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LIFE WOOD FOR FUTURE

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NEWSLETTER 10

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PEMADE PLATAFORMA DE ENXEÑERIA DA MADEIRA ESTRUTURAL
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RESEARCH BY THE UNIVERSITY OF GRANADA DEMONSTRATES THE PROTECTIVE ROLE OF POPLAR TREES AGAINST POLLUTING GASES AND PARTICLES FROM TRAFFIC AND SAHARAN DUST INTRUSIONS

[08/01/2025]

A research carried out in the framework of the European project LIFE Wood for Future/Madera para el Futuro, led by the University of Granada (UGR), **has shown the protective role of poplar trees against polluting gases and particles, mainly from road traffic and heating boilers, as well as their ability to cushion the negative effects of Saharan dust intrusions.**

Fig 1. Measuring station placed in a poplar grove

Enrique Pérez Sánchez-Cañete, professor of Applied Physics at the UGR, installed an air quality measurement station, on loan from the Diputación de Granada, in collaboration with researcher María Ángeles Ripoll, inside the poplar grove of the Instituto de Investigación y Formación Agraria y Pesquera (Ifapa) of the Junta de Andalucía -located in the Camino de Purchil, on the edge of the city-, and compared its results with the records of the stations of Granada Norte and the Palacio de Congresos, between June 10 and July 17, 2022.

MORE WOOD BY 2025

[14/01/2025]

Published in ideal opinion in ideal about the current housing situation in Spain and an analysis of the possible solution.
The price of housing will continue to rise in 2025, partly due to the lack of labor in construction. **The solution lies in industrialized construction, a more efficient and labor-attractive model.** In this context, wood emerges as a key material because of its lightness, speed of assembly and competitiveness, dispelling myths about its resistance to fire, moisture and cost. Although challenges remain, such as the availability of wood and specialized training, using local wood, such as Andalusian wood, can be key to a more sustainable, innovative sector with a positive impact on the rural environment.

LIFE WOOD FOR FUTURE WILL DISSEMINATE ITS FINAL RESULTS AT THE III CONGRESS ON WOOD CONSTRUCTION LIGNOMAD 25

[19/01/2025]

The congress on construction with wood and other lignocellulosic materials, LIGNOMAD 25, will be held on September 24, 25 and 26, 2025 in Granada. **The event aims to address scientific, technical and constructive aspects related to wood, its derivatives and other natural materials, as well as to present the work developed by its members and collaborators.**

Fig 2. LIGNOMAD25 announcement

It will be attended by leading researchers, architects, engineers, builders, manufacturers and other professionals who will share their vision and experience on the use of these materials in the construction sector.
Arquima, Iberolam Timber&Technology, Egoin, PEFC and Cadwork Ibérica & Latinoamérica will participate as exhibitors of their products and services. The congress is currently sponsored by the Directorate General of Forestry Policy and Biodiversity of the Ministry of Sustainability and Environment of the Andalusian Government, the companies Lignumtech and Finsa and the Cívitas Chair of Sustainability of the University of Granada.

AGRUPACIÓN MARJAL PARTICIPATES IN THE COURSE ON ALTERNATIVE CROPS AT THE ESCUELA FAMILIAR AGRARIA EL SOTO IN CHAUCHINA

[28/01/2025]

The poplar crop has been the protagonist of one of the four days of the course on "New crops and alternative crops" promoted by the Escuela Familiar Agraria (EFA) El Soto located in Chauchina. The Escuela Familiar Agraria (EFA) "El Soto" is a vocational training center whose mission is to achieve the development of the rural environment.

Fig 3. Speakers representing the LIFE WOOD FOR FUTURE project at the course on alternative crops at the Escuela Familiar Agraria el Soto in Chauchina

Victoria Carreras and Alberto De la Torre, President and Secretary of Agrupación Marjal, presented the papers "Poplar. Tradition and Innovation" and "Poplar and Economy. Populiculture and Uses of Poplar in the Market", respectively**. They presented the past, present and future of poplar promoted by the LIFE Wood for Future project. Patricia Gómez, manager of COSE, partner of the LIFE Wood for Future Project, was present at the meeting, presenting to the students the wide ecosystem benefits of poplar in**

the global context of their territory, to which they silently contribute to the benefit of society and the planet.

LIFE WOOD FOR FUTURE TO ATTEND THE WOOD CONSTRUCTION FORUM IN PAMPLONA

[31/01/2025]

On May 14 and 15, 2025, the 5th Forum on Construction with Wood will be held at the Baluarte Conference Center in Pamplona. Two days to learn about the present and future of industrialized and sustainable construction; as well as to connect with the main agents of the wood sector. The Library of the Thousand Suns in Madrid, a new concept of cultural center in the capital by architect Miguel Ángel Díaz Camacho and the Oceanika project by architect Juan José Baena, the largest coliving in Malaga with a commercial area for digital nomads, are some of the outstanding projects of this edition.

DOCTORAL THESIS SHOWS POPLAR WOOD TO BE OF HIGH TECHNOLOGICAL RESPONSIBILITY AS A STRUCTURAL MATERIAL

[04/02/2025]

Researcher Yaiza Fuentes García, a Building Engineer from the University of Granada, defended her doctoral thesis the past February 3rd, titled "Mechanical Characterization of Poplar Clones MC and Luisa Avanzo and Their Viability for Structural Laminates" in the Assembly Hall of the School of Building Engineering of the University of Granada (UGR). The thesis was carried out within the UIMA laboratory (Andalusian Structural Wood Research Unit) of the UGR, in collaboration with the PEMADE laboratory (Platform for Structural Wood Engineering) of the University of Santiago de Compostela in Lugo, the Andalusian Institute of Agrarian Research and Training (IFAPA), the Wood Construction Research Group of the Polytechnic University of Madrid, and the LABOMAP group of ParisTech University in Cluny (France).

Fig 4. Researcher Yaiza Fuentes defending her doctoral thesis

The thesis performed a characterization of the mechanical properties of poplar wood at the Spanish level, restricted to the clonal varieties *MC* and *Luisa Avanzo*, the most abundant in Granada and Andalusia. Through rigorous mechanical tests on large samples, it was

concluded that poplar wood meets the regulatory requirements of a T10 resistance class (EN 338), meaning that its structural use is entirely viable. The characterization of the wood was comprehensive, including non-destructive testing (NDT) and destructive testing (DT), covering tension, bending, and compression tests in directions parallel and perpendicular to the fiber.

LIFE WOOD FOR FUTURE PARTICIPATED AT THE BREAKFAST BRIEFING ENCUENTROS SER THROUGH RESEARCHER YAIZA FUENTES

[17/02/2025]

The past Friday 16th, the Rector of the University of Granada, Pedro Mercado Pacheco, inaugurated the new space for reflection and debate of Radio Granada – SER, the breakfast meetings called Encuentros SER.

Fig 5. Researcher Yaiza Fuentes invited to the inauguration of the breakfast briefing Encuentros SER

The breakfast was attended by **Yaiza Fuentes, a researcher from the UIMA-University of Granada laboratory, a recent doctor who has carried out the mandatory mechanical tests to incorporate poplar into the Spanish and European structural wood standards**. During the debate, Yaiza Fuentes spoke about the progress of the project and the importance of the University as an agent to give added value to poplar trees and their wood.

RESEARCH SHOWS THAT POPLAR TREES PURIFY WATER POLLUTED BY AGRICULTURAL FERTILIZERS IN THE VEGA OF GRANADA

[23/04/2025]

A research carried out in the framework of the European project LIFE Wood for Future/Madera para el Futuro, led by the University of Granada (UGR), has shown the ability of poplar trees to purify water with nitrates from agricultural fertilizers and prevent these substances from leaching into groundwater.

Fig 6. Map of the location of the land where the study has been carried out

The study carried out by the Institute of Agricultural and Fisheries Research and Training (IFAPA) of the Andalusian Government

shows that **this traditional crop of the Vega of Granada uses these nutrients in its growth and prevents them from contaminating the aquifer of Granada, the most important groundwater body of the province, which covers 39 municipalities, including the capital**, and far exceeds the legally established maximum nitrate concentration limits of 37.5 mg/l in groundwater.

LIFE WOOD FOR FUTURE PARTICIPATED AT A DAY OF REFLECTION ON PRESENT AND FUTURE STRATEGIES IN THE VEGA OF GRANADA

[23/04/2025]

The University of Granada, through Medialab UGR of the Vice Chancellor of Social Innovation, Employability and Entrepreneurship in collaboration with Save the Vega – Vega Educa and the City of Huétor Vega, held on April 22, **a day focused on the analysis and highlight the Vega of Granada as agricultural, heritage and cultural space as part of the VIII Week of the Vega.**

Fig 7. Participants in the day of reflection on present and future strategies for the Vega of Granada

The day began with Manuela Martínez Jiménez, president of the Plataforma Salvemos la Vega, and Esteban Romero Frías, vice-rector of Social Innovation, Employability and Entrepreneurship, in an emblematic place: the Plantain of the Casería de Santo Domingo, symbol of the Custody Agreements of the Acequia del Albaricoque. There, participants from different **sectors were able to learn first-hand about the current challenges facing the Vega de Granada. During the activity, key issues such as the impact of urbanization, the loss of agricultural land and strategies for the sustainable conservation of this unique environment were addressed.**

SEMINAR AND PHOTOGRAPHIC EXHIBITION ON POPLAR PRESENTED IN ALHAMA DE GRANADA

[27/04/2025]

On April 25 and 26, the event Poplar Groves: A Source of Social and Environmental Benefits was held in Alhama de Granada. The event showcased the value of this deeply rooted crop in the region, which is experiencing a hopeful resurgence thanks to the promotion of sustainable construction with poplar wood by the European project LIFE Wood for Future. The participating **experts discussed the role of poplar groves in enhancing biodiversity, improving soil health, filtering water contaminated by agricultural fertilizers, and capturing air pollutants such as particles and gases.** They also highlighted the groves' historical connection with irrigation infrastructure and their positive impact on public health as recreational spaces for the local population.

Fig 8. Photographs exhibited in the Galería del Carmen in the City Hall of Alhama de Granada

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