INDEPENDENT UNITED NATIONS SUBMISSION PROPOSAL

GLOBAL HEMP EVERYWHERE INITIATIVE

A planetary master business plan for industrial hemp cultivation, soilless agriculture, urban production, circular manufacturing and Hempoxies research.

HEMP EVERYWHERE IT CAN RESPONSIBLY CONTRIBUTE.
HEALTHY ECOSYSTEMS EVERYWHERE THEY MUST BE PROTECTED.

Prepared by: Marie-Soleil Seshat Landry
Affiliation: Landry Industries / Marie Landry Spy Shop
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Executive decision memorandum

The Global Hemp Everywhere Initiative (GHEI) proposes a worldwide, voluntary programme to expand the use of industrial hemp as a renewable feedstock for food, textiles, construction, packaging, specialty chemicals and advanced composites. It integrates three cultivation pathways: responsible field farming; hydroponic, aeroponic and related controlled-environment systems; and carefully engineered rooftops, balconies and other urban sites. It also proposes a materials research track for Hempoxies.

The phrase “everywhere” is interpreted as every technically and economically viable location that passes legal, ecological, social and safety screening—not wholesale replacement of forests, native grasslands, wetlands or food crops. Hemp is one crop within a diversified bioeconomy, not a universal substitute for biodiversity or all materials.

Decision requested from prospective partners

- Convene a voluntary scoping coalition with agricultural, trade, industrial and environmental expertise.
- Commission a global geographic and economic suitability atlas, including protected ecosystem exclusions.
- Fund controlled pilot comparisons of field, greenhouse, hydroponic, aeroponic and urban cultivation.
- Support regional processing, standards, product qualification and fair farmer participation.
- Establish an evidence and safeguards framework before setting global acreage or carbon targets.

Evidence and proposal notation

Established: documented existing practices or regulatory frameworks. Emerging: technically demonstrated, with uncertain broader economics. Experimental: requiring independent performance validation. Proposed: programme design, milestones, budget or governance without institutional authorization. Numbered references appear in brackets throughout.

Proposed outcome: an inclusive global hemp bioeconomy built on verified product demand, responsible land use, decentralized industrial capacity and auditable environmental results.

1. Scientific and strategic foundation

Industrial hemp is a multipurpose form of Cannabis sativa L. UN Trade and Development (UNCTAD) identifies opportunities spanning seeds, food, fibres, industrial uses and whole-plant value chains, but emphasizes that laws, production capacity, quality and market access constrain their development [1–3].

FAO reports approximately 4.6 billion hectares of agricultural land globally in 2024, including extensive pasture; this is not the area available for hemp. Its 2026 land statistics also document deforestation pressure associated with cropland expansion, reinforcing the need to prioritize existing suitable farmland and avoid conversion of high-value ecosystems [4].

The initiative shall not make unverified claims that hemp automatically sequesters more carbon, produces lower-impact products, remediates contaminated soil or outperforms conventional materials. Each assertion must be assessed against explicit baselines, location-specific data and lifecycle boundaries [2,5–7].

2. Worldwide cultivation architecture

Production pillar	Eligible sites	Primary use and condition
A. Soil-based agriculture	Existing suitable cropland and rotational systems	Main candidate for high-volume seed, stalk, fibre and hurd. Protect food security and existing ecosystems.
B. Engineered soilless systems	Hydroponic and aeroponic greenhouses; selected indoor research systems	Controlled breeding, propagation, seed quality and specialized research; commodities only after cost/energy proof.
C. Urban built environment	Certified rooftops, balconies, terraces, courtyards, municipal pilots	Small-scale education, participation, science and specialty production; mandatory safety and legal compliance.

2.1 Global Hemp Suitability Atlas

Commission a geospatial screening platform using soils, photoperiod, climate, irrigation, electricity emissions, land rights, protected habitats, existing crops, transport routes and processing demand. Assign each candidate site a suitability class: viable; conditional/pilot; or excluded. The assessment must consider baseline land use and climate-change scenarios.

2.2 Agricultural exclusion criteria

- No conversion of forests, peatlands, wetlands, intact native grasslands, protected areas or other high-conservation-value ecosystems.
- No displacement of essential local food production without demonstrated food-security neutrality.
- No use of water-stressed sites where the programme would worsen water scarcity or ecosystem flows.
- No land acquisition without lawful tenure, consultation, free prior informed consent where applicable, and fair benefit sharing.

3. Soilless hemp research and production

Hydroponic systems deliver nutrients through water-based root-zone management; aeroponics supplies roots with nutrient solution in a mist or spray, and aquaponics integrates aquatic production with plant nutrition. Small peer-reviewed experiments demonstrate feasibility for hemp in hydroponic and aquaponic systems [8]. These do not establish universal commercial superiority over field cultivation.

System	Potential advantage	Main limitation
Sunlit hydroponics	Precision nutrition, water reuse, controlled research	Greenhouse capital; regional heating and cooling loads.
Aeroponics	Root-zone oxygenation and experimental precision	Pump/nozzle failures, maintenance, backup power needs.
Aquaponics	Integrated water and nutrient management	Complex biosecurity, system stability, nutrient matching.
Indoor vertical farming	Spatial control and year-round propagation	High lighting, energy and building costs; commodity yield economics.

System	Potential advantage	Main limitation
Hybrid nursery-to-field	Consistent transplants and breeding materials	Transplant labour and field adaptation requirements.

A 2025 peer-reviewed review identifies productivity advantages and major environmental/energy tradeoffs for vertical farming, while research on indoor cannabis highlights possible large energy and emissions penalties relative to outdoor systems [9,10]. Those studies are not direct industrial-hemp fibre profitability measurements; use them as cautionary benchmarks.

3.1 Minimum pilot protocol

- Compare matched cultivars and planting densities across field, sunlit greenhouse, hydroponics and aeroponics.
- Report dry mass, seed output, usable fibre/hurd, relevant biochemical composition, water and nutrient balances.
- Meter electricity, heating, cooling, lighting and backup-system loads per kilogram of saleable product.
- Report capital cost, labour, downtime, reject rates, maintenance, yield variability and site-specific profitability.
- Require a documented independent environmental assessment before scaling.

4. Rooftops, balconies and urban hemp

Urban hemp projects shall be designed as optional, regulated municipal initiatives. They may support education, community-owned nurseries, breeding experiments, sensor validation and local greening comparisons. Household fibre volumes are unlikely to compete with farm-scale decortication economics after collection, drying and transport.

Site type	Concept	Required approval / screening
Balcony	Small containers or compact recirculating system	Building approval, structural capacity, wind, falling-object and drainage safety; cultivation permission.
Residential roof	Lightweight modular planters and water management	Structural-engineer review, waterproofing, emergency access, maintenance and wind design.
Commercial or industrial roof	Experimental greenhouse or larger modular arrays	Load calculations including saturated media and water tanks; code, fire, insurance and electrical review.
School / university	Supervised educational research	Legal authorization, safeguarding, site controls and established research protocols.

No universal rooftop-load capacity or safe planter weight is assumed. Structural evaluations must explicitly include saturated substrate, water storage, wind uplift, personnel loads, snow loads where relevant and mechanical equipment. Elevated cultivation also requires plant-height, pollen and neighbour-impact management.

4.1 Urban deployment rule

> **A legal, structurally certified rooftop can be eligible. A rooftop or balcony is never automatically a suitable hemp farm.**

For example, Canada distinguishes industrial hemp from other cannabis products under federal regulation and requires licensing for specified growing and other activities [11,12]. Local rules may impose further restrictions. GHEI proposes model policies for small-scale trials; it does not assert an existing global right to cultivate hemp at home.

5. Industrial product and value-chain portfolio

Value chain	Maturity / examples	Route to market
Food and nutrition	Established: hempseed, hearts, oil, flour and protein	Food safety, approved uses and commercial processing.
Textiles and fibre	Established: rope, technical textiles, nonwovens, fibre blends	Decortication, grading, spinning and industrial supply contracts.
Construction	Existing and developing: hemp-lime, insulation, panels	Code testing, fire/moisture testing, non-structural claims unless certified.
Paper and packaging	Existing niches: pulp, paper, moulded fibre, packaging	Unit economics, pulping impacts, collection and recycling.
Chemicals and oils	Established/emerging: lubricants, oils, bio-based ingredients	Composition, safety, processing and regulatory qualification.
Carbon and energy	Mixed: biochar, fuels, activated carbon, specialty fillers	Conversion efficiency and competition with higher-value material uses.
Advanced composites	Emerging/experimental: engineered fibre composites, Hempoxies	Mechanical, thermal, chemical, emissions and financial testing.
Regulated cannabinoids	Jurisdiction-specific: pharmaceutical and related products	Separate authorization and rules, not assumed part of ordinary hemp sales.

The portfolio follows the whole-plant industrial development logic described by UNCTAD [1–3]. “Possible” applications are not investment-grade products until customers, specifications, life-cycle impact and margins are demonstrated.

6. Hempoxies flagship materials research

Hempoxies is proposed as a research and innovation programme associated with Landry Industries. It should evaluate hempseed-oil-derived reactive materials, biobased resin constituents and hemp-derived carbon-rich fillers, including biochar, nanosheet candidates and possible functionalized derivatives. Vitrimer concepts are research candidates, not presently established or independently qualified industrial products in this proposal.

6.1 Technical qualification sequence

- Measure feedstock composition and reproducibility with traceable samples and batch records.

- Develop controlled resin and filler formulations, including appropriate conventional baseline controls.
- Measure curing, rheology, tensile/flexural strength, toughness, thermal behaviour, moisture uptake and ageing.
- Assess recyclability, repairability, toxicity, emissions and lifecycle impact independently.
- Qualify specific products under the relevant industry standards before structural, safety-critical or high-performance marketing claims.

No claim is made that hemp carbon nanosheets equal or outperform graphene, conventional carbon fibre or engineered carbon reinforcements. Those are hypotheses for independent testing and material-specific benchmarking.

6.2 Research governance

Maintain public protocols, archived datasets, negative results, conflict-of-interest disclosures, third-party validation, intellectual-property rules and publication rights. Product claims shall be separated into independently verified, internally observed and speculative categories.

7. Global processing and industrial clusters

A typical regional cluster would connect contracted growers and eligible soilless suppliers to drying, grain cleaning, seed pressing, fibre decortication, fractionation and downstream manufacturing. Regional value addition should be prioritized wherever financially sound and consistent with fair trade. UNCTAD identifies primary processing equipment and economies of scale as material barriers to small producers [2,3].

Cluster module	Core assets	Commercial gate
Farm network	Varietal supply, farmer training, production agreements	Reliable quantity, quality, price and tenure.
Primary processing	Dryers, presses, cleaners, decorticators, storage	Utilization rate, maintenance, inbound logistics.
Secondary manufacturing	Panels, textiles, food plants or composite lines	Certifications, firm orders, margin and reliable operations.
Innovation and recycling	Test labs, R&D; pilot equipment, material recovery	Demonstrated performance and net sustainability benefit.

7.1 Procurement principle

Prioritize transparent, competitive tenders, local maintenance capability, accessible finance, worker protections, traceable product flows, cooperatives and SME opportunities. Avoid a centralized global monopoly or technology lock-in.

8. Finance and economic model

Illustrative proposal: a five-year, USD 1.0 billion multinational feasibility and pilot facility. This is a design scenario, not requested or committed funding from any UN body.

Budget allocation	USD millions	Purpose
Regional processing demonstrators	350	Facilities, commissioning, workforce training

Budget allocation	USD millions	Purpose
Farmer and cooperative support	200	Seed, training, credit facilities, contract development
Independent R&D; and standards	150	Field/soilless comparisons, product testing, Hempoxies research
Pilot cultivation	100	Agronomic and urban demonstration programmes
Environmental monitoring	100	LCA, biodiversity, water and public audit
Governance and market development	100	Suitability atlas, trade work and programme administration
TOTAL	1,000	Illustrative five-year pilot facility

8.1 Project-level investment rule

Each project must demonstrate economic value after capital, operating cost, logistics, power, land opportunity cost, financing, insurance, compliance and waste treatment. Require an off-take agreement or credible market test before bankrolling significant cultivation expansions. Evaluate base, optimistic and downside cases and sensitivities for biomass price, energy price, yield and equipment uptime.

8.2 Revenue channels

Potential revenue includes seed and food commodities; fibre and hurd contracts; certified construction and textile products; specialty resins and composites; laboratory services; licensed technology; and verified environmental services only where eligible and demonstrably additional. Carbon credits are not assumed.

9. Proposed UN-related partnership and governance

GHEI is conceived as a voluntary coalition, not a UN-controlled global agricultural corporation. Functions listed below are proposed areas for engagement, not commitments or assigned responsibilities.

Potential partner	Prospective area of contribution
FAO	Agronomy, food security, land use and agricultural suitability.
UNCTAD	Hemp trade, product codes, market access and developing-country value chains.
UNIDO	Industrial processing, manufacturing capacity and technology transfer.
UNEP	Lifecycle assessment, environmental safeguards and building materials.
UNDP / IFAD	Inclusive development and eligible smallholder/financing work.
Member States and research institutions	Regulation, domestic programmes, test centres, standards and laboratories.

Governance shall include meaningful farmer and cooperative representation, Indigenous and local community consultation, public audit, independent scientific review, grievance channels, procurement transparency and open reporting of environmental and social outcomes.

10. International law and national policy

Article 28(2) of the 1961 Single Convention on Narcotic Drugs states that it does not apply to cannabis cultivation exclusively for industrial fibre and seed purposes or horticultural purposes [13]. This does not itself authorize cultivation in a country; national cultivation, processing, trade, cannabinoid, zoning and safety rules remain controlling. The legal separation of industrial hemp activities and regulated cannabinoid products is essential.

10.1 Proposed model-policy toolkit

- Clear statutory definitions of industrial hemp and authorized plant parts or products.
- Transparent and accessible licensing proportional to production scale and local risk.
- Rules for seed certification, cannabinoid compliance, product testing, transport and exports.
- Optional research permits or municipal micro-pilots for rooftop and balcony sites where governments approve.
- Harmonized product specifications and evidence-based, safe labelling practices.

11. Climate, biodiversity and social accounting

Plant growth incorporates CO2 temporarily, but permanent sequestration or avoided emissions cannot be inferred from harvested biomass alone. Full life-cycle assessment must consider fertilizer, irrigation, land-use change, energy, transport, processing, product durability and end of life. UNEP highlights the substantial material and emissions footprint of the built environment, making careful evaluation of low-impact alternatives relevant [5,6].

Dimension	Mandatory indicator	Failure trigger
Climate	Cradle-to-grave GHG intensity and credible substitution baseline	No verified net benefit for advertised climate claim.
Water	Withdrawals and consumption by basin and crop output	Material worsening of stressed watersheds.
Biodiversity	Land-cover change and habitat indicators	Conversion of excluded high-value ecosystems.
Food security	Crop displacement, local prices and farm incomes	Demonstrated serious local food-security harm.
Economics	Realized costs, yield, margin, employment and off-take	Non-viable recurring operations without justified public benefit.
People	Land rights, consent, labour conditions and distribution	Unremedied rights violations or unsafe worksites.

Contaminated-land cultivation must be treated as a specific remediation research project; hemp biomass grown on polluted land cannot automatically enter food, feed or consumer products. Measurements must document pollutant fate and residue disposal.

12. Programme phases and decision gates

Window	Work programme	Gate to proceed
2026–2030	Atlas, legal review, public consultation, farm/soilless/urban trials, product feasibility and standards mapping.	Independent evidence, lawful pilots and early off-take.
2030–2040	Regional clusters, institutional partnerships, workforce development and qualified commercial products.	Positive unit economics and audited safeguards.
2040–2050	Broader integration into food, textile, building and materials markets.	Competitive performance and resilient value chains.
2050–2100	Adaptive long-term production with biodiversity, climate and resource monitoring.	Sustained social, ecological and economic performance.

12.1 Indicative dashboard

- Land: legally eligible hectares and protected-ecosystem conversion avoided.
- Production: saleable yield, crop mix, rejected biomass and product quality.
- Processing: throughput, capacity utilization, traceability and local value added.
- Economics: grower margin, customer sales, cost of capital and job quality.
- Soilless and urban: kWh/kg, water/kg, structural safety, uptime and permits.
- Climate and biodiversity: independently verified net life-cycle impact and habitat metrics.
- Research: open protocols, reproducible results, successful product qualification and negative findings.

13. Immediate implementation deliverables

- Global Hemp Suitability Atlas - public geospatial screening with exclusions and scenario methodology.
- International Hemp Policy and Regulatory Toolkit - national and urban-model provisions.
- Hemp Industrial Product Catalogue - evidence maturity and technical specifications by use.
- Hempoxies Research Dossier - independent testing plans, benchmarks and commercialization gates.
- Regional Investment Prospectus - financial and market models for candidate value chains.
- UN and Member-State Partnership Submission - draft terms of reference and invitation to scope.

13.1 First-stage procurement packages

Package A: land, water and biodiversity assessment. Package B: controlled field and soilless pilot design. Package C: rooftop/balcony safety and legal demonstration standards. Package D: regional industrial market/off-take study. Package E: environmental and social monitoring with independent verification.

14. Proposed declaration of intent

Recognizing the need for environmentally responsible agriculture, renewable materials, circular manufacturing, equitable development and international cooperation; acknowledging the documented multipurpose industrial use of Cannabis sativa L.; and affirming the protection of biodiversity, food security, community rights and national sovereignty, the proponents invite interested States and institutions to examine a voluntary Global Hemp Everywhere Initiative.

Its purpose is to evaluate the responsible cultivation and utilization of industrial hemp on eligible farmland, in technically sound soilless systems and at safely engineered urban sites, and to establish viable downstream processing and manufacturing systems. All scales of deployment shall be contingent on scientific evidence, transparent economics, legal compliance and measurable public benefit.

THE PLANETARY TARGET IS NOT MAXIMUM HEMP ACREAGE.
IT IS MAXIMUM VERIFIED BENEFIT FROM RESPONSIBLY DEPLOYED HEMP.

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