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Submission to the Australian Government's Inquiry into opportunities for the development of a hemp industry in Australia

Executive Summary

The Orbost & District Chamber of Commerce and Industry, as auspice body for the Future of Orbost & District (FoOD) Project, welcomes the opportunity to contribute to the Australian Government's Inquiry into the **opportunities for the development of a hemp industry in Australia.** With the cessation of native timber harvesting in Victoria, industrial hemp represents a timely and logical successor industry for East Gippsland and beyond. Drawing on a local trial, whole-of-value-chain pilot, scenario modelling and extensive stakeholder engagement, our work suggests that hemp can integrate into existing farming systems, support new manufacturing and construction supply chains, and catalyse a circular, low-carbon economy aligned with national net-zero, housing and regional development goals.

Yet hemp's full potential is constrained by fragmented regulation, under-developed supply chains, and insufficient applied research and standards. This submission outlines the opportunities for hemp in farming systems, manufacturing, circular economy and construction, and recommends key enablers — policy certainty, harmonised standards, shared infrastructure, digital platforms, and system-integrator cluster models — to unlock growth. With coordinated action, industrial hemp can become a cornerstone of Australia's sustainable fibre economy, creating jobs, diversifying regional incomes and accelerating the transition to a regenerative, globally competitive bioeconomy.

Full Submission

The Orbost & District Chamber of Commerce and Industry (East Gippsland, Vic) is the auspice body of the **Future of Orbost & District (FoOD) Project[1],** which has been exploring new economic opportunities in response to the cessation of native timber harvesting in Victoria which was a previously a key driver of our local economy. Industrial hemp has emerged as an exciting new opportunity and an obvious successor: a fibre industry that builds on local strengths, aligns with global trends, and delivers spillover benefits across multiple sectors. This submission outlines how industrial hemp can become a cornerstone of Australia's sustainable fibre economy and the enabling actions required to achieve it.

In investigating this opportunity, we have derived many learnings from:

- Growing a trial crop, which validated the suitability of our climate and soil – inclusive of the potential for growing on non-irrigated land;

[1] Future - Orbost Region | Fresh air life in the heart of nature

- Embarking on a practical place-based whole of value chain pilot which highlighted many of the current challenges across the value chain which need to be addressed for the industry to succeed;
- Undertaking some-early-stage scenario modelling on scale requirements to support place-based development around a local hemp hub concept;
- Engaging extensively with ecosystem stakeholders across our region, Australia and New Zealand – industry, industry bodies, researchers, government, community;
- Studies undertaken that relate specifically to the Gippsland context[2] - including early-stage work undertaken by Food & Fibre Gippsland[3];
- Extensive desktop research.

We have concluded that industrial hemp is much more than just another crop**.** Cultivated for thousands of years and once prized for rope, sails, textiles, and paper, it is now re-emerging as a powerful systems-level leverage point. By reducing embodied carbon and, in applications such as hemp construction materials, sequestering CO_2 for the lifetime of a building, hemp contributes directly to net-zero goals. Beyond construction, it can support regenerative agriculture, generate regional jobs, enhance health and wellbeing, and enable sustainable bio composites to replace fibreglass, plastics, and other carbon-intensive materials across industries from transport to manufacturing.

Yet, like many emerging industries, hemp faces the familiar "chicken-and-egg" challenge: underdeveloped supply chains limit market confidence, while uncertain markets constrain investment in reliable supply. It also contends with vested and incumbent interests, and entrenched "business as usual" approaches, which can resist or slow the industry's development and potential. Addressing these barriers requires the right policy settings, shifts in culture and practice across production, processing, and end use, and a strong commitment to innovation and R&D to close knowledge gaps. Above all, it calls for authentic collaboration and support across the entire ecosystem.

We are pleased to provide further inputs in relation to the areas you are exploring.

a. The opportunities for the development of a hemp industry in Australia

(i) Farming systems

Industrial hemp shows strong compatibility with our local farming systems – particularly beef cattle grazing and corn seed production. Key contributions and considerations include:

- **Low chemical inputs & soil health**: Hemp is considered to require fewer chemical inputs than many other crops and its deep root systems improve soil structure, water infiltration, and overall soil health. More action and longitudinal research are required to support this.
- **Crop rotation & regenerative agriculture**: Hemp can play a valuable role in crop rotation, reducing pest and disease cycles, and represents a positive shift toward

[2] Hemp in Gippsland: Potential multi-industry development

[3] GS3 update: Industrial hemp project gathers momentum — Food and Fibre Gippsland

regenerative agricultural practices. More action and longitudinal research are required to support this.

- **Short growth cycle & fibre yields**: With rapid maturity and high biomass productivity, hemp potentially offers a more attractive fibre option than agroforestry, which requires longer timeframes to yield.
- **Diversified income/value streams**: Hemp potentially provides an additional revenue option for farmers which could also derisk their business models. In addition, the contribution to soil health potentially provides other less tangible benefits (i.e. reduction in inputs/improved productivity), although more action and longitudinal research is required to better understand and validate this.
- **Anchor capability – Gippsland Seed Services**: As a global leader in corn seed production, Gippsland Seed Services (located near Orbost)[4] has established expertise in producing, drying, storing, and distributing seed. This existing infrastructure and knowledge base could act as an anchor capability for hemp, supporting reliable seed supply for food, wellbeing products, and on-farm inputs.
- **Need for system fit**: Further work is needed to better understand how hemp best integrates into a range of farming systems – including potential in vegetable and dairy production.
- **Market confidence & adoption**: Farmers are cautious about changing production systems. Beyond technical guidance, they need confidence in reliable markets and regulatory stability before investing. It is essential that farmers know the intended end-use of their crops so that they can grow according to end use specifications.
- **Shared value activation**: Building farm-level capability will only succeed if parallel work ensures activation of the entire hemp value chain, creating shared value from cultivation through processing and end-use.
- **Specialist equipment requirements**: Hemp requires precision seeding, heavy-duty harvesting, and processing infrastructure. At scale, such investment is often beyond individual farms and will depend on cooperative approaches, subcontracting models, and investor confidence in supportive markets and regulation.

(ii) Manufacturing

Hemp manufacturing opportunities include:

- **Textiles, nutraceuticals, and food proteins.**
- **Bio-based plastics and bio composites** to replace fibreglass and carbon-intensive materials. For example, where are the regional spillover opportunities into other key regional projects (i.e. wind farms and building on international research into the application of hemp bio composites in wind turbines[5])?
- **Construction products** such as hemp panels, blocks, and insulation, which could be activated by leveraging the current housing crisis.

However, further and significant translational R&D is also required — not only to validate product performance under real-world conditions, but also to establish recognised

[44] Gippsland Seed Services – Contract Seed Production in Gippsland Victoria
[5] Structural performance analysis of hemp fiber-reinforced hybrid composites in wind turbine blade manufacturing - ScienceDirect

standards, demonstrate applications, and build the confidence of regulators, markets, and investors.
Regional processing hubs such as Wandarra[6] in North Queensland and Western Murray[7] are already exploring vertically integrated models that connect growers to processors and advanced manufacturers. We also strongly advocate for **hub-and-spoke models**, where:

- first-stage processing (decortication) occurs locally — e.g. Orbost — to reduce bulky transport costs;
- advanced manufacturing opportunities are pursued regionally. For Orbost this also represents opportunities to leverage other key anchor business's capabilities in construction materials.

Looking ahead, the greatest opportunity potentially lies in developing **distributed scale through networked hemp hubs** — connected across regions and working on collaborative principles. Such an approach would allow hubs to specialise according to local strengths, share knowledge and infrastructure, and collectively build a robust, adaptive, and competitive industry that can respond to both domestic and global demand.

(iii) Circular economy

As a renewable, fast-growing crop, hemp fibres and hurd can be repurposed into a wide range of circular economy products, contributing directly to waste reduction and carbon sequestration goals. At a national level, this aligns strongly with Australia's **National Waste Policy** and emerging **Circular Economy principles**, which prioritise designing out waste, keeping materials in use, and regenerating natural systems.

Locally, it creates opportunities for regions like Orbost and more broadly Gippsland to demonstrate circularity in action — for example by linking hemp processing residues into emerging **biochar projects**, where waste is converted into high-value carbon products that enrich soils, capture and store carbon, and potentially generate new revenue streams through carbon markets.

This integrated approach positions hemp not only as a crop, but as a catalyst for bio-based circular economies at local, state, and national levels, fully aligned with government priorities.

(iv) Construction industry

Hemp-based construction materials (such as hemp blocks, insulation, and bio-based panels) can significantly reduce embodied carbon and actively sequester CO_2 in housing and commercial buildings for their lifetime. Given the demonstrated fire-retardant properties of hemp materials, more work needs to be done to validate and support the introduction of hemp-based building materials into high bushfire risk areas like East Gippsland. The main barriers to adoption are certification, standards, and lack of demonstration projects along

[6] Wandarra Limited
[7] Development - Murray Industrial Hemp

with dominant practice, culture and mindsets. National support for translational R&D, test facilities, demonstration hubs, and building standards will be critical to accelerate mainstream adoption.

Given the current 'housing crisis' – hemp can play an important role, and the crisis can also be an important leverage point to support the industry – particularly through targeted policy and program interventions (i.e. requirements of sustainable materials in builds, public housing projects, etc).

(v) Broader economic contribution

The hemp industry offers strong prospects for regional job creation and economic diversification. With native timber harvesting ceasing, establishing a hemp-based fibre industry in regions like East Gippsland is a logical transition pathway. Clusters and hubs are already emerging across Australia — providing opportunities and models for connected place-based development with global relevance.

b. Research and Development

AgriFutures Australia has established a hemp RD&E program[8], but further applied and translational research is required. Key priorities include:

- seed genetics suited to Australian conditions;
- agronomic trials across diverse regions;
- processing technologies and bio composite applications;
- lifecycle assessments and carbon accounting frameworks;
- demonstration hubs to bridge research and market adoption;
- innovation intermediaries — organisations that connect research, industry, and community — are critical to reduce risk, accelerate knowledge transfer, and build credibility for the sector.

Connectivity across the innovation ecosystem locally, nationally and internationally is critical to support sharing of knowledge and avoid the risk of unnecessary duplication and overlap.

c. Regulation

The current regulatory landscape for hemp remains fragmented and inconsistent across jurisdictions. Challenges include:

- varied licensing arrangements between states and territories;
- uncertainty around THC thresholds and food safety regulation;
- export rules that are unclear or burdensome;
- ambiguity in construction standards: hemp-based building materials such as hempcrete, blocks, and panels are not yet well aligned with recognised Australian Standards or the National Construction Code. This lack of clarity creates barriers for

[8] 22-030.pdf (Agrifutures Australia Roadmap)

certification, slows approval processes, and undermines confidence among builders, regulators, and investors.

Together, these regulatory gaps limit industry growth and the opportunities for national collaboration by creating uncertainty and inconsistency across value chains.

d. Other related matters

Hemp should not be treated as a niche commodity but as a **systems-level opportunity**. Its spillovers into agriculture, construction, health, advance ed manufacturing, and the circular economy show its potential to fast-track Australia's transition to a net-zero economy whilst supporting regional development.

As per Attachment 1, hemp aligns with multiple policy areas to support integrated outcomes.

The **Future of Orbost Project** hopes to demonstrate how hemp can be positioned at the heart of regional transition strategies. With the closure of one fibre industry (native timber), it is a "no-brainer" to invest in building another — one that is regenerative, circular, and globally relevant.

Key enablers will include:

- policy shifts that provide certainty and incentives;
- mechanisms that enable collaboration and reduce fragmentation;
- investment in shared infrastructure and digital platforms that connect ecosystem actors;
- alignment with place-based initiatives, ensuring hemp is integrated with regional strengths, needs, and opportunities.
- system integrators and cluster models that act as trusted backbone organisations to orchestrate stakeholders, align incentives, and accelerate collective impact.

Conclusion

Industrial hemp has the potential to deliver transformative benefits for Australian farming systems, manufacturing, construction, and the circular economy — while creating regional jobs and export opportunities. Realising this potential requires coordinated policy, investment in R&D and infrastructure, harmonised regulation, and cluster-based collaboration.

With the right enabling environment, industrial hemp can become a cornerstone of Australia's emerging sustainable fibre economy, ensuring regional communities like Orbost not only survive post-timber transition but thrive.

ATTACHMENT: Policy Mapping

Unlocking the Potential of Industrial Hemp in Australia: Policy Alignment Summary
Industrial hemp offers a compelling, cross-sectoral opportunity for Australia to advance climate, housing, agricultural, economic, regional development and environmental goals. Below is a policy-by-policy breakdown of how hemp aligns with key national strategies and frameworks. It does not imply that industrial hemp is specifically mentioned in these policy documents but highlights the potential alignment with the intent of the policies.

🌏 1. Net Zero by 2050

Policy: Australia's Long-Term Emissions Reduction Plan

Relevance:

- Hemp sequesters carbon rapidly during growth.
- Hemp-based materials contribute to carbon-neutral construction.
- Supports circular bioeconomy principles.

🏠 2. Sustainable Housing and Construction

Policies:

- Housing Australia Future Fund
- National Housing and Homelessness Plan – Consultation Draft

Relevance:

- Hemp products offer a sustainable, low-carbon alternative to conventional building materials.
- Contributes to energy-efficient, breathable, and durable homes.
- Potential to scale for affordable housing and remote builds.

🌾 3. Sustainable Agriculture and Soil Health

Policy:

- National Agricultural Innovation Agenda
- National Soil Strategy
- Australian Agricultural Sustainability Framework (NFF)

Relevance:

- Hemp fits well in crop rotations, improves soil structure and reduces pesticide use.
- Supports regenerative practices and biodiversity.
- Can contribute to a more diversified, climate-resilient farming economy.

🛠️ 4. Advanced Manufacturing and Regional Innovation

Policy:

- National Reconstruction Fund (NRF)

Relevance:

- Hemp enables local value-adding and bio-based manufacturing.
- Opportunities in textiles, fibreboard, bioplastics, and building materials.
- Potential to drive job creation in regional areas.

🗑️ 5. Circular Economy and Bioeconomy

Policies:

- National Waste Policy Action Plan
- Australian Bioenergy Roadmap (ARENA)

Relevance:

- Hemp is biodegradable, low-waste, and recyclable.
- Whole-plant use supports waste reduction.
- Hemp bioenergy (and links to biochar) and bioplastics can replace fossil-based inputs.

🌱 6. Climate-Smart Agriculture and Carbon Farming

Policies:

- Emissions Reduction Fund Methods
- Low Emissions Agriculture Strategy

Relevance:

- Potential to develop carbon credit methodologies for hemp.
- Hemp cultivation could be integrated into land-sector mitigation strategies.
- Suits nature-based and soil carbon initiatives.

📊 Mandatory Climate and Carbon Reporting: A Catalyst for Hemp Adoption (starting in 2025)

Policy Link: Climate-Related Financial Disclosure Reforms (Treasury, 2024+)

How it Links to Hemp:

- **Construction & Housing:** Builders, developers, and materials suppliers will need to reduce the embodied carbon in construction. Hempcrete and other bio-based hemp products offer a verified low-carbon alternative.
- **Agriculture & Land Use:** Farms and agribusinesses may seek to reduce or offset emissions — hemp supports soil carbon, low inputs, and biodiversity.
- **Manufacturing:** Value-added hemp products (e.g., textiles, construction materials, bioplastics) will be in growing demand by manufacturers seeking to reduce Scope 3 emissions in their supply chains.
- **Finance & Investment:** Carbon disclosure will drive **ESG-aligned investment**. Industrial hemp, with its traceable environmental benefits, can attract green loans, transition finance, and sustainable bond opportunities.

Unlocking the Potential of Industrial Hemp in Victoria: Policy Alignment
Industrial hemp presents a cross-cutting opportunity for Victoria's clean economy, regional development, and sustainability agenda. Below is a policy-by-policy breakdown. It does not imply that industrial hemp is specifically mentioned in these policy documents but highlights the potential alignment with the intent of the policies.

🌏 1. Victoria's Climate Change Strategy (2021)

Policy:

- Climate Change Strategy – Victoria

Relevance:

- Hemp contributes to land-based carbon sequestration.
- Hemp-based products (e.g. hempcrete) reduce emissions in building and manufacturing sectors.
- Supports nature-based solutions and bioeconomy transition.

🏠 2. Victorian Housing Statement (2023) + Big Housing Build

Policy:

- Victoria's Housing Statement 2023–2030

Relevance:

- Hemp-based construction materials offer low-carbon, energy-efficient alternatives for affordable and social housing.
- Suited to regional housing delivery and off-site manufacturing models.
- Aligns with innovation and sustainability ambitions in the Big Housing Build.

🌾 3. Agriculture Victoria Strategy + Regenerative Agriculture Work

Policy:

- Agriculture Strategy: Strong, Innovative, Sustainable

Relevance:

- Hemp supports soil health, rotations, and low-input farming.
- Opportunity to pilot regenerative hemp systems in East Gippsland and other regions.
- Fits with Agriculture Victoria's innovation and diversification goals.

🛠️ 4. Made in Victoria: Manufacturing Statement

Policy:

- Made in Victoria – 2030 Manufacturing Statement

Relevance:

- Hemp enables new local industries — textiles, fibreboards, insulation, bioplastics.
- Supports bio-based and circular manufacturing pathways.
- Aligned with emphasis on sovereign capability and regional manufacturing jobs.

🔁 5. Recycling Victoria: Circular Economy Policy

Policy:

- Recycling Victoria: A New Economy

Relevance:

- Whole-plant hemp use aligns with zero-waste principles.
- Supports design of biodegradable, compostable, or recyclable products.
- Offers local processing opportunities in rural areas.

📉 6. Net Zero Industry and Innovation Programs

Policy:

- Net Zero Industry and Innovation Program

Relevance:

- Hemp value chains can decarbonise construction, packaging, and agriculture (carbon sequestration, links to biochar and livestock emissions reduction).
- Aligns with Victoria's focus on clean manufacturing and low-emissions innovation.
- Opportunities for pilot funding or partnerships.

🚜 7. Regional Economic Development + Transition Plans

Policies:

- Gippsland Region Economic Development Strategy
- Forestry Transition Program

Relevance:

- Hemp offers whole-of-value-chain potential to replace lost jobs and industries.
- Opportunity to build local capabilities in sustainable fibres and ag-tech.
- Fits regional goals for innovation, resilience, and new industries.

💡 8. Bioeconomy and Innovation

Policy: While Victoria does not have a formal "bioeconomy strategy," it is referenced in:

- AgriFutures Australia Research and Innovation Strategic Plan
- Food & Fibre Gippsland's innovation platform

Relevance:

- Hemp is a key candidate for a growing regional bioeconomy.
- Supports industry collaboration, innovation ecosystems, and university linkages.