

SSUCHY-Next consortium obtains €6.7 million from the CBE JU to go beyond the achievements of the previous SSUCHY project and take high-performance circular bio-based composites from hemp fibre and bio-based resins to industrial applications.

**BIOBASED MATERIALS | BIO-BASED COMPOSITES
HEMP INNOVATION | SUSTAINABLE MANUFACTURING**

HIGHLIGHTS

- €6.7 million European grant from the private-public partnership “Circular Bio-based Europe - Joint Undertaking”
- Scale-up of hemp fibre production and development of bio-based resins for high-performance bio-based composites

The Circular Bio-based Europe Joint Undertaking has granted €6.7 million to the SSUCHY-Next consortium to scale-up hemp fibre production and develop bio-based resins for high-performance bio-based composites. Over the next 4 years, the 17 European partners will leverage the achievements of the previous [SSUCHY project in an Innovation Action up to TRL7](#), with the aim to integrate the hemp fibre bio-based composites in new industrial applications (12.6 m wind turbine blade, bulk mould compounded products like façade panels, wood-based construction materials...). The project was launched on 18-19 September 2024 in Leuven (Belgium) and its key areas of focus include:

- Establishing reliable value chains for the supply of hemp fibres and fabrics and the production of bio-based resins
- Extending the range of applications of bio-based composites and testing them in industrial products
- Demonstrating the circularity and the sustainability of the bio-based materials developed



1: SSUCHY-Next consortium during the kick-off meeting in Leuven (Belgium)

RELIABLE VALUE CHAINS FOR HEMP FIBRES FOR BIO-BASED COMPOSITES PRODUCTION AND USE OF NEW BIO-BASED RESINS

To optimize costs, enhance fibre characterization, and minimize the environmental impact of the materials and their processing, the partners will focus on establishing reliable and robust hemp fibre value chains for bio-based composites production. The consortium will address a bottleneck identified in the previous SSUCHY project, namely the need for efficient and cost-effective bio-based polymer matrices, by using three bio-based resins: acrylic polymer ("Elium®"), benzoxazine, and BG-epoxy.

PRODUCTION OF BIO-BASED COMPOSITES AND INTEGRATION INTO INDUSTRIAL APPLICATIONS

Once the bio-based hemp fibre preforms and bio-based resins have been further developed, the partners will work towards their integration into industrial applications. The scope ranges from wind energy, construction, to automotive and consumer goods sectors. The products to



2: developed by Woodoo

be developed by the partners within the framework of the project include bulk mould compounded building products like façade panels, a 12.6 m long wind turbine blade and wood-based products like laminated beams and transparent wood. Their design, testing and certification will allow to make significant steps towards industrial viability (TRL7), which is the overall objective of SSUCHY-Next.

DEMONSTRATION OF THE RECYCLABILITY AND EVALUATION OF THE ENVIRONMENTAL IMPACT

A key focus of the project will be to conduct comprehensive life cycle assessments (LCAs) to demonstrate the environmental performance of the developed products throughout their entire lifecycle. By assessing factors such as resource consumption, energy use, greenhouse gas emissions, and waste generation, the LCAs will provide valuable insights into the sustainability of the materials and processes involved. Additionally, the project will actively showcase the recyclability of the developed products, demonstrating their potential to contribute to a circular economy.

"Bio-based is a first step towards a rational use of resources. But it is essential that this use is based on virtuous practices, otherwise it loses its value. That's why SSUCHY-Next addresses not only the issue of recyclability but also that of environmental impact. The project is quite ambitious in this respect, with the LCAs that will be carried out but also by preparation of Digital Product Passports (DPP) and a data management plan which will allow practising Open Science" said Aart Willem Van Vuure, Coordinator of SSUCHY-Next at KU Leuven.

A MULTI-STAKEHOLDERS PROJECT

SSUCHY-Next brings together 17 partners from 6 European countries coordinated by KU LEUVEN:

5 Academic partners: KU Leuven (Belgium), TU Delft (Netherlands), Université de Bourgogne Franche-Comté UBFC (with affiliated UFC and ENSMM) (France), Danmarks Tekniske Universitet DTU (Denmark), ECOLE NATIONALE D'INGENIEURS DE TARBES (ENIT) (France)

2 Research centres: CETIM (France), MATERIA NOVA (Belgium)

7 SMEs: ECO-TECHNILIN (France), HEMP-ACT (France), SAS WOODOO (France), NPSP BV (Netherlands), Olsen Wings A/S (Denmark), BITREZ (United Kingdom), TERRE DE LIN (France)

2 Large companies: ARKEMA (France), LINIFICIO (Italy)

1 Cluster: BIOECONOMY FOR CHANGE (France)

KEY FIGURES

Duration: 48 months (September 2024 - August 2028) | Total budget: € 8 M (+ UK funding for Bitrez)

SSUCHY-Next has received € 6.7 M funding from the Circular Bio-based Europe Joint Undertaking, under Grant Agreement number 101157517.

For more information, please refer to the European Commission website:

- <https://cordis.europa.eu/project/id/101157517>
- <https://www.cbe.europa.eu/projects/ssuchy-next>

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