

QUYA · Clean Industry

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Country: Peru · BAGUA GRANDE **Category:** Clean Industry **Impact Areas:** Mitigation, Circular Economy, Nature-Based **Stage:** Prototype **Team Size:** 3 **Website:** —

Elevator Pitch

QUYA closes the cocoa loop: it transforms the husk—which accounts for 10–20% of the bean and is currently burned—into B2B extracts of antioxidants and methylxanthines for use in nutraceuticals and cosmetics, using scientifically validated green technology in Peru.

Climate Problem

The husk accounts for 10–20% of the cocoa bean—up to 960,000 tons per year globally—and is either burned or left to decompose, emitting CO₂ and methane. It represents a massive amount of waste and a loss of high-value bioactive compounds that the nutraceutical industry needs.

Solution

QUYA applies green extraction technology (ultrasound and microwaves with an ethanol-water solution) validated by PUCP to cocoa shells, transforming the waste into traceable B2B extracts of polyphenols and methylxanthines for use in nutraceuticals and cosmetics.

Revenue Model

B2B sales of standardized extracts (powder and liquid) to manufacturers of nutraceuticals, natural cosmetics, and functional foods in Latin America, Europe, and the U.S. Complementary service: outsourced extraction services for cocoa cooperatives in the region.

Target Market

B2B manufacturers of nutraceuticals, natural cosmetics, and functional foods in Europe (Germany, France, Belgium), North America, and Latin America. Global market for cocoa extracts: USD 3.2 billion (2023) ? USD 5.9 billion (2032), CAGR 7.1%. Pharmaceutical applications grow by 8.1%.

Social Impact

Indigenous Peoples, Persons Belonging to National or Ethnic - Religious and Linguistic Minorities, People Living in Extreme Poverty, Women

Demand Evidence

International trade in cocoa waste reached 71,200 tons and \$27.9 million in 2023 (top exporters: France, Belgium, the Netherlands). The industry prefers natural theobromine over synthetic Chinese/Indian theobromine for clean-label purposes. EUDR 2026 is accelerating demand for traceable origins

Competitors

Global: BIOINVAL (Spain), Fermtech (UK, \$3.3M by 2026), Barry Callebaut. In agricultural upcycling: Hubcycle (France, \$16.3M). Theobromine producers: Indian/Chinese (synthetic). In Peru: no B2B cocoa players; Amazon Andes is the analogous model for other crops.

Founder Expertise

Co-founder and manager with 10 years of experience in the Amazonian fine-aroma cocoa industry, exporting to Europe and the U.S. I have expertise across the entire supply chain, from farm to international B2B client, and maintain a well-established network of cocoa producers and cooperatives in Peru.

External Support

We are not yet a company (we are in the ideation phase). We have scientific backing from PUCP: the extraction technology was developed as part of a PhD in engineering funded by a PROCIENCIA-CONCYTEC grant and published in *Sustainable Food Technology* (RSC, 2026).

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