Wood for Health

More wood for health care buildings in Europe

Wood calms us down, affects indoor air quality and sequesters carbon. To support the natural good properties of wood, a new research project is developing coatings that prevent the growth of microbes and drawing up European guidelines for using wood in health care buildings and premises. The aim of the WOOD for HEALTH project is to promote the use of wood in health care buildings. The project is led by the University of Oulu from Northern Finland.

In addition to the University of Oulu, the project partners include three institutes from Latvia, Norway and Germany focused solely on wood research, two companies from Latvia and Germany manufacturing coatings and a Swedish architecture agency that specialises in designing hospital buildings. To support the project operators, both national groups and an international expert group will be set up.

The increasing popularity of wood construction is boosted by environmental factors, in particular. The most significant of these might be the fact that a wooden building sequesters carbon from the atmosphere for decades. However, people often think that wooden surfaces get dirty easily and are hard to clean, which has limited their use in premises with high hygiene requirements. This is unfortunate because the beneficial effects of wood on indoor air quality are known, as is the fact that wooden surfaces are considered calming and warm. Therefore, the WOOD for HEALTH project is directly based on the needs of constructors, the wood industry and administrators of hospital buildings.

The project will study the cleanliness and cleanability of wooden surfaces, develop innovative antimicrobial and breathable coatings and compile the first European guidelines on using wood in different premises and surfaces of health care buildings. Three different approaches have been planned for the development of new coatings, and both coatings that create a film as well as completely breathable coatings without films are included. Natural polymers are also being experimented with in the coatings as antimicrobial factors instead of traditional toxic chemical compounds. Processed and unprocessed wooden surfaces are being studied in terms of hygiene, mechanical and chemical durability, light resistance, flammability and water vapour permeability. All of these are significant properties in health care premises.

According to **Professor Vesa Virtanen**, Director of Kajaani University Consortium from University of Oulu, taking environmental aspects into consideration and international cooperation guarantee our future: **Jukka Silvennoinen**, CEO of CrossLam Oy, a Finnish company that participates in an expert group that supports the research and development project, says that the project is a significant and necessary product development effort: “As a construction material, wood is so

versatile, and the antiseptic additional property provided by the coating makes it possible to use wooden structures and surfaces even more diversely."

The WOOD for HEALTH project is part of the ERA-Net ForestValue program. The project will last three years.

ForestValue

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Project web page