ForestValue

# NEWSLETTER #6 DECEMBER 2020

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No

ForestValue

# Dear ForestValue Friends,

in the June Issue 2020 I started this column with *"What a spring we have had due to the coronavirus outbreak..."* and ended it with *"Hopefully there will be no major wave of new infections which would bring a second wave of lockdowns"*. But now we are facing the fact that Europe was hit hard by a coronavirus second wave and although the vaccine will land soon, it is not that the pandemic will end and everyone can throw their masks away. Even experts foresee a long path ahead, so we will have reflections of this pandemic much longer than we could have thought possible, or wanted to believe a few months ago.

Despite the pandemic, I was happy to learn at the virtual ForestValue Research Programme Midterm Seminar held on 17-18 November that most of the 17 projects selected for funding under the 1st Joint Call of the ForestValue Research Programme have managed to find innovative ways to run the planned activities in their transnational collaborations and have thus been able to progress their work according to their original workplans. However, of course the pandemic has hit a few projects more than the others and after next spring we need to run a thorough analysis of the consequences and then start implementing necessary actions. For more news about the Midterm Seminar, please have a look at an article later in this newsletter.

During the summer and autumn a group of ForestValue funders have intensively been working on the preparations for the second ForestValue Joint Call (to be launched in January 2021, see Call Pre-Announcement) and the preparations are now almost finished. At the moment we have a group of 15 funders from 10 countries contributing to the Joint Call but although not all ForestValue funders are officially participating in the call, this does not mean that an organisation willing to participate in the call would be automatically out if there is no funder from one's country listed. Like in connection with our previous call, also this time partners from countries which are not officially participating in the call are also encouraged to join a consortium. It is just that these so-called "third country" partners must finance their activities from other sources and need to state in advance the source of funding for their part in the project.

For some reason it feels like time went by really fast this fall, it might be that this feeling is due to this remote working in a bubble. Anyway, we have only a few weeks to Christmas, so I would like to take this opportunity to thank you all for your collaboration with ForestValue in 2020 and on behalf of the entire ForestValue consortium from our bubble to yours, I wish you a very Merry Christmas and a happy holiday season! Stay safe and take care.

Best regards
Mika

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Background photo by Sebastian UNRAU via unsplash.com

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# ForestValue and the new EC Dissemination & Exploitation Booster for H2020 projects

***ForestValue's application for Horizon Results Booster (HRB) services was approved by the European Commission in August 2020. The service is expected to strengthen the capacity of the 17 ForestValue projects in disseminating and exploiting their research results, to maximise the dissemination of results and to offer a wider and more complete view to potential users.***

In November 2019 the European Commission launched a new call for expression of interest for projects funded under H2020 and FP7 seeking support to disseminate effectively and/or boost their exploitation potential. In order to help the beneficiaries get a step further and better implement their D&E actions, the European Commission offers free consulting services through the Horizon Results Booster.

The Horizon Results Booster offers 3 types of services: i) Help and guidance for: creating a results portfolio with other projects (module A), creating/executing common dissemination strategy for a cluster of projects (module B), improving existing exploitation plan (module C), ii) Tailor made support services to develop a business plan, and iii) Assistance, coaching and mentoring for go-to-market activities.

After discussing with the Project Officer, ForestValue decided to apply for the Module A (identifying and creating the portfolio of R&I project results) under the Service 1 (Portfolio Dissemination & Exploitation Strategy) to support the 17 ForestValue projects to create a portfolio of results for which a common dissemination adds value. In August 2020 ForestValue then got positive news: the application had been accepted by the European Commission.

All Horizon Results Booster (HRB) services will be delivered through a dedicated platform, and ForestValue has now taken the first steps to get the service started. Due to the unusually large number of members it is expected that the Portfolio of R&I Results Report which will include joint target stakeholders and common portfolio of results to disseminate would be available early spring 2021.

HORIZON RESULTS BOOSTER

An initiative of the European Commission

## PRE-ANNOUNCEMENT OF A JOINT CALL FOR RESEARCH PROPOSALS

The ForestValue Research Programme announces the upcoming call for joint European research projects with an indicative total public funding budget of over 11 million €. **Indicative Call opening: 19.01.2021**

The call will address the whole forest-based value chain in the following three areas:

1. Sustainable & multifunctional use & management of forests, to maximize their contribution to all SDGs
2. Building with wood from various perspectives
3. Analysis of benefits, synergies & trade-offs in the use of forest biomass

15 funding organisations/ programme managers from following countries plan to participate in the call: Finland, France, Latvia, Germany, Ireland, Norway, Poland, Slovenia, Sweden, Turkey

For an indicative launch and full information package see the website https://forestvalue.org/joint-call-2021/.

**Please note that the information above is provisional and subject to change in the official call announcement being published with the call opening**

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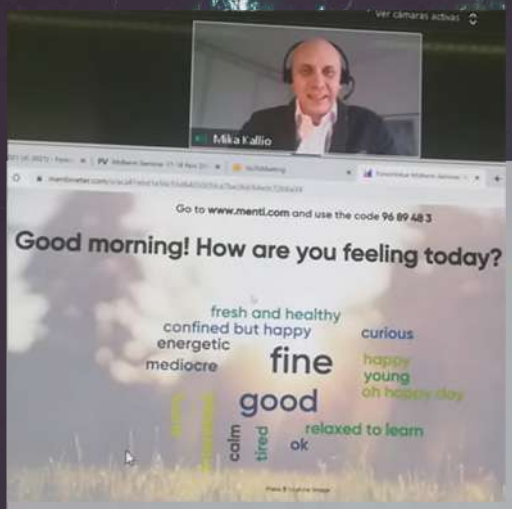


# ForestValue co-funded projects present interim results at the Mid-term Seminar

As announced through various channels, ForestValue held its Midterm Seminar past 17th & 18th November, 2020. Given the current circumstances related to COVID-19 restrictions, the seminar had to take place virtually. Organized by the State Research Agency (AEI, Spain) and the Ministry of Agriculture and Forestry of Finland (MMM), the event brought together researchers and stakeholders from industry, academia and policy-making organizations in the forest-based sector.

The seminar was conducted by ForestValue coordinator Mr. Mika Kallio and arranged according to three thematic sessions, chaired by experts in the field. The programme also included two keynote speeches from renowned researchers in the forest-based ecosystem, who shared their research experiences and success stories.

During the sessions, each of the co-funded projects presented their main objectives, activities carried out and results obtained so far, including their exploitation and/or technology transfer perspectives. Presenters also explained impacts related to the COVID-19 crisis, as well as best practices implemented within their research teams to minimize its effects.

More than 130 people attended the seminar along the 2-days. For that reason, we would like to thank all presenters, including our keynote speakers, Prof. Andreja Kutnar ("Scientific and innovation excellence through interdisciplinary science") and Prof. Tobias Stern ("Perception of the forest-based sector, its innovations and future pathways") for their most interesting and inspiring speeches, and all those that participated in the event and made it a success. You will find all materials presented during the event on ForestValue's website.

The ForestValue organizing committee looks forward to the Final Event that will, hopefully, take place physically in 2022. Further news will follow, so stay tuned!


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Strong composite

## High strength densified wood for automotive structural part

Delignified and densified wood laminates are a largely renewable bio-based alternative to fossil-based structural materials. By partially removing the wood polymer lignin, wood is softened and becomes easily formable. In parallel, the relative content of the mechanically strong wood polymer cellulose is increased. As a result, delignified and densified wood tremendously improves in strength and stiffness, while simultaneously preserving a weight advantage compared to metals or glass fibre-reinforced polymers.

A favourable combination of lightness and mechanical strength enables ambitious goals for application, e.g. in automotive industry. Hence a process for upscaling wood delignification and densification to the scale of 1m was successfully implemented. Spruce wood veneers were delignified in an alkaline process, densified in a hot press, and laminated into a hybrid multilayer side impact beam structure. The side impact beam protects vehicle occupants from injury due to excessive door deformations caused by impact from the side. Full-scale crash testing of the newly developed beam is scheduled for the upcoming months. By implementing densified wood structural parts in automotive construction, potentials for reducing the overall carbon footprint of vehicles arise due to the incorporation of renewable materials and savings

Within our project, we have technically upgraded a multi-tree felling head produced by the project partner company Bracke forest. We have studied it combined with a novel working method (boom-corridor thinning). This working method means that the thinning is done in somewhat more geometric patterns than conventional thinning.

Preliminary results from large field studies in Sweden, Finland and Slovenia (64 study units in total) shows that thinning of dense stands with small trees (9-13 cm basal area weighted diameters) gives rather large harvested volumes (30-70 tons dry mass/ha, corresponding to about 60-140 m3 biomass/ha) (Figure 1). The productivity during thinning was in average about 5 ton dry mass/productive machine hour, and about 16% higher in the boom corridor thinning than in the conventional selective thinning. This is a rather high productivity when thinning of so small trees

The spatial distribution of trees and the amount of remaining trees with damages after thinning was measured. A general conclusion is that it was very difficult to find any differences of importance in the quality of the remaining stand after treatment (Figure 2). All stands are expected to develop in a good way.


***Figure:*** *The appearance from above of one study unit with boom corridor thinning and one with conventional selective thinning. Each study unit is 20 times 50 m in size, and in this case close to a public road.* **Are you as reader able to judge what unit that belongs to each treatment?**

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Within InnoCrossLam one of the tasks is to use modern FEM tools to analyse complex high-rise CLT buildings located in seismically active areas. For the purpose of the study a joint cooperation was established with the DynaTTB project to reach a mutual goal of more reliable **modelling of tall timber buildings**. DynaTTB is focused on the dynamic response of tall timber building under service load with the emphasis on wind loading. As a case study, a 4-storey asymmetrical CLT building was taken into consideration. The building is situated in Ljubljana and was designed by the company CBD, also an associated partner of InnoCrossLam.

© DynaTTB

The building's roof plate horizontal accelerations were measured with a set of Dytrans's accelerometers combined with Dewesoft's Sirius data acquisition system. A fast Fourier transform (FFT) was used to calculate the building's vibration periods. So far, an ambient vibration method was used. Namely, vibrations originating from the environment (wind, traffic etc.) are used to excite the building. A force-based method, employing the use of a mechanical shaker, is planned in the next months. The building was measured in different building stages with the aim to try identifying the influence different non load bearing elements (façade, windows, screed, cladding) have on the building's dynamic response. These elements change the stiffness of the building and introduce additional damping that is otherwise usually not accounted for in the finite element calculations.

© InnoCrossLam/DynaTTB

The building was modelled in FEM software Dlubal Rfem, where different modelling techniques were tested to match the experimentally determined natural frequencies. The main goal was to find the most effective modelling approach for practicing design engineers. The outcome of the study will be in the form of practical suggestions on how to use Dlubal Rfem and its modules RF-Laminate and RF-Dynam to model complex CLT buildings in seismic areas. The results from the in-situ measurements were compared to the finite element's response. The vibration period matching so far shows good agreement between the two. The comparison allowed us to identify which parameters are relevant and need to be accounted for in the model


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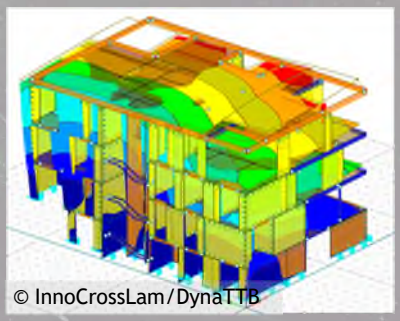
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The project **'From fundamentals to valorization: Enzymatic oxidation of cellulosic fibres and underlying mechanisms'** aims at unravelling the potential of enzymatic oxidation of cellulosic fibres for material solutions. In particular, the potential of enzymatic oxidation in sustainable fibrillation and dissolution processes for cellulosic fibres is being studied. The enzyme-assisted technologies developed in the project are related to processes of making regenerated (textile) fibres and different types of nanocelluloses.

During the 2nd year, the project work at NMBU and VTT has focused on selection of most promising enzymes for the oxidative modification of cellulosic fibres and optimization of reaction conditions, utilizing methods developed at BOKU for analysis of the oxidized sites in the fibres. Enzyme production has also been scaled up in order to provide sufficient amount of catalysts for the application trials. Project meetings have been arranged using remote connections, due to the restrictions related to the COVID-19 pandemia.

## Science and business collaboration developed a new optimization tool

The project MultiForest reached a big milestone this autumn. A new tool was developed that allows optimizing forest management to reach the targets of national sectoral policies: forest policy, bio-economy policies, and biodiversity policies. The optimization tool was developed together with our business partner FinnOpt from Jyväskylä, Finland (www.finnopt.com). In several online meetings with all partners from FIN, GER, NOR and SWE, the optimization experts from FinnOpt elaborated the specific requirements in terms of forest policy and management in each country. They identified similarities and transferred those into a common set of optimization rules. This set of new optimization rules allows each project partner to very easily transfer the manifold targets of the different national sectoral policies into a multi-objective optimization problem. This standardized and international approach – taking into account Scandinavian and central European forest policy needs simultaneously – is new, and thanks to the expertise of FinnOpt, the whole tool is based on state-of-the-art optimization methods. The results provide us with new insights into the synergies and conflicts that exist among policies, and that might influence the provisioning of multiple forest services demanded by society. The optimization tool will be elaborated further into a graphical user interface that can be applied in workshops in spring 2021 together with the stakeholders to create management programs matching best their objectives.


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## How to sustain the current and future provision of forest ecosystem services ?

The idea of the project NOBEL originates from this general question: we want to find innovative business models and mechanisms and test them in pilot demonstrators (regional case studies in Sweden, France, Spain, Portugal and Austria) for the sustainable supply of and payment for forest ecosystem services (PES).

PES has been identified as an important mechanism to close the gap between the demands of the society and the service providers; therefore NOBEL dedicated a study to identify sucessful mechanisms for the implementation of payment for ecosystem services.

As a primary data source for this task, a database of successful PES case studies was compiled and reviewing the lessons learned from these cases. The information was synthesized according to selected characteristics including the country of implementation, business model applied, ecosystem service provided, temporal and spatial scale of implementation, payment types, type of facilitator, buyer and sellers. The results show that some factors seem to have a stronger effect on the successful implementation of the PES schemes. The most prominent factors are a strong focus on marketable ES and implementing PES schemes at local level with a long-term perspective. The influence of NGOs as intermediary is important as well.

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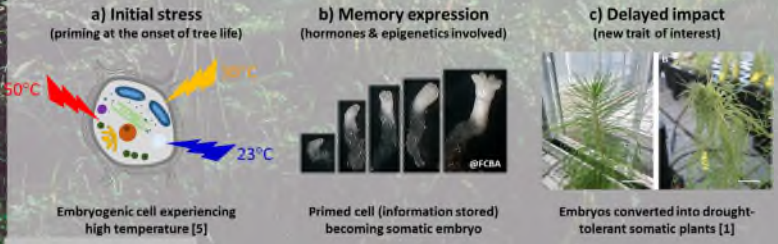
## Conifer trees are able to memorize stress experienced during early development

When pine cells, on their way to becoming somatic embryos, experience high temperatures ('priming', Fig. a), tolerance to abiotic stress, like drought, can be expressed months later, i.e. when these embryos become trees (Fig. b,c). Hereby, a complex cross-talk between plant hormones and epigenetics is assumed. Our work showed that cytokinins could be crucial in this process. You can learn more about these results in a number of recent MULTIFOREVER publications mainly provided by our partners from NEIKER, Spain.

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Our results go in line with news coming from other species demonstrating that plants can store information from stressful conditions and respond in efficient ways to environmental constraints. Applying stresses during early development could be used as an innovative 'breeding' method and new traits could be introduced effectively. Knowing the mechanisms behind priming enables further research and links stress with impact and thus paves the way for an applications in forestry –

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## What if we had a database covering all forest disturbances in Europe over the past 170 years?

Would we be able to identify patterns of old disturbance regimes, analyse how they have changed over the years with forest management and climate change, and make predictions on how the future disturbances will look like? By updating the already existing Database of Forest Disturbances in Europe the project I-Maestro is aiming at delivering exactly that: a comprehensive database for all forest disturbances. Therefore, the project will ask partners to provide their data from the past 20 years. This data will be used to make an update of the 2003 paper of Schelhaas et al., and to develop scenarios on future disturbances for the modelling in I-Maestro. Finally, an up-to-date database will benefit everyone dealing with forest disturbances as it gives more precise pictures of past events, trends, and future predictions. Please be in touch with dbadmin@dfde.efi.int for questions or suggestions on relevant datasets.


© I-MAESTRO

With regards to personnel, the project recruited PhD students and postdocs who are involved in the collection and analysis of empirical data, in modelisation and simulations integrating climate change and forest management, and in the analysis of forest inventory plots or satellite data. We are introducing some of our researchers and their respective project teams in our new I-Maestro interview series.

## Workshop with architects & engineers, a start for decision-making tool & indicator system


© InFutUReWood

InFutUReWood aims to answer the questions: "How should we build today to be able to circulate tomorrow? To solve this, we decided to consult not only our industrial project partners but to gather architects, engineers, and branch organization representatives from Sweden in a workshop on the web the 3rd of September. The aim was to get the participants' views on both the idea of using a tool that would assess circularity and to get their views on the design of the tool. Inspiration comes from articles studied and presented in our state-of-the-art report on timber construction. The report discusses technical premises for a potential circular use of timber in building construction, focusing on Design for Deconstruction and Reuse (DfDR).

The workshop pointed out directions for future work and as a result, one of our targets now is to develop a DfDR design decision- tool for architects and engineers. This decision matrix can be coupled to an indicator system, to verify the projected design as part of a building rating system, in an effort to transfer the considerable DfDR research into practice. Furthermore, a case study method has been developed and the first of a series of case studies is presently carried out.

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## READiStrength – Resource-Efficient & Data-driven integrated log & board Strength grading

Europe is aiming at expanding the sustainable bio-based economy and successively reducing dependence on fossil resources. Wood & wood products play an important role in this scenario and the project READiStrength focuses on the production of wood material for the large area of construction timber products. Strength grading is a pre-requisite for sawn wood to be used for advanced construction and in engineered wood products like glulam or cross-laminated timber. The project aims to improve current concepts of saw timber strength grading towards flexible and adaptive approaches prior to conversion at the raw material stage to make best use of Europe's wood resources.

During the first year interviews were conducted with sawmill companies and important European manufacturers of scanning technology. State of the art, the industrial perspective on strength grading together with novel strength grading scenarios for future is summarized. In each country extensive data collection of roundwood & sawn timber characterization measured in different sawmill processing steps is almost completed. Next step is preparing modelling of strength grading scenarios.

## FIRENWOOD

FIRENWOOD wants to identify barriers and new strategies for the implementation and use of woodbased systems in the building industry. A complete list of parameters that have a negative impact on a widespread application for timber construction is potentially infinite and depends on people, regions and views involved. The main obstacles could be divided into four areas: social, economic, technical and political.

During the first year testing has now been initiated in FIRENWOOD and the comprehensive test program comprises variously shaped and sized test specimens. Eleven different adhesives belonging to the five adhesive families used commonly in Europe for structural wood bonding have been selected and are provided adhesive manufacturers collaborating with the project. The adhesive selection process represented a complex, multi-facetted task.

Wood materials of known properties have been sent to Stockholm, Stuttgart, Trondheim and adhesive manufacturers. The wood is supplied by the 3 consortium partners Masonite Beams (SE), Moelven and Splitkon (NO). Specimen production and preparation for the first testing phase is completed to 50% and fire testing is initiated. Development of models for wooden structures (I-beams & CLT) is ongoing in order to optimise results from fire resistance based on calculations. This is directly related to effect "Too conservative solutions" and "Too liberal solutions".

## GreenLane - fast-tracking value and resilience in industrial wood supply

GreenLane wants to develop a virtual supply chain laboratory environment enabling value tracking and interactive testing of harvesting and transport responses to challenging climate scenarios. The focus is on implementing weather-driven models for wood quality and availability.

The study compares three European case study areas in continental, sub-arctic & oceanic conditions. The main output is to identify and quantify the combined potential of value-tracking and managerial responses for log quality, supply security and delivery costs under varying climate scenarios. The final output consists of best-practice guidelines for managerial response that improve the resilience of wood supply systems to climate change impacts incl. natural disturbances. Work during the first year of activities was primarily related to development of architectures of the supply chain simulation environment with respect to value tracking and management responses.

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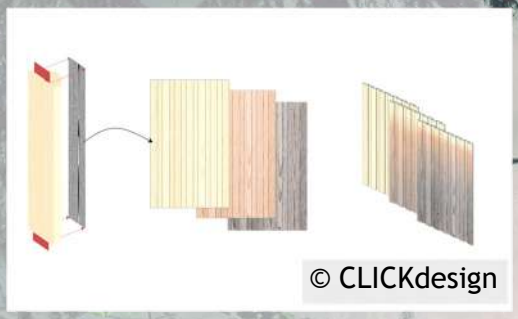
Lund University focus to bring together the **models for material resistance, exposure, aesthetics, decay & insects to create the CLICKdesign tool** – no simple task! Their work removes the need for complex models by delivering pre-calculated deterioration scenarios and decay maps, providing tools to simulate the aesthetical changes of wood structures and working towards providing more general recommendations to asset owners in termite-risk zones. It is extremely interdisciplinary work and engages with all the other CLICKdesign partners.

Being creative and flexible is key, as they often encounter new types of challenges. For example, a key part in modelling the visual appearance of wood is to visualize the organic wood texture. The image below shows the method currently used by the prototype tool, where the wood texture is rendered from a 3D model and projected onto a wooden cladding, where after the user can change the degree of weathering to explore how the visual appearance of the wall will change over time. We are at a pivotal project stage as the tool moves forward to piloting with the wood industry and architects, refining the tool and the user interface during 2021. **Exciting times!**




## Modelling forest growth and timber harvest outputs under distinct management strategies by small-scale forest owners

Small-scale forest owners represent 99% of all forest owners in Europe. Their forests provide a large share of the wood raw material for a growing bio-economy. In addition to timber production, small-scale forest owners contribute to a wide range of ecosystem services, such as carbon storage, biodiversity conservation, drinking water supply and protection against natural hazards. ValoFor wants to model forest growth and timber harvest outputs under different management strategies of small-scale forest owners. Based on national forest inventory data, future biomass and deadwood development, growing stock composition, growth and yield are simulated. Various forest growth models are used at national level. The simulations are run until 2100, taking into account effects of climate change in representative concentration pathways RCP4.5 and RCP8.5.

Four specific management strategies were developed and implemented in the forest growth models: a. No management; b. Close-to-nature forestry; c. Increasing the profitability of timber production and responding to the increased demand for timber and d. Multifunctional forest management according to business as usual (BAU). The next step is to apply a sub-model for different ecosystem services (including soil carbon, deadwood, diversity), which will be updated and calibrated with country-specific information.

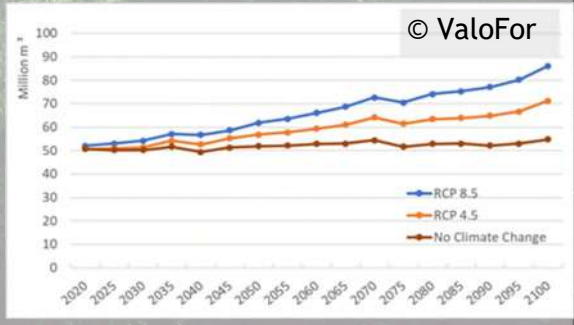



*Figure 1. Preliminary results of the Heureka system for annual potential sustainable harvesting in Sweden for small-scale forest owners with "business as usual" (BAU) forest management strategy, two climate change scenarios and without climate change.*

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AVATAR designs a digital coaching, assistance and feedback system for improving productivity and job satisfaction of forest machine operators. The project contributes to efficiency improvements of Cut-To-Length operations for enhanced timber utilization at higher value added resource recovery. Alongside occupational health and safety, AVATAR supports the implementation of a sustainable and competitive bio-economy in Europe.

Besides many other activities, an analysis of how cyclic work elements of harvesters and forwarders may be identified via CAN bus data has been conducted. The subsequent development of algorithms to automatically detect work elements for virtual harvester and forwarder in a simulator environment has been finished. Interviews with forest machine operator trainers have been done in forestry training centers in all partnering countries in Germany, Norway and Sweden for identifying work patterns and work practices of forest machine operators. Sensors for tree detection around forest machines have been tested successfully. These aspects focus on environment and machine localization and mapping. Field studies were conducted to get an insight in productivity ranges of the forwarder to develop a concept for the digital coach. Figure 1 shows outdoor field tests of the University of Goettingen in which productivity ranges of forwarders were assessed via the time consumption of loading cycles related to different grapping distances and angles.

***Figure 1:*** *The assessment of Forwarder work is a central element of the AVATAR project.*

## hardwood_joint Innovative joints in hardwoods

The overall project objective is to foster high-performance hardwood structures in the European building sector by developing economic, reliable and innovative joint technologies for hardwood members and the design thereof. For this purpose, hardwood_joint aims at understanding load transfer mechanisms and failure modes of hardwood joints in order to allow for final joint optimisation.

During the first year the project among other things carried out first test series investigating minimum distances and spacing of joints with laterally loaded screws and developed models for laterally loaded single-fastener joints based on nonlinear beam-on-foundation approaches which include the rope effect.

Moreover, investigations to optimise joints were carried out i.e. methods were developed that can potentially increase both stiffness and capacity of joints. A promising way is to increase friction between shear planes through rough surfaces. A parametric study looked into the effectiveness of shallow or deep grooves on hardwood surfaces. Numerical studies investigated the effect of moisture variations on these grooved surfaces were carried out. Finally, as any final implementation of design models in standards and engineering handbooks require input values, a literature study was carried out to see if all necessary values are available. Missing values, e.g the embedment strength of birch, were subsequently determined.

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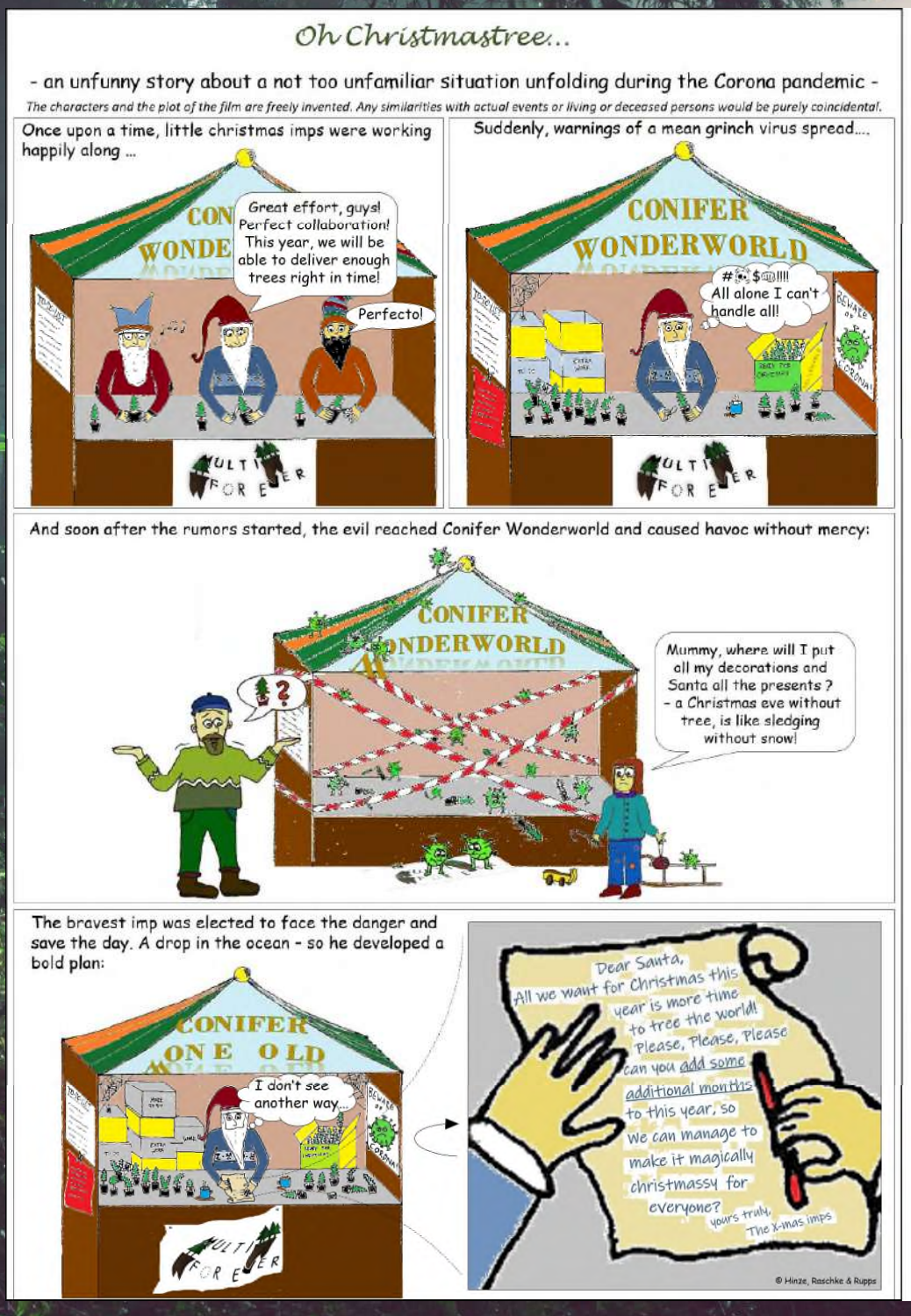
# PANDEMIC IMPLICATIONS

**A small contribution by CLICKdesign:** The impact on CLICK*design* is not unique – it has changed abruptly the way we collaborate and tackle problem solving creatively as research teams. The landscape is different, and we adapt. Conferences where there would have been immediate peer review, questions and new contacts 'over coffee' now sometimes feel remote and sterile – the ecosystem of the conference has changed. We have seen pressure on university teaching staff change with intense phases of teaching to catch up. However, we are researchers and of course we find solutions it's just they are different and sometimes that takes a bit of getting used to.

On the other side of the coin, the small silver lining, is the reduction in GHG emissions during this global pandemic year. In our small way CLICK*design* by not travelling across Europe to meetings and conferences this year has avoided the emission of 19 $tCO_2$ in air transport alone which working in the forest product sector that confidently talks of storing carbon in buildings by using wood (0.9 $tCO_2/m^3$ of timber) is perhaps not a bad thing for us to take forward to our low carbon future.

**A small comic contribution by MULTIFOREVER:**

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# NEWS FROM THE FUNDING AGENCIES

## FINLAND:

**Academy of Finland**

BioFuture2025 Academy Programme organises a seminar on Tuesday 15 December at 9:30-12:30 (webcast). The purpose of the seminar is to present the results of the research projects and to discuss current issues in bioeconomy in light of the results. The language of this seminar is Finnish. www.aka.fi/en/research-funding/programmes-and-other-funding-schemes/academy-programmes/biofuture2025-2017-2021/

[For your information: In the above programme we have five ForestValue projects involved, too]

**Ministry of Agriculture and Forestry in Finland**

Hiilestä kiinni – Catch the carbon research and innovation programme to produce climate-sustainable land use solutions, extensive call for applications now open. The Ministry of Agriculture and Forestry has opened an extensive call for applications for research and development funding aimed to produce information on how the climate-sustainability of agriculture, forestry and other land uses can be strengthened. The total amount of funds available is about EUR 9 million. The three-year research and innovation programme Hiilestä kiinni - Catch the carbon is one of the key elements of the package of climate measures for the land use sector under the Government Programme. The application for funding related to the programme will be open until 21 December 2020. The aim is also to open a supplementary call for applications already in 2021. https://mmm.fi/en/-/hiilesta-kiinni-catch-the-carbon-research-and-innovation-programme-to-produce-climate-sustainable-land-use-solutions-extensive-call-for-applications-now-open

**Ministry of the Environment in Finland**

Environmental administration to introduce a built environment information system. The project on the built environment information system of the environmental administration (Ryhti) is preparing major changes to how information on the built environment is being managed. The aim is to have all information created in land use and building operations in one place in an accessible and interoperable form. This will also streamline the management of this information and facilitate the work of the users. https://ym.fi/en/-/environmental-administration-to-introduce-a-built-environment-information-system

**Business Finland**

Program: Bio and Circular Finland https://www.businessfinland.fi/en/for-finnish-customers/services/programs/bio-and-circular-finland. The program supports the development of competitive bio and circular economy solutions and ecosystems that offer solutions to global environmental challenges and hold potential for significant global markets. The program will be carried out over a four-year period and its budget is 300 million euros. Business Finland's innovation funding makes up 150 million of this sum. In addition, the program offers internationalization services and renewable ecosystems that also help attract foreign talent, companies and investors to Finland. To date, the program has granted over 50 million euros of funding to projects. Examples of ecosystems launched in the program: ForBest – Environmentally friendly textiles from wood (https://www.businessfinland.fi/en/whats-new/news/2019/bio-and-circular-finland-program-in-action-fortum-starts-an-ambitios-project), UPM building a new ecosystem for wood-based biomedical solutions (www.businessfinland.fi/en/whats-new/news/2019/upm-is-building-a-new-ecosystem-for-wood-based-biomedical-solutions-together-with-partners).

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# NEWS FROM THE FUNDING AGENCIES

## AUSTRIA: The Austrian Forest Fund Act offers opportunities for research on climate fit forests and the material and energetic use of wood

The National Council passed the Austrian Forest Fund Act in July 2020. The forest fund comprises an investment volume of 350 million euros in total. The aims are to compensate forest owners for bark beetle damages, to promote investments in climate-fit forests and to strengthening the use of the resource wood. Moreover, the Austrian Forest Fund Act will fund research projects looking into climate fit forests, wood gas and biofuels, new ways and innovative technologies of using wood for different purposes as well as research on wood construction. After the completion of the notification procedure by the European Commission, the directive will come into force beginning of 2021. News about funding opportunities via the Austrian Forest Fund will be published online: www.bmlrt.gv.at.

## FRANCE:

ANR will organize a (web) conference in March 2021 on "tree, wood, forest and society", all information in French https://anr.fr/fr/actualites-de-lanr/details/news/colloque-anr-arbre-foret-bois-et-societes-reporte-aux-30-mars-et-1er-avril-2021-les-inscript/

ANR also published review of the funded projects on this topic, also in French https://anr.fr/en/resources/cahiers-thematiques/

ANR organized with Chistera ERANET a common meeting to promote the tool "challenge' at the European level www.chistera.eu/workshop-challenge-call-era-net

## SPAIN:

The **8th SPANISH FOREST CONGRESS with the focus on "Forest Science and its contribution to the Sustainable Development Goals"** has been postponed, for the time being, until the 20th -24th of September 2021. It will be held in Lleida, a beautiful part on Cataluña in Northern Spain. The following link has further details: https://8cfe.congresoforestal.es/es

## GERMANY:

The fungus *Hymenoscyphus fraxineus*, causing the ash dieback, is a severe threat for ash trees in Germany and Europe. Aim of the huge interdisciplinary research project FraxFor-Future, comprising 27 individual projects and funded with more than 9 Mio. € via the Forest Climate Fund of the German Ministries of Forestry and Environment, is to develop strategies and solutions to ensure ash trees can survive and maintain their role in the forest ecosystem.

More information (in German): https://news.fnr.de/fnr-pressemitteilung/hoffnung-fuer-die-esche and https://www.kiwuh.de/wald/nachhaltige-waldbewirtschaftung/eschentriebsterben

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# NEWS FROM THE FUNDING AGENCIES

**ARGENTINA:** CONAE (National Commission for Space Activities in Argentina), within the scope of the Ministry of Science, Technology and Innovation (MINCyT), presented the first images of the Earth observation satellite SAOCOM 1B, which was put into orbit on last 30 August and thus, together with SAOCOM 1A, it completed the first constellation of Argentine radar satellites. With this series of images, the professionals of the Argentine space agency reconfirmed the perfect condition of the satellite. Among the first images obtained by the Argentine satellite SAOCOM 1B, those of Valdés Peninsula and Lake Salinas Grandes stand out, because they allowed testing the Synthetic Aperture Radar (SAR) and its ability to detect information below the surface of the soil and water. It was also possible to record the advance of the agricultural frontier over the native forest in the province of Salta, among other aspects of interest.

Roberto Salvarezza, Minister of Science, Technology and Innovation, celebrated the obtaining of the first images of SAOCOM 1B and highlighted the excellent work being done by the professionals involved in this project. He also pointed out that "we are working jointly with different ministries, such as Agriculture, Livestock and Fisheries, Defense and Security, with the AySA company, and also with provincial organizations, so that the knowledge generated by our satellites contributes to improving the lives of the and the citizens". Finally, Salvarezza highlighted the possibilities of commercializing the images and information provided by the SAOCOM mission abroad. The SAOCOM 1B satellite continues in the "commissioning" phase of the system for several more weeks, until it reaches its final orbit and can then begin its operational phase, to generate products such as the Soil Moisture Map and derivatives, for the agricultural sector and the management of environmental emergencies.

CONAE's executive and technical director, highlighted that SAOCOM satellites generate unique information in the world, due to the possibility of working together in the Italian-Argentinean Satellite System for Emergency Management (SIASGE). *"We can combine the information from the two Argentine SAOCOM satellites with that from four Italian COSMO SkyMed satellites. Both have a radar instrument, but the SAOCOMs operate in the L band and the COSMO SkyMed in the X band. This allows the generation of unique products in the world. There is no other constellation on the planet that can produce and combine the type of information that we have today in SIASGE, based on the cooperation of CONAE with ASI, the Italian space agency "* he stated.

www.argentina.gob.ar/noticias/primeras-imagenes-del-saocom-1b-muestran-la-argentina-desde-el-espacio-0

**IRELAND: DAFM funded 3 large programs in October 2020 in agriculture, food and forestry**. The forestry program, awarded €3m, will focus on research in the bioeconomy and forestry in Ireland with a goal to develop a research ecosystem that will 1) launch higher value wood and wood-derived bio-based products into the market 2) generate innovation and unique wood materials / bio-based chemicals that can be exploited 3) develop a highly trained work force that can enter the Irish workforce and foster the uptake of those emerging technologies and 4) sponsor development of science to help fulfil Ireland's sustainability targets.

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Background photo by Sebastian UNRAU via unsplash.com
LayOut and Technical Editor: Carina Lemke, FNR

# ForestValue

* God jul og godt nyttår!

* Radosnych Świąt Bożego Narodzenia oraz pomyślnego i pełnego sukcesów Nowego Roku 2021

* Con nuestro cariño y mejores deseos para estas fiestas navideñas. ¡Feliz Navidad! From Marina, Hector and Milvia at CDTI

* Gemütliche Weihnachten und Viel Spass im Neuen Jahr!

* Relaxed X-Mas and a Lovely New Year!! :)

* Hyvää joulua ja onnellista uutta vuotta!

* Vesel božič in srečno novo leto!

* *Uvolněné Vánoce a šťastný nový rok !*

* ¡¡AEJ os desea un 2021 saludable y lleno de éxitos!!!

* *God jul och gott nytt år från Sverige!*

*Joyeux Noël et une très heureuse nouvelle année!

* Priecīgus Ziemassvētkus un laimīgu Jauno gadu

* Nollaig shona duit agus atbhliainn faoi mhaise duit

* DESDE ARGENTINA LES DESEAMOS A TODOS UNA FELIZ NAVIDAD CON SALUD, AMOR Y RODEADOS DE SUS SERES QUERIDOS!!
..Y QUE EL AÑO 2021 SEA MUCHO MEJOR QUE EL AÑO QUE SE VA.
Próspero Año Nuevo!!!

* mutlu yıllar!!

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