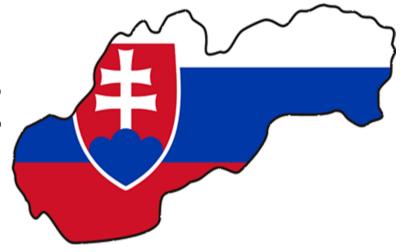
## Ongoing R&D projects in COST member countries

January 2014



## **SLOVAK REPUBLIC**







COST FP1303: Performance

of bio-based building materials

Country: Slovakia

January 2014

# TECHNICAL UNIVERSITY IN ZVOLEN Faculty of Wood Science and Technology

#### The objective of international cooperation:

- Continuation in building relations with foreign partners and institutions
- Actively participation in international scientific organizations and international scientific projects



**IUFRO** 

# TECHNICAL UNIVERSITY IN ZVOLEN Faculty of Wood Science and Technology

#### The key aspects of international activities:

- Participation in educational process and research and development projects with foreign partners
- Development of international cooperation through participation in international programs
- Mobilities of students and academic staff within the framework of ERASMUS, TEMPUS and other



Country: Slovakia

January 2014

# TECHNICAL UNIVERSITY IN ZVOLEN Faculty of Wood Science and Technology

List of ongoing international research projects:

**COST Action IE0601** 

**Wood Science for Conservation of Cultural Heritage** 

**COST Action E 53** 

Quality control for wood and wood products



COST FP1303: Performance of bio-based building materials

- Slovak Chinese Research and Development Cooperation
  Optimization of wood drying processes
- Slovak Czech Research and Development Cooperation Fire Fighting in the natural environment of appropriate techniques in terms of environment acceptance
- Slovak-Ukrainian Research and Development Cooperation
  Modern energy saving technology of plywood
  production from veneer with higher moisture content
- Slovak Polish Research and Development Cooperation
  Survey of consumer attitudes towards wood products



The main objective of research activities at the Faculty of Wood Sciences and Technology during the year 2007-2013:

"Effective and ecological valuation of raw wood material"

in the following areas:



- Quality of wood and other lignocellulosic materials
- Development of wooden material and products
- Interaction of wood with other substances and forms of energy
- Energetic use of wood
- Production of final wood products and wood constructions
- Economic, market and marketing aspects of use of wood and system management of production processes and innovations



# The Development Workshops and Laboratories of the Technical University in Zvolen (since 1971)

- Total area of 8 100 m<sup>2</sup>
- The main mission: to create conditions for activities in educational process, in scientific research, to put into practice the results of scientific research
- Fully equipped engineering workshop: veneer and plywood production (lathe, clipper, press, ...), particleboard and fiberboard production (chippers, dryer, pre-press, press, ...)



### **Mechanical Properties Testing**







### **Pressing**





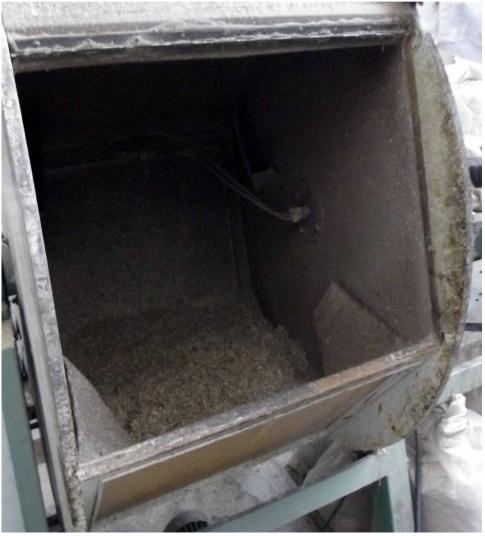
### **Pressing**





## **Adhesive Spraying**





### **Mat Forming**







## **Pre-pressing**





### **Mats of Boards Prepared for Pressing**







# **Equipment for Temperature and Heat Gradient**Measuring during Pressing



#### January 2014

	Properties							Environmental					
INSTITUTE	Natural Durability	Moisture / sorption studies	Resistance to mould	Fire resistance / reaction to fire	Insect /termites / pests	Dimensional stability	Life Cycle Assessments	Whole Life evaluations	Product accreditation	Emission testing	Environmental Product Declaration (EPD)		
Technical University in Zvolen	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	No		



#### January 2014

	Laboratory tests							Field tests					
INSTITUTE	Natural Durability	Mould resistance	Insect /termite testing	Leaching / weathering	Sorption studies	Dimensional stability	In ground contact tests	Out of ground contact tests	Natural weathering	Surface performance / coatings	Moisture data logging		
Technical University in Zvolen	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes		





## Society of Wood Science and Technology

P.O. Box 6155 Monona, WI 53716-6155

The 57th SWST International Convention

will be held: June 23-27, 2014 in Zvolen, Slovakia

The Convention will be held in conjunction with:

- 7th Wood Structure and Properties Conference
- and the 6th European Hardwood Conference