PREPARING CONDITIONS FOR THE REVIVAL OF THE HEMP TEXTILE INDUSTRY IN V4 COUNTRIES AND BEYOND

Strategic Roadmap for the Revival of Hemp Textile Fibre Production in Central Europe - SUMMARY

Strategic directions for rebuilding hemp textile fibre production in Central Europe between 2026 and 2035.

2026 – 2035

LEAD ORGANISATION	**CzecHemp — Czech Hemp Cluster**
FUNDED BY	**International Visegrad Fund**
PROJECT PERIOD	**October 2024 – June 2026**

The project is co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants from the International Visegrad Fund.

Hemp textile fibre was a strategic material for European agriculture and industry for centuries.

Today, a convergence of EU sustainability regulation, growing industrial demand and advancing processing technology is creating the conditions for its return — not as a niche crop, but as a commercially viable, regionally anchored component of the European natural fibre value chain.

This Roadmap, developed by CzecHemp and partners from the Czech Republic, Slovakia, Hungary, Poland and Germany with the financial support of the International Visegrad Fund, presents the strategic directions for rebuilding hemp textile fibre production in Central Europe between 2026 and 2035. It is grounded in two years of collaborative research, study visits, partner workshops, a Survey of 26 textile industry stakeholders, pilot processing trials and analysis of European and global fibre markets.

THE OPPORTUNITY IN NUMBERS

79%	€8/kg	124 Mt	48,500 ha
of textile buyers surveyed interested in sourcing CE hemp fibre	average import value of hemp yarn vs €1.25/kg for raw fibre	global fibre production in 2023 — 73% synthetic	hemp under cultivation in Europe in 2024

WHY THE MOMENT IS RIGHT

The EU regulatory landscape has shifted decisively in favour of traceable, locally produced natural fibres.

The Ecodesign for Sustainable Products Regulation (ESPR) makes the Digital Product Passport (DPP) mandatory for textiles from approximately 2027, rewarding supply chains with documented provenance.

The EU Bioeconomy Strategy identifies hemp as an industrial platform for textiles, composites, construction and food.

The revised End-of-Life Vehicles Regulation opens automotive composites markets. The CAP raised the hemp THC threshold, expanding the cultivable variety range.

Against this regulatory backdrop, the market opportunity is concrete. Germany alone accounts for 17% of global raw hemp fibre imports by volume;

Italy is the largest global importer of hemp yarn by both value (24%) and volume (21%).

Hemp yarn commands average import values of approximately €8/kg against €1.25/kg for raw fibre — an order-of-magnitude jump in value captured at a single processing stage.

Woven hemp fabric exports doubled in value between 2019 and 2022. Demand already exists and that CE-region processing is currently not positioned to supply.

The competitive argument for CE hemp fibre is specific: EU-grown, EU-processed, certified-provenance fibre, from a supply chain whose environmental footprint is a fraction of Asian alternatives, produced through processing routes that are climate-resilient and compatible with circular bioeconomy infrastructure.

It addresses real procurement problems for EU automotive suppliers, regional textile manufacturers and European apparel brands repositioning toward sustainable materials.

THE CENTRAL EUROPEAN HEMP FIBRE LANDSCAPE

The CE region has relevant agronomic capacity — hemp is cultivated in all five project countries, with authorised varieties adapted to Central European conditions.

Hungary contributes the Kompolti variety and its hybrids, accounting for an estimated 25% of the genetic base of European hemp varieties, with Kender-Cucc driving the green harvest and controlled retting route within the consortium.

Poland has the most developed institutional support through IWNiRZ; Slovakia manages the Hemp Materials Library mapping processing capacities across the region;

the Czech Republic holds the EU's most open cultivation framework and hosts new domestic decortication investment.

What is missing is the middle of the value chain: the controlled degumming, decortication and fibre refinement infrastructure that converts hemp straw into specification-grade fibre at consistent quality, in contractable volumes, within economically viable transport distances.

This gap exists at every scale — from individual farm-level processing to regional hub capacity — and without addressing it, all other elements of the chain cannot function commercially.

> *"The technologies for growing, processing and spinning hemp textile fibre are available or achievable. The barriers are economic and infrastructural, not fundamental technical unknowns."*

Price competitiveness, raw material availability and processing capacity are the most frequently cited concerns among textile industry stakeholders engaged by the project.

A significant share report that no production adjustments would be needed to use hemp.

The manufacturing infrastructure to receive CE hemp fibre already exists in the region.

THREE PROCESSING ROUTES: COMPLEMENTARY PATHWAYS

The Roadmap identifies three processing approaches, each with a distinct cost structure, quality profile and market target.

These are complementary pathways that together cover the full range of CE market opportunities.

Green harvest with controlled bio-retting carries the highest investment and processing priority within the Roadmap, as the route that most directly addresses the region's core infrastructure gap.

Route A: Technical harvest + dry spinning

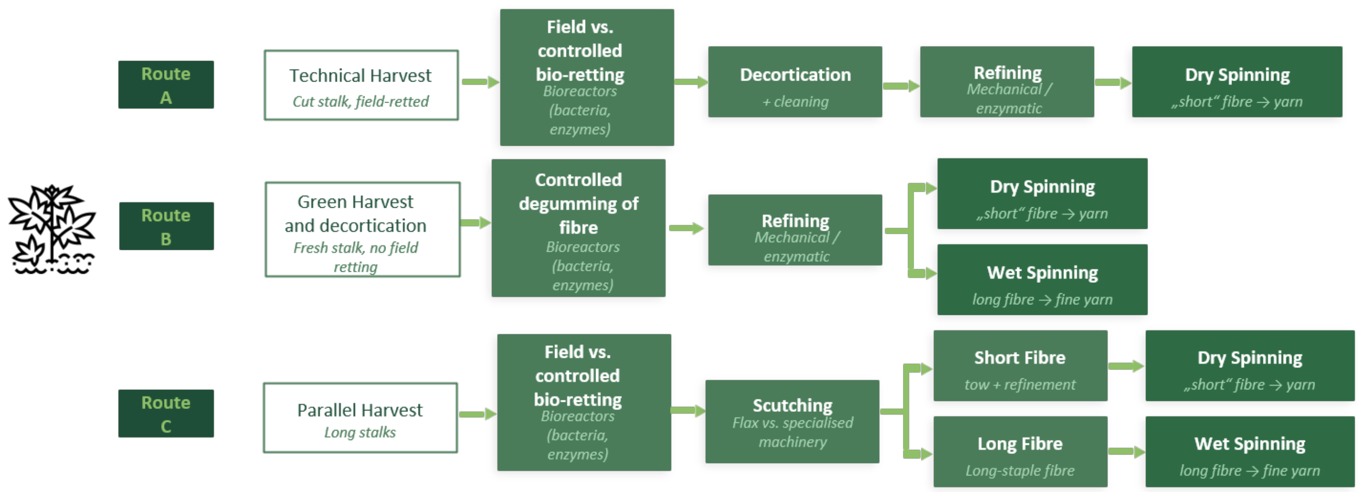
- Lowest capex entry point
- Accessible with existing equipment
- Technical textiles, composites, furniture
- Dew-retting: climate-exposed
- Hurd revenue essential for viability

Route B: Green harvest + controlled retting

- Backbone of the long-term model
- Decouples quality from weather
- Biogas + biochemical co-products
- Primary infrastructure investment target

Route C: Parallel harvest + wet spinning

- Highest quality ceiling
- Linen-equivalent yarn
- High-end apparel, luxury textiles
- Specialist strand — not volume route
- Scutching access: key near-term task



TARGET MARKETS

CE hemp fibre does not need to compete with Asian commodity production on price.

It targets the segment of the European market for which commodity supply is structurally inadequate — defined by quality, reliability, provenance and regulatory compliance.

Market entry is sequenced across the three Roadmap phases:

NEAR-TERM 2026–2028	SCALE-UP 2028–2030	INTEGRATION 2031–2035
• Technical textiles and composites (primary entry) • Furniture and interior textiles • First supply agreements with EU buyers	• Automotive composites at volume • Apparel blends from pilot to regular supply • Supply agreements with Italian buyers	• Medical and specialty textiles • Premium long-line fibre (parallel harvest route) • CE as recognised certified provenance origin

Across all segments, buyers consistently prioritise three things above all else: reproducibility of fibre quality across batches and seasons;

documented provenance and traceability compatible with DPP requirements; and contractable supply volumes. These requirements define the investment priorities.

THE ROADMAP: VISION AND ACTION LINES

Vision: A competitive, regionally anchored hemp textile fibre production ecosystem in Central Europe, integrated into the European natural fibre value chain and aligned with EU sustainability requirements.

AL	OBJECTIVE	HORIZON
AL1	Processing infrastructure investment — controlled retting, decortication, long-fibre route	2026–2028
AL2	Supply chain integration — anchor off-take agreements across three production lines	2026–2027
AL3	Quality systems — alignment with Masters of Hemp Fibre™ certification framework	2026–2028
AL4	Market validation — full chain demonstrated under commercial conditions	2026–2028
AL5	Investment readiness and co-financing across all three Roadmap phases	2026–2030
AL6	Skills and education — European vocational training network (ERASMUS+ CoVE application)	2026–2030
AL7	Policy and regulatory engagement — CE common position in EU standardisation	2026–2030

PRIORITY ACTIONS FOR THE VALIDATION PHASE (2026–2028)

Five actions define the critical path for the validation phase. Their sequencing matters as much as their completion.

1	**Establish anchor off-take agreements**	Sign first agreements along each of the three consortium production lines — blended apparel; technical textiles and automotive composites; premium and specialty fibre. Each agreement makes the investment case for processing infrastructure concrete.
2	**Commission techno-economic feasibility studies**	Facility-specific engineering and financial analysis at candidate CE locations — throughput, energy balance, biogas integration, financing structure. Prerequisite for investment applications.
3	**Connect technical fibre route from decortication to refined output**	Prove existing and emerging decortication capacity; validate downstream refinement — through refinement technology, enzymatic processing or other available capacity — to achieve dry-spinning quality.
4	**Validate CE scutching lines under hemp conditions**	Establish achievable throughput, long-line fibre yield and output quality at Polish and Czech lines. Assess IWNiRZ parallel harvest IP as a near-term development pathway.
5	**Initiate alignment with Masters of Hemp Fibre™ and advance funding**	Engage with Alliance certification framework. Coordinate funding applications; await I3 investment readiness results (summer 2026); submit ERASMUS+ CoVE application (September 2026).

> *"The conditions for the revival of hemp textile fibre production in Central Europe are more favourable than at any point in the past three decades. The barriers are known, finite and addressable."*

ABOUT THE PROJECT AND PARTNERS

Project	Preparing conditions for the revival of the hemp textile industry in V4 countries and beyond (October 2024 – June 2026)
Lead organisation	CzecHemp — Czech Hemp Cluster (www.czechemp.cz)
Funded by	International Visegrad Fund
Consortium partners	• ČTPT — Czech Technology Platform for Textiles (CZ) • HEMPSKA — Slovak Hemp Association (SK) • Textilné centrum — Textile Centre, Žilina (SK) • Kender-Cucc Kft. — Hemp processing and textiles (HU) • IWNiRZ — Institute of Natural Fibres and Medicinal Plants, Poznań (PL) • Natuvalis GmbH — Natural fibre development (DE)
Full Roadmap available at	www.czechemp.cz

The project is co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants from the International Visegrad Fund. The mission of the fund is to advance ideas for sustainable regional cooperation in Central Europe.