



Transforming global production and consumption patterns through innovative technologie to build a flourishing, sustainable planet.

Challenge

Across Southeast Asia, millions of tonnes of everyday plastic never make it into a recycling stream, and even when it does, conventional oil-based plastic can persist in landfills, waterways, and ecosystems for decades. Waste management alone can't solve a problem rooted in the material itself, while the smallholder farmers who could supply a genuinely biodegradable alternative are left out of the value chain entirely.

Solution

Greenhope's approach sits within the circular economy's 9R framework and it starts at the very top, with Redesign. Where many plastic strategies focus on managing waste after it already exists, Redesign is the most upstream R: it rethinks the material itself before a product is ever made. Because Greenhope's redesigned materials are made from cassava starch instead of oil, they reduce dependency on oil-based plastic and, in turn, shrink its carbon footprint while building a new, reliable income stream for local cassava farmers, who are paid fair, above-market prices for the raw material behind them.

Three redesigned materials, one strategy:

- Oxium: A biodegradable additive that manufacturers can blend into their existing conventional plastic production, reducing environmental persistence without new equipment or supply chains. Patented in Singapore, US, and Indonesia.
- Ecoplas: A biobased, biodegradable bioplastic made from cassava starch, engineered as a direct replacement for the oil-based plastics most commonly left out of recycling systems.
- Naturloop: A cassava starch-based plastic that is both biodegradable and compostable, designed to fully return to nature at the end of its life.



Contact

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Scaling Global South Climate Solutions | Greenhope - Indonesia



Impact

- 12.7B+ plastic bags replaced with biodegradable alternatives.
- 150,000+ tons of conventional plastic transformed.
- 30% lower greenhouse gas emissions and 45% lower energy use.
- 40+ commercial applications developed.
- 12+ countries reached alongside 150+ brand partners.
- >25% above market prices paid to cassava farmers via fair-trade cooperatives.

Partners

- World Economic Forum
- The UN Global Compact
- Catalyst Now
- The Unreasonable Goals community,
- Gerakan, PASTI

