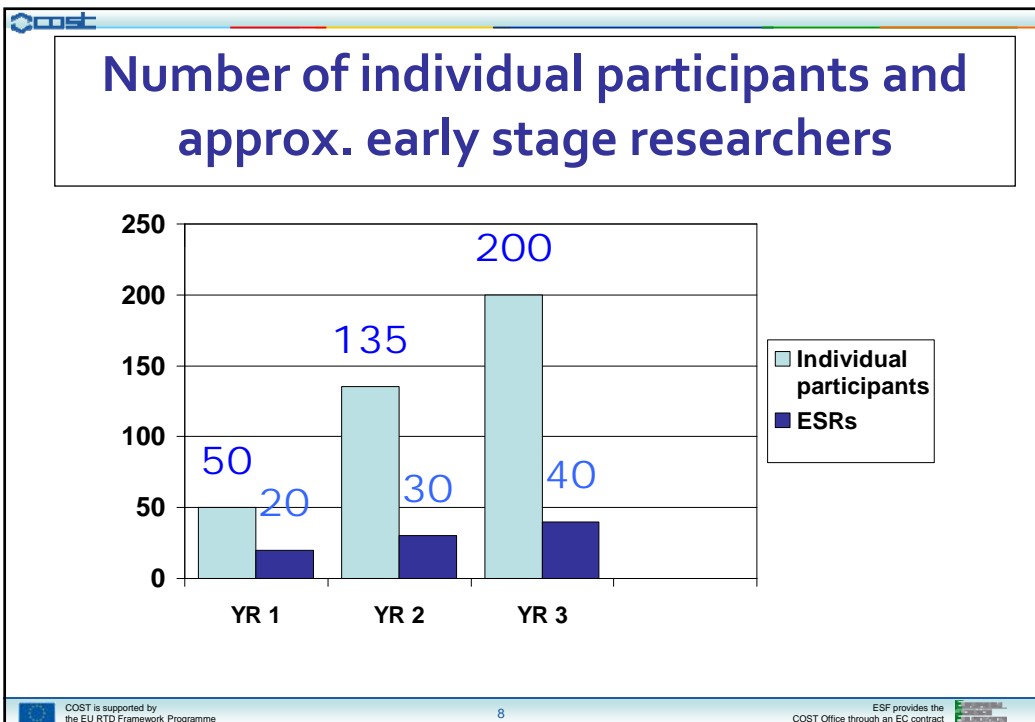
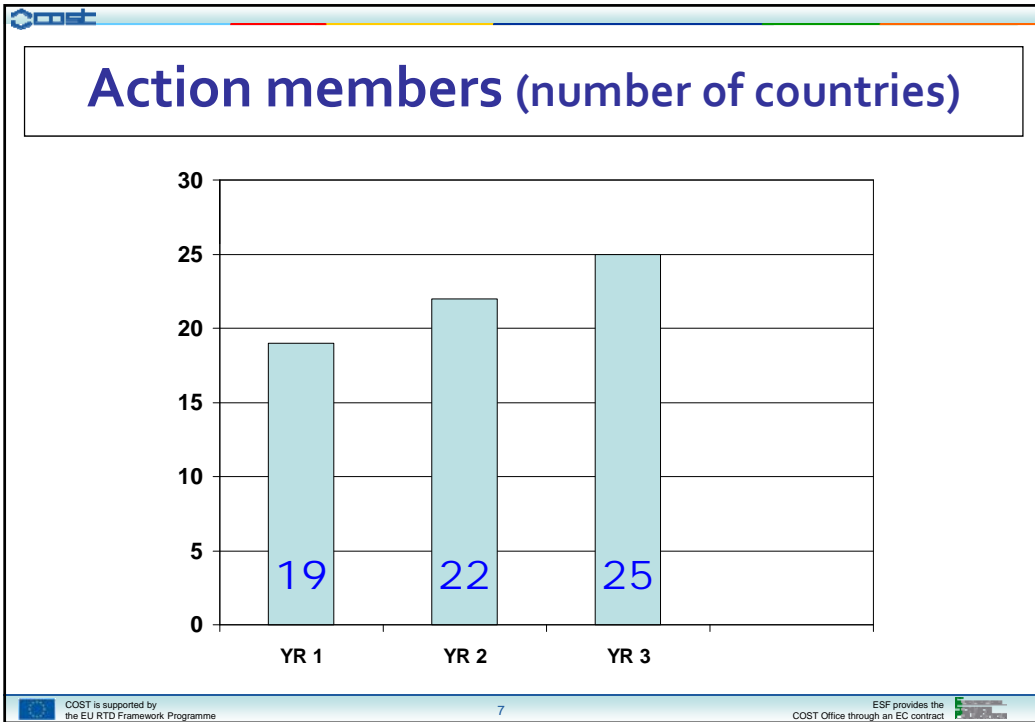
- knot size
- knot position
- Ring width, cracks, Compression wood, ...

Mark

$E_A = 4 \rho L^2 f_{A-1}^2$



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**Use of COST instruments**

	YR 1	YR 2	YR 3
No. of MC / SC meetings	3	4	4
No. of STSMs	1	4	3
No. of workshops / conferences	1	3	2
No. of publications	1	2	2
No. of training schools	1	0	0
GASG (activities)	Poster <a href="http://www.coste53.net">www.coste53.net</a>	Website <a href="http://www.coste53.net">www.coste53.net</a>	Website <a href="http://www.coste53.net">www.coste53.net</a>

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- Significant highlights:**
- **Workshops in Oslo – May 2008**
- **Three separate Working Group meetings/workshops**
    - all very different and successful on their own merits
    - **Decision** to prepare a web-based questionnaire related TG
  - **WG1 workshop on scanning**
    - Essential dimension - active participation of industrial people providing information about industrial needs for the further development of scanning systems for different applications
    - Discussions related to the application of the scanning system
    - Opportunity to narrow the gap between 21 European countries
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 **Significant highlights:**

- **Workshops in Oslo – May 2008**

- **WG2 workshop on drying (moisture content) and distortion**
  - provided information and support for the production of three leaflets for industrial stakeholders
    - a) colour changes and the reasons,
    - b) drying-related deformation and the reasons
    - c) MC-related quality control and its reflection in the system of CEN standards
  - The aim of these leaflets is to transform scientific knowledge into easy-to-understand information for practitioners
- **WG 3 workshop on grading** (largest group in terms of number of participants)
  - provided many interesting presentation and very interesting discussions related to results from Gradewood project (WoodWisdom-Net programme),
  - Gradewood project deals with a major problem for machine strength grading systems such us growth areas, for example


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 **Significant highlights:**

- **Conference in Delft – October 2008**

- **The conference on “End user’s needs for wood material and products”**
- **Attended by over 100 experts and included 32 presentations.**
- **The papers based on accepted pre-reviewed abstracts**
- **The activity have a tangible impact:**
  - The importance of understanding the end user’s needs
  - These needs play an important role in developing timber products
  - It is essential to focus on the important properties and measure them

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 **Significant highlights:**

- **Conference in Delft – October 2008**


- “End user’s needs for wood material and products”
- **The web-based questionnaire was finalised!**
  - The aim was to generate qualitative and quantitative knowledge about the demands and expectations end users in European countries impose on various timber products
  - It was translated from English to fifteen European languages and 25 countries are expected to participate; <http://coste53.questionpro.com/>
  - The results of this survey will help the scientists participating in the Action to focus their work on what matters most to industry and, importantly, its customers

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 **Global dimension**


- Researchers from UBC (Canada) are involved in Action E53. Researchers from Australia and New Zealand exchanged information and showed an interest in our Action and results
- Some identified aims of Action E53 will have follow-up in terms of new research projects, at both national/international level. Many companies showed an interest and are very active

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 **Global dimension** - dissemination efforts

- **Various ways used:**
  - Web: [www.Coste53.net](http://www.Coste53.net)
  - Folder and poster
  - E-mail network
  - Web-based questionnaire
  - **Publications:**
    - State-of-the-art reports, interim reports, proceedings
    - The leaflets are designed to transform scientific knowledge into easy-to-understand information for practitioners
    - Visits and study trips
  - **Articles in scientific and technical journals**
  - **Non-technical publications**

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 **Challenges**

- **Successes and shortcomings:**
  - The main difficulties so far relate to the Task Group for the requirements and specification of end-use-related properties. As there are no research funds in the Action, it was difficult to involve MC committee members in this TG.
- **Future challenges are:**
  - Evaluation of the technical requirements needed for effective quality control of timber products across Europe
  - Broadening of the knowledge base and improvement of measurement procedures

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Thank you for your attention!

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