



Hemp Club



Co-funded by the COSME
programme of the European
Union

Total budget: EUR 587 972.48 |
Total funding: EUR 462 976.00

DAY 1. 5th of September 2022
HempClub project and hemp
potential

What we do

The HempClub project brings together **7 clusters and association** operating in the bioeconomy, advanced manufacturing and hemp production sectors to create **interconnected and interregional supply chains** between operators in primary production, agri-food processing and green chemistry by strengthening industrial symbiosis and sustainable and renewable business models in the **hemp sector**.

1

Improve the **management skills** of cluster managers.

4

Enhance **collaboration** and **networking** activities between European organisations.

2

Strengthen **cluster excellence capacity**

by improving the portfolio of business support services.

5

Promote **internationalisation, technology** and **knowledge transfer**

through the activation of new opportunities for growth and capacity of excellence for clusters and their members.

3

Facilitate **B2B and C2C** collaborative activities

to strengthen interregional strategies for the bioeconomy



Project mission

Encourage interregional
Investments based on the
Smart Specialization Strategy

Contribute to the
achievements of **Green
Deal** and **SDGs**

Support **urban-rural symbiosis**
and **environmental protection**



Supporting the
ClusterXchange
scheme's implementation

Enhance the **industrial
potential** of hemp through the
creation of new cross-sector
value chains

Enhance European
cooperation networks in
**agriculture, advanced
manufacturing** and
bioeconomy fields



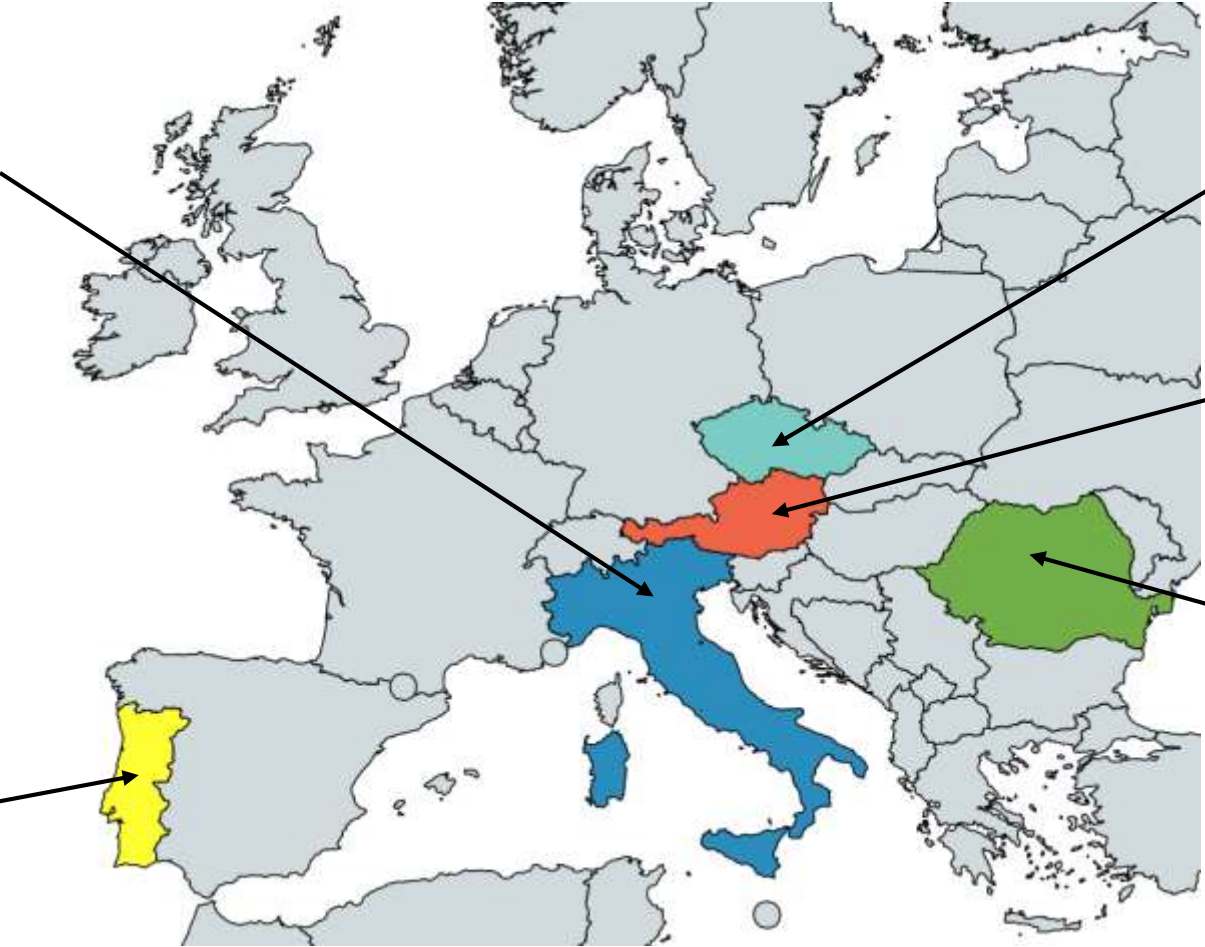
The COSME programme

The project is co-funded by the **Programme for the competitiveness of enterprises and small and medium-sized enterprises**:

- ❖ Aimed at promoting growth and strengthening the competitiveness and sustainability of enterprises in the EU.
- ❖ Managed by the Executive Agency for Small and Medium-sized Enterprises (EASME).
- ❖ Since 2014, COSME has provided around EUR **51 million in funding** for 130 initiatives that promote clusters.
- ❖ Built on the **European Cluster Collaboration Platform**, which counts with a mapping of more than 1200 European and international clusters, and more than 60 cluster associations.
- ❖ The platform serves as a **unique one-stop shop** for information, learning and collaboration opportunities for industrial clusters across Europe seeking to strengthen the competitiveness and sustainability of Europe's economy and industry



Project consortium



Lombardy Green Chemistry Association

LGCA is the reference point for the **Lombard bioeconomy** both at national and European level, shaping the bio-based economy as the most powerful tools for sustainable development. Founded in 2013 by Consorzio Italbiotec, LGCA was recognised by Lombardy Region as the **regional Cluster of Bioeconomy and Green Chemistry** in 2015.



Country: Italy

Mission: actively involving all regional players potentially involved in the bioeconomy, LCA aims at creating, in close cooperation with the regional authorities, the **most favourable environment for the development of the bioeconomy in Lombardy**. It represents a **meeting point** for all actors, a major reference for the regional authorities and an **access point to international players**.

Cluster members: 52 (50% SMEs)

Sectors/value chains covered: agrifood, green chemistry, food/pharma, wood

Role in the project: Project coordinator, managing the exchanges under the CXC mobility scheme



Why hemp

With its **unique chemical properties**, **environmental benefits**, **high yield** and **wide range of applications**, hemp is a valuable crop for the bioeconomy, contributing to achieving climate neutrality, although still representing a niche crop in Europe.

Hemp for environmental protection



Carbon storage



Soil Erosion Prevention



Biodiversity



Minor or no use of pesticides



Small amount of water and land for cultivation



Double fiber yield per hectare

Hemp for several industrial applications



Food and animal feed



Pharma industry



Building materials



Cosmetics



Oil



Paper



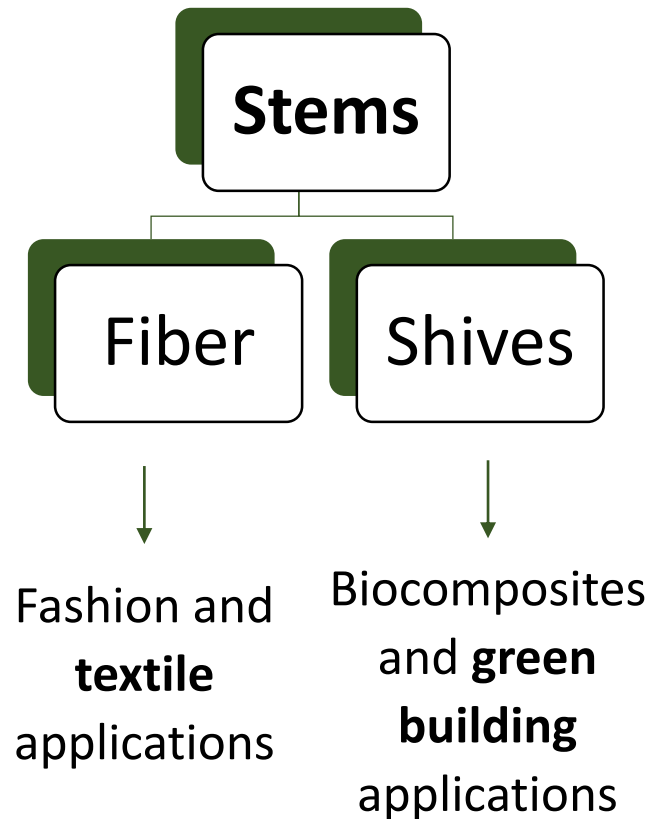
Textile



Electricity



Hemp Value Chain - Stems

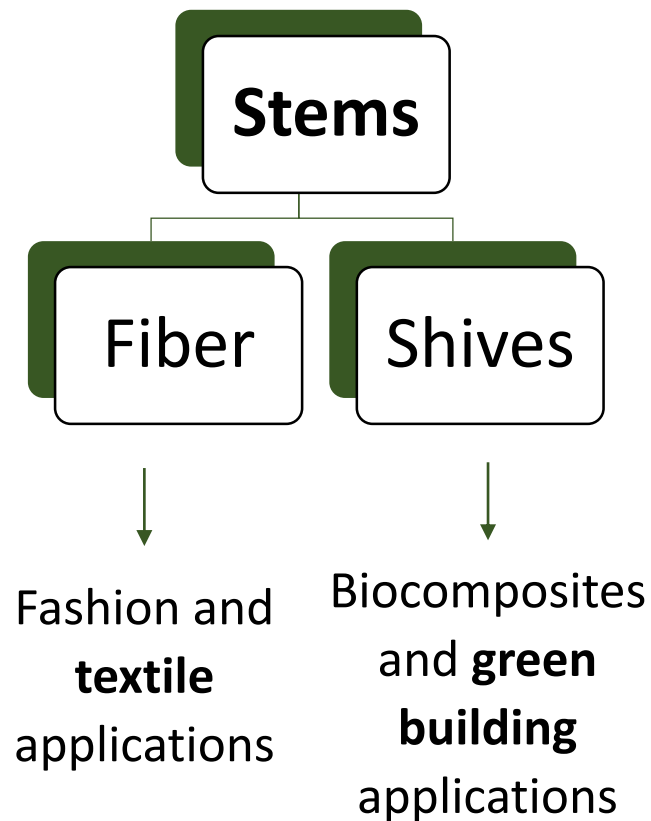


Shives

- Hemp stem is a versatile starting material, which can be used in the **green building sector** as insulating panels and mixed with lime to produce plasters.
- **Product features:** low weight, superior strength, biodegradability, and thermodynamic properties. Low cost compared to fibers
- Green building is one of the biobased sectors in **constant growth** with new sustainable-by-design polymers are driving the green transition of the sector.
- **Major development trends:** selection of the most suitable and technical hemp varieties to strengthen their insulating and breaking resistance characteristics.
- **Other applications:** paper and pulp, plastics, animal bedding, graphene, biochar and amendants



Hemp Value Chain - Stems

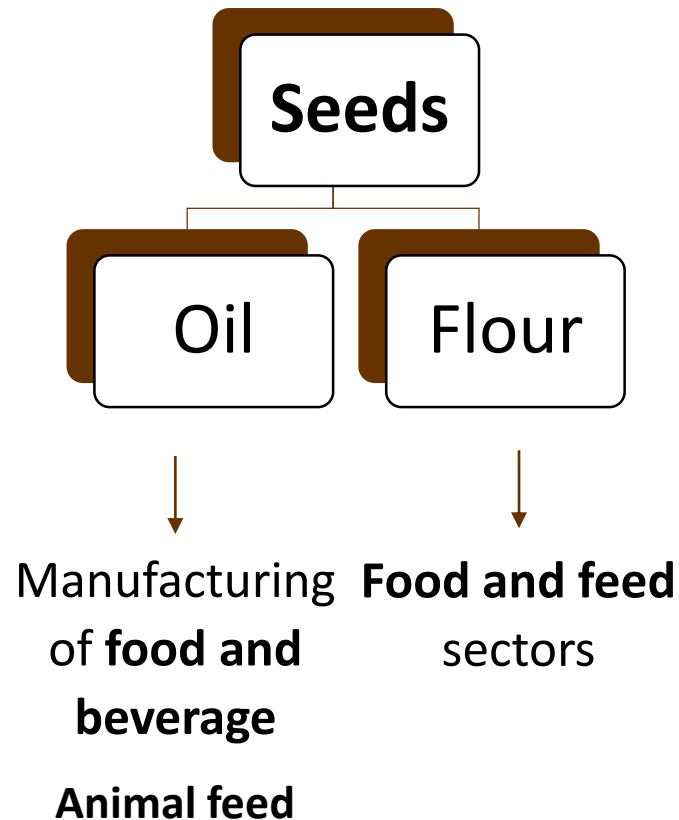


Fibers

- Oldest fibres used for **textile production** before cotton became a mass product (more than 24% share of the global hemp revenue in 2021)
- **Product features:** strong, hypo-allergic, and naturally resistant to UV light, mold, and mildew; can be easily blended with other fibers.
- **Other applications:** Non woven, Insulating Mats, Plastics, Composites, Paper and pulp, Ropes, Padding



Hemp Value Chain - Seeds



Oil

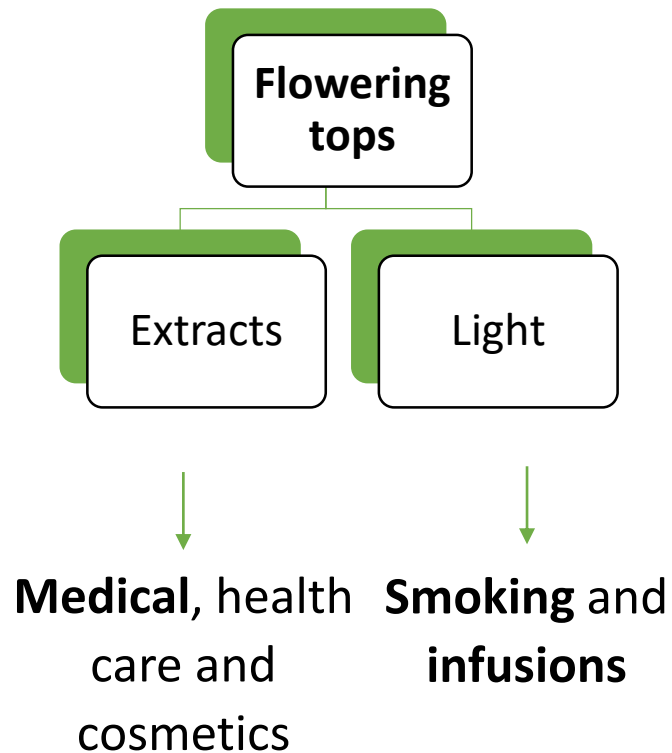
- Several **food manufacturing processes** use hemp seeds and oil, which is expected to propel market growth. In addition, rising consumer awareness about the product's benefits is likely to fuel market growth.
- **Product features:** high nutritional content, including fatty acids, proteins, and several other ingredients
- Other applications: feed, cosmetics, technical oil, polymer, fuel, paints/varnishes

Flour

- Bird and fish feed are important market for hemp flours and seeds in **animal nutrition**.
- **Other applications:** adhesives, proteins, cosmetics



Hemp Value Chain – Flowering tops



Extracts

- The hemp inflorescence is rich in non-psychoactive substances, still biologically active cannabinoids, such as **cannabidiol (CBD)**.
- CBD dietary supplements account for about a third of the global \$ 1.34 billion CBD market.
- **Product features:** potent anxiolytic, spasmolytic, anticonvulsant effects, among others.

Light

- High CBD hemp with low THC, smoked or infused, can bring into relaxation without the intoxicating effects.



Hemp Value Chain – Roots & Leaves

Roots

- **Applications:** phytoremediation, carbon sink, cosmetics, medical, health care

Leaves

- **Applications:** medical, cosmetics, health care



ClusterXChange mobility scheme

ABOUT THE CXC

CXC is a new **pilot scheme** funded by the EU aiming to facilitate transnational cooperation, peer learning, networking and innovation uptake through **short-term exchanges** between **cluster members**.

THE ACTORS

An exchange constitutes a stay abroad performed by a **visiting organisation** from an eligible country at a **host organisation** in another eligible COSME country.

WHO CAN PARTICIPATE

50% of the participants are **SMEs** and 50% are **clusters**, similar business networks, or scaling-up organizations. Training providers, large companies and public authorities can only participate as host organizations.

ECONOMICAL SUPPORT

The stay is partly financed by the EC through a lump sum paid to the visitors for **travel and accommodation expenses**. The lump sum must not exceed the threshold defined per host country.



HempClub implementing CXC

Our objective: the project will carry out at least **80 short term exchanges** involving SMEs, scale support organizations, training providers, public authorities and big companies involved or interested in the hemp sector and belonging to a COSME participating country.





Standortagentur



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 <https://www.linkedin.com/company/83302386>

 hempclubeu@gmail.com