


Description of best practice

Best practice	
Title	Development of visual and mechanical sorting tools for the enhancement of structural sawn timber
Picture	
Domain	Construction Products Regulations (CE Marking). Structural grading tools for sawn timber. First wood processing industry.
Source of wood	Sawn timber, structural wood
Location	Spain
Implementers	Cesefor, INIA, CETEMAS, Incafust (Forestry and wood sector R&D&I centers)
Actual status	Running
Approach	<p>Structural sawn timber intended for construction must offer similar guarantees to those offered by other materials and products intended for the structural construction sector. For this purpose, it is necessary to develop classification tools that allow manufacturers and marketers to certify the strength and stiffness values of all the wood that is placed on the market (adjusted to the species and origin that corresponds).</p> <p>It is, in addition to being a legal obligation, a tool for the valuation of wood that is enabling a competitive improvement of its industrial network.</p>
Main results	<p>Visual classification tools have been developed for the main commercial wood species found in Spanish forest stands, such as <i>Pinus sylvestris</i>, <i>Pinus insignis</i>, <i>Pinus nigra</i>, <i>Pinus pinaster</i>, <i>Abies alba</i>, <i>Pseudotsuga menziesii</i>, <i>Quercus rubra</i>, <i>Castanea sativa</i> and <i>Eucalyptus globulus</i>. Tools that in many cases enable the possibility of classifying structural sawn timber into three structural qualities, which allows the different qualities of wood that the timber industry places on the construction market to be classified and valued.</p> <p>Mechanical classification systems are currently being developed for the main species of the <i>Pinus</i> genus. This is one more step in the competitive improvement of this type of wood, as it improves the</p>

	<p>classification times and the classifying performance in the different mechanical qualities.</p> <p>Both developments have enhanced the value of the wood of the different wood species characterized, and have promoted its use in construction.</p>
Lessons learned	<p>Technological development of structural sawn timber not only enables it to be directly promoted in the construction sector as a construction element, but also to be incorporated into the manufacture of technological products with high added value, such as glued laminated timber, duos, trios, CLT, prefabricated panels... These are high value-added products that require high levels of competitiveness that cannot be achieved without their main raw material, structural sawn timber, increasing its competitiveness, optimising its manufacturing times and its declared mechanical properties</p>
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Best practice assessment

Region	Spain
Time scale	2011-
Mobilization Potential	300,000 m ³
Kind of wood concerned	Pinus sylvestris, Pinus nigra, Pinus radiata, Pinus pinaster, Pseudotsuga menziesii, Larix sp, Quercus rubra, Abies alba
Sustainability Potential	Very positive
Impact on environment & biodiversity	Positive, it mobilizes wood with a proper forest management
Ease of implementation	Very easy
Economic impact	Structural timber value increases in 10€/m ³ approximately
Job effect	Positive through better competitiveness
Income effect	Positive, more quality timber is mobilized
Specific knowledge needed	Knowledge about Physical-mechanical properties of wood. Harmonized rules needed
Costs of implementation	Around 25,000 € for every strength class and species
Technical readiness level	Applicable
Key information for adoption	Experience on manufacturing and classification of structural timber