Implementación de una Planta Comunitaria de Transformación de Residuos Plásticos en Madera Plástica (WPC) para el Fortalecimiento de la Economía Circular en Circasia – Quindío · Air & Environ

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Country: ?? Colombia · Circasia **Category:** Air & Environment **CT Taxonomy:** CT-BU-001 — Sustainable Construction Materials **Impact Areas:** Circular Economy **Stage:** Prototype **Team Size:** 6.0 **Website:** https://www.facebook.com/ejeambientequindio/ **Funded:** False **Founder:** Juan Guillermo Velásquez Valencia

Elevator Pitch

The Eje Ambiente Q. Association is launching a community-based plant in Circasia that converts plastic waste into WPC. We transform 36 tons of plastic annually into durable products, replacing natural wood and supporting professional recyclers.

Climate Problem

We address post-consumer plastic pollution and deforestation. In Colombia, much of the plastic ends up in landfills or the environment, generating GHG emissions and increasing the use of natural wood in the Coffee Cultural Landscape. It is key to

Solution

We operate a community-based facility in Circasia that transforms 36 tons of plastic waste (PET, HDPE, PP) into wood-plastic composite (WPC) each year. Through grinding, pelletizing, and extrusion, we produce planks, posts, and benches, thereby closing the local loop.

Revenue Model

We already generate revenue by selling recycled materials, but we could produce WPC products, planks, posts, etc., at $6,000–$10,000 COP per kilogram—far more than plastic as a raw material ($800–$1,500 per kilogram). We've shifted from selling raw materials to high-value-added goods.

Target Market

Municipalities in the Coffee Region for street furniture and parks; the agricultural sector for posts and fences; and construction companies and retailers seeking durable and sustainable materials in Quindío and neighboring municipalities.

Social Impact

Persons Belonging to National or Ethnic - Religious and Linguistic Minorities

Demand Evidence

There is demand because we are already recovering 3 tons of plastic per month, and the WPC market is growing in Colombia due to the need for alternatives to natural wood in construction and street furniture. The products are valued for their durability and eco-friendliness.

Competitors

The main competitors are Construplast Colombia, Layco, and Ecomaderas Plásticas (located in Bogotá, Medellín, and Valle). In Quindío, we are not aware of any direct competitors that operate small community-based facilities with an inclusive approach toward local waste pickers.

Founder Expertise

I bring to this role my background as a lawyer, a specialist, and a master's degree holder in law, with a certificate in environmental law. I have helped establish other waste pickers' associations, worked at the Chamber of Commerce, and have been supporting the Eje Ambiente Quindío Association for many years.

External Support

Legal support from the AVISPAS organization Super Servicios Domiciliarios, to be recognized as professional recycling service providers Circasia City Hall NGOs that assisted in drafting this project and are mentioned in the project

Team

At AVISPAS, where I serve as legal representative, we have spearheaded, supported, and formalized the establishment of the waste pickers' association in order to launch the project (which has already been developed), obtain recognition as service providers, and organize recycling drives

Founder

Juan Guillermo Velásquez Valencia

Revisión #5
Creado 2026-05-29 03:22:07 UTC por Angelica Diaz
Actualizado 2026-09-18 19:16:46 UTC por Angelica Diaz