BIOSAFIRE

Nature's flame-retardant technology upgraded

Gaiker

MEMBER OF
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Development and manufacture of new, more sustainable and safer materials using biobased functionalised additives based on lignin and tannins to improve fire resistance

Sustainable Composites Researcher

Patricia Ares

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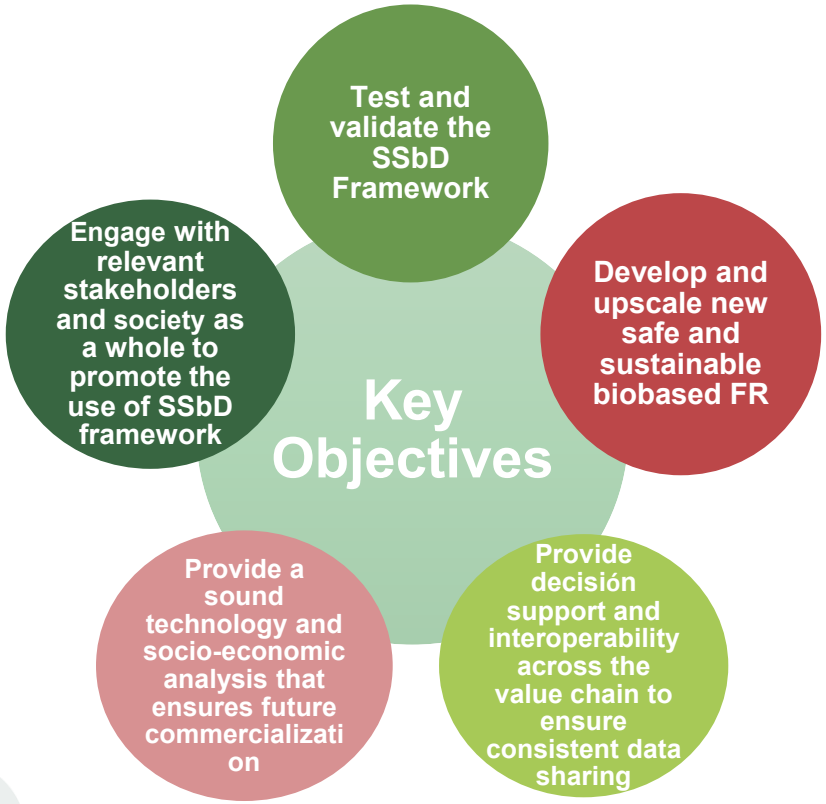
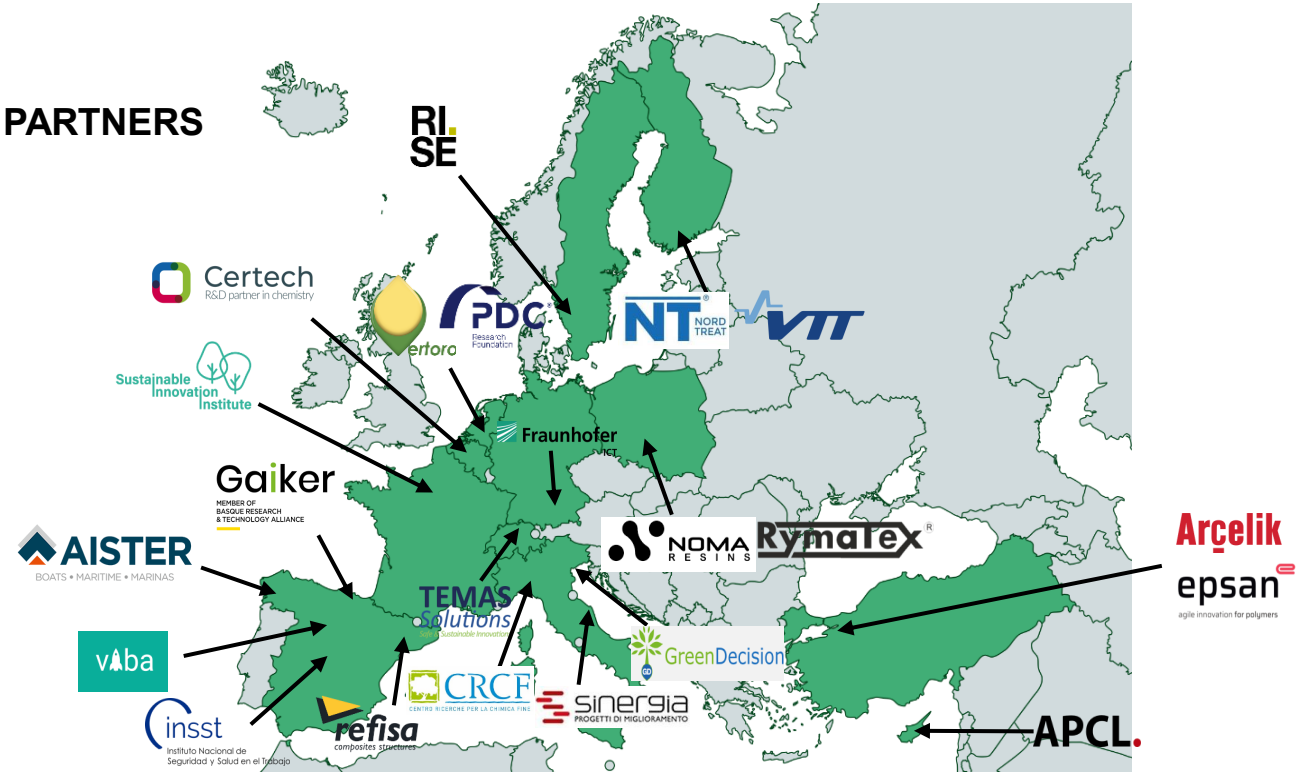
Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101178218

Objectives and ambition

BIOSAFIRE's main objective is to **develop a new generation of safe and sustainable-by-design biobased flame retardants that replace current toxic alternatives with high-performance sustainable ones** while testing the implementation of the JRC's SSbD Framework and providing guidelines and recommendations for its improvement driven by hands-on industrial experience.





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Added Value Chain

ADDED VALUE CHAIN (I)

Raw Material	FR Synthesis	Processes	Final Product
-Lignin Supplier -Tannins Supplier	-Chemical Company -Process Engineering Design	-Fibres, Resins -Thermoplastic Masterbach company	Use cases: Railway, Marine, Wood coating, House appliances
-Vertoro -CRCF-Silvateam	-Nordtreat -Process Design Centre (PDC)	-Rymatex (Fibres) -Thermoplastic Masterbach company	Use cases: Railway, Marine, Wood coating, House appliances

RTD SUPPORT

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Added Value Chain

ADDED VALUE CHAIN (II)

Lab Testing + Data Interoperability + SSbD + Dissemination & Explotation

HORIZONE ISSUES

- Testing Lab (ar least Fire Certification)
- Data Interoperability
- Hazard Assessment
- Sustainability Assessment
- Social and Economic
- Explotation & Dissemination

End of Life

Mechanical Recycling

Certech
R&D partner in chemistry

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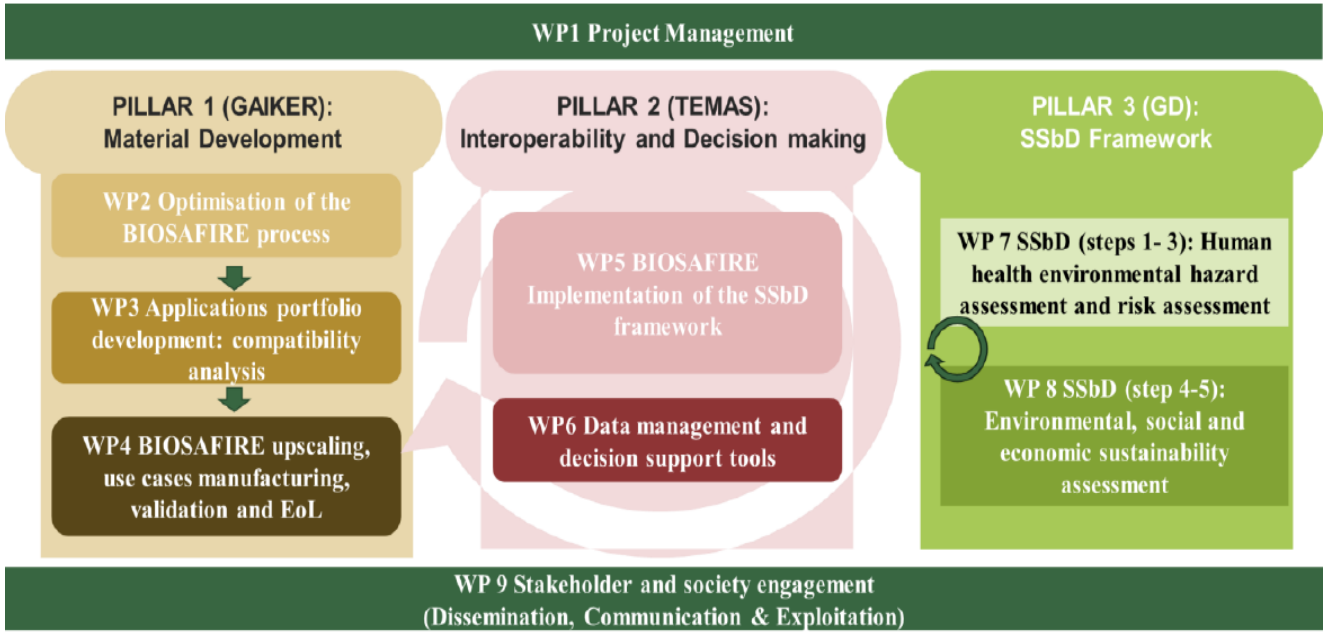
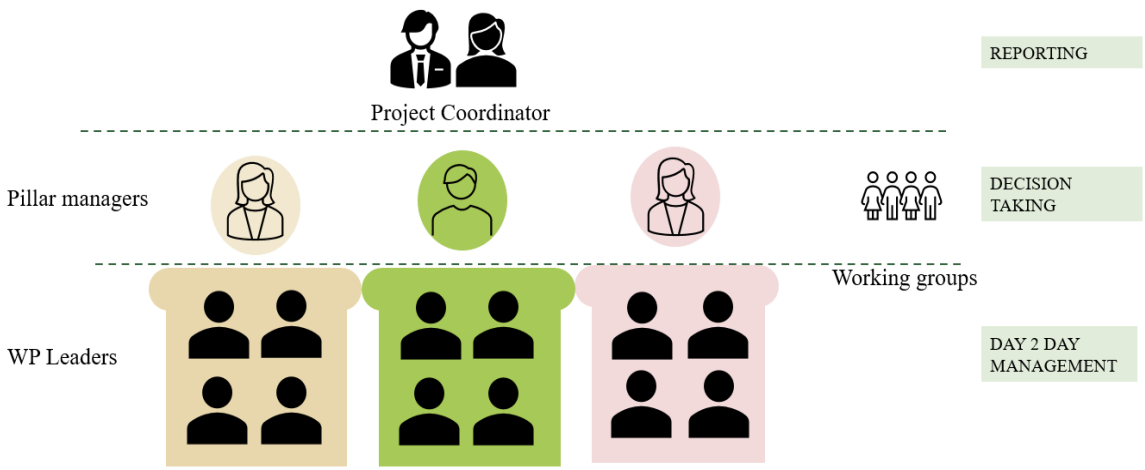
Biosafire Management Structure and WPs





BIOSAFIRE will upscale to market readiness (TRL7) at least 2 bio-based flame retardants, developing a materials portfolio and guidelines to promote the further substitution of toxic flame retardants in resins and matrixes beyond those demonstrated by the project use cases.

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