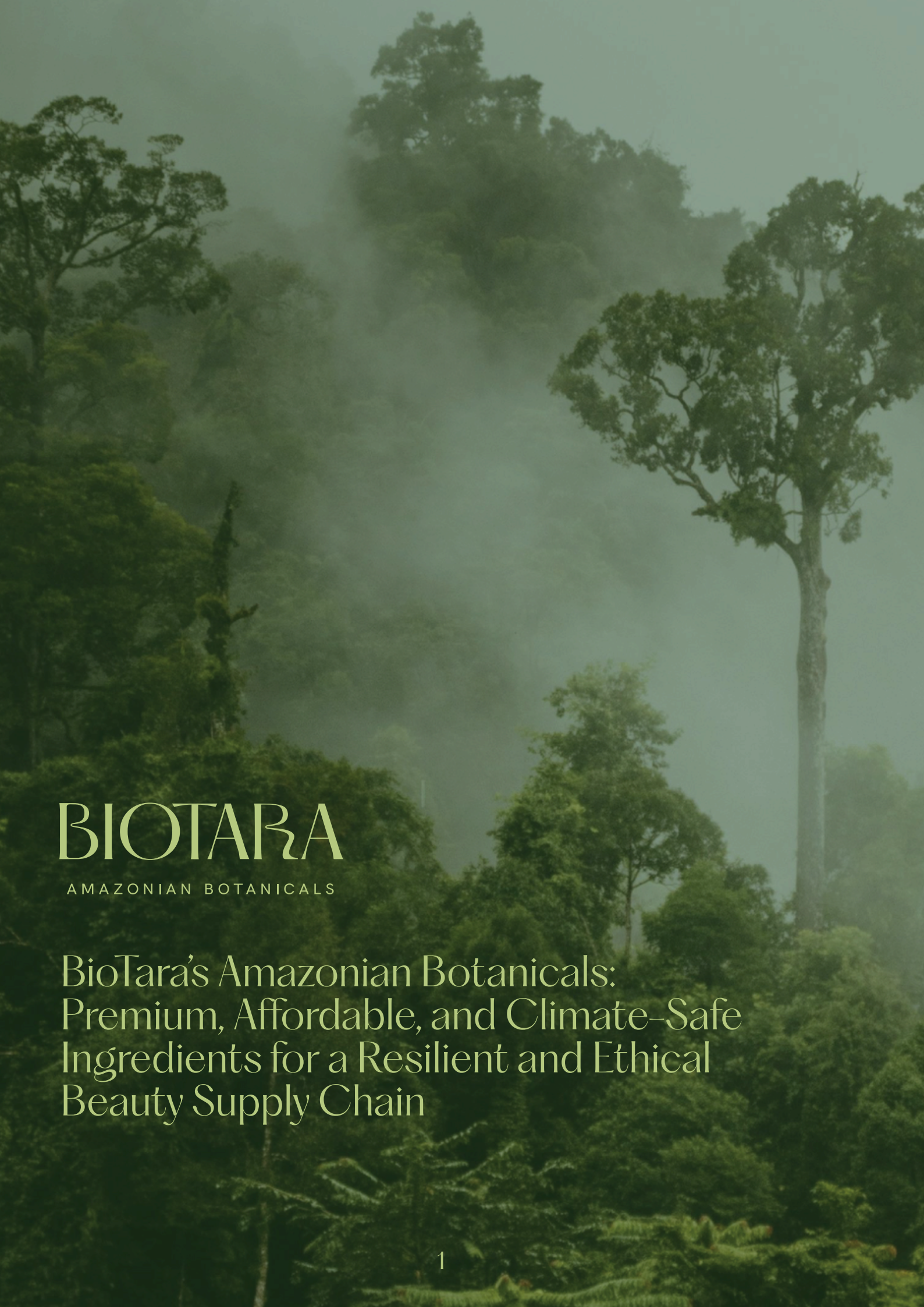


A misty Amazonian forest with tall trees and dense foliage. The scene is captured in a soft, hazy light, with a prominent tree on the right side of the frame. The overall color palette is dominated by various shades of green and grey, creating a serene and natural atmosphere.

BIOTARA

AMAZONIAN BOTANICALS

BioTara's Amazonian Botanicals:
Premium, Affordable, and Climate-Safe
Ingredients for a Resilient and Ethical
Beauty Supply Chain

1. Executive Summary

The beauty industry is undergoing a profound transformation. Consumers are demanding clean, natural, and sustainable ingredients, pushing brands to rethink their entire supply chain. But behind the glossy labels and eco-friendly promises lies a major challenge—where will these ingredients come from, and at what cost to people and the planet?

For decades, the industry has relied on petrochemical-derived ingredients, deforestation-linked palm oil, and unsustainable sourcing of botanicals like shea butter, vanilla, and sandalwood.

Now, as climate change disrupts agriculture and supply chains buckle under pressure, brands face an urgent reality:

Ingredient Scarcity – Climate change, land degradation, and overharvesting are threatening the supply of essential beauty ingredients.

● **Regulatory Pressures Are Mounting** – The EU Deforestation Regulation (EUDR) and SEC climate disclosure rules are forcing brands to track and report their environmental impact, or risk fines and consumer backlash.

● **Consumers Are Paying Attention** – Over 74 percent of U.S. beauty buyers prefer brands that demonstrate real sustainability commitments. Greenwashing is no longer possible, and Greenhushing is not really an option.

● **Rising Costs and Unpredictability** – Prices of organic essential oils have increased by 40 percent, while palm oil and argan oil are becoming more expensive due to labor shortages, environmental degradation, and trade restrictions.

Imagine a world where beauty products do not just avoid harm—they actively regenerate the planet. That is the vision behind BioTara, a game-changing supply chain partner offering

brands access to high-performance, wild-harvested Amazonian botanicals without the environmental or ethical baggage.

Why Beauty Brands Are Choosing BioTara

● **Sourcing Without the Risk** – No deforestation, no forced labor, no supply chain volatility. BioTara's structured sourcing model ensures a steady, traceable flow of premium Amazonian ingredients.

● **Climate-Resilient Ingredients** – While traditional beauty supply chains struggle under climate pressures, BioTara is proactively monitoring environmental risks, adapting sourcing strategies, and securing long-term stability for brands.

Regenerative and Carbon-Negative – BioTara's wild-harvested ingredients remove more carbon than they emit, thanks to innovative biochar production, biodiversity restoration, and zero-waste processing.

● **Transparent, Traceable, and Regulation-Ready** – BioTara meets the strictest global standards, including EUDR, SEC climate rules, and sustainable sourcing certifications. Its traceability solution ensures brands can confidently share their sustainability story.

● **Beyond Sustainability—Beauty That Gives Back** – BioTara is not just about ethical sourcing. It is about empowering forest based communities, maintaining and restoring rainforests, and proving that beauty can be a force for good.

The Future of Beauty Is Regenerative—Are You Ready? The industry is at a crossroads: continue with business as usual and risk supply chain collapse, or embrace a new model that prioritizes resilience, regeneration, and responsibility. With BioTara, beauty brands no longer

have to choose between ethics and efficacy—they can have both. This is the future of beauty—one that heals the planet, protects communities, and delivers the highest-quality ingredients on Earth. The time to transform the beauty supply chain is now.



The future of beauty is regenerative.

2. Introduction: The Supply Chain Dilemma in the Haircare & Skincare Industry.

2.1 The Growing Demand for Natural Ingredients

The global beauty industry is undergoing a significant transformation as consumer preferences shift toward natural, organic, and sustainable ingredients. Growing awareness of the harmful effects of synthetic chemicals, such as parabens and sulfates, has fueled an increasing demand for clean beauty products. The Global Sustainable Beauty and Skincare Market, valued at \$2.1 billion in 2022, is expected to reach \$10.95 billion by 2030. Sustainability initiatives such as recyclable packaging and plant-based formulations are now industry benchmarks, reflecting the expectations of environmentally conscious consumers.

The demand for natural ingredients is expected to grow significantly, with the market expanding from \$642 million in 2022 to \$1.095 billion by 2030. Over 40% of consumers now prioritize natural components in their beauty products, driving research into alternatives that ensure safety, efficacy, and environmental responsibility (The Carbon Trust Greenhouse Gloss report 2023). However, replacing synthetic ingredients presents challenges due to the complex nature of conventional formulations, which rely on petrochemical-derived emollients, surfactants, and preservatives—many of which contribute to deforestation, pollution, and bioaccumulative materials.

Advancements in Sustainable and Regenerative Ingredients

Innovations in green chemistry and biotechnology are paving the way for sustainable alternatives that maintain product efficacy while reducing environmental impact. Key advancements include:

- Vegetable Oil-Based Emollients: Serving as eco-friendly replacements for petroleum-derived agents.
- Squalane from Sugarcane: Providing hydration and stability without reliance on shark liver extraction.
- Bioengineered Fatty Alcohols: Reducing dependency on palm oil through sustainable agricultural practices.
- Biocatalytic Esters: Produced via enzymatic processes to minimize chemical waste, with innovations such as Evonik's Tegosoft OER setting new industry benchmarks.
- Wild Oil and Butters: Sourced through regenerative harvesting, these nutrient-rich botanical ingredients provide superior skin and hair benefits while actively preserving biodiversity and supporting Indigenous communities.

Among natural cosmetic ingredients, emollients hold the largest market share, with skincare products accounting for 38.7% of sector revenue. However, sustainability efforts are hindered by ethical sourcing challenges. For instance, palm oil—a key emulsifier in 70% of beauty products—is linked to deforestation, with an estimated 300 football fields of rainforest cleared every hour for palm plantations, threatening biodiversity, including the endangered Sumatran tiger (Clean Hub Report, 2025).

Despite the beauty and personal care sector's rapid growth, mainstream awareness of its greenhouse gas emissions remains limited. The British Beauty Council (2020) highlighted that, unlike heavily regulated industries such as transport and agriculture, beauty has become a significant source of pollutants. The sector’s emissions primarily stem from two key activities: raw material sourcing and consumer product use. The extraction of fossil fuel-based ingredients, minerals like mica, and deforestation-linked materials such as palm oil and wood pulp contribute 30-50% of emissions. Meanwhile, 40-80% of emissions come from consumer

use, particularly the hot water required for rinse-off products like shampoos and shaving foams, which rely on fossil-fuel-generated energy. Although these emissions are indirect, they are substantial, making it crucial for the industry to implement sustainability measures.

A Quick Breakdown

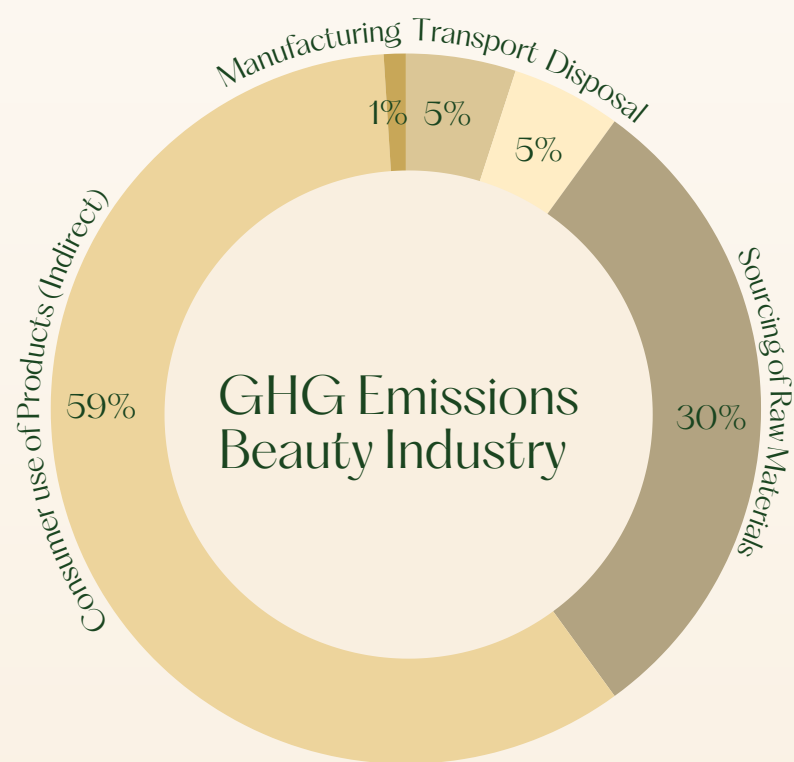


Figure 1: GHG Emissions from Beauty Industry
Source: Adapted from [The Carbon Trust Greenhouse Gloss report 2023](#)

To address these concerns, brands are turning to wild-harvested botanicals and plant-based extracts. However, this shift raises concerns about supply chain stability and ecological impact, underscoring the need for sustainable and regenerative harvesting and regenerative farming practices.

The Role of Supply Chain Innovations

The modern beauty supply chain is a complex web of raw material sourcing, ethical trade practices, manufacturing, packaging, and retail distribution. Companies are implementing sustainable solutions to mitigate environmental impact and improve efficiency:

- **Lush Cosmetics: Ethical Sourcing & Minimal Waste:** Lush Cosmetics has pioneered fair-trade ingredient sourcing and low-waste packaging to reduce its environmental footprint. The company prioritizes sustainably harvested raw materials, such as shea butter from women-led cooperatives in Ghana and organic essential oils from ethical farms. To tackle waste, Lush introduced solid shampoo bars, which eliminate the need for plastic bottles, preventing over 6 million from ending up in landfills annually.
- **Glossier: Sustainable Packaging & Material Innovation:** Glossier has committed to reducing virgin plastic use by incorporating post-consumer recycled (PCR) materials into its packaging. The brand redesigned its signature pink pouches, transitioning to recyclable alternatives, and introduced minimalist refillable packaging for key products. This shift has significantly cut down single-use packaging waste while maintaining the brand's sleek aesthetic.
- **MAC's Back-to-MAC Program: Consumer Recycling Initiatives:** MAC Cosmetics encourages consumers to participate in circular beauty with its Back-to-MAC program. Customers return six empty MAC product containers in exchange for a free lipstick, promoting closed-loop recycling. The initiative has helped divert millions of plastic and glass packaging units from landfills while fostering sustainable consumer habits.

These innovations highlight how leading beauty brands are leveraging supply chain improvements, material science, and consumer engagement to drive sustainability in the industry. Additionally, data-driven demand forecasting, supplier collaboration, and rigorous quality control are critical to maintaining supply chain resilience in an evolving landscape.

2.2 Pressure on Supply Chains

The beauty industry operates within a complex global supply chain, facing challenges ranging from sourcing raw materials to managing fluctuating consumer demand. Increasing regulatory requirements, sustainability concerns, rising costs, and climate change further complicate logistics and production, requiring brands to develop resilient and adaptable supply chain strategies. Table 1 and Figure 2 outlines the key challenges shaping the industry's supply chain and how they impact business operations.

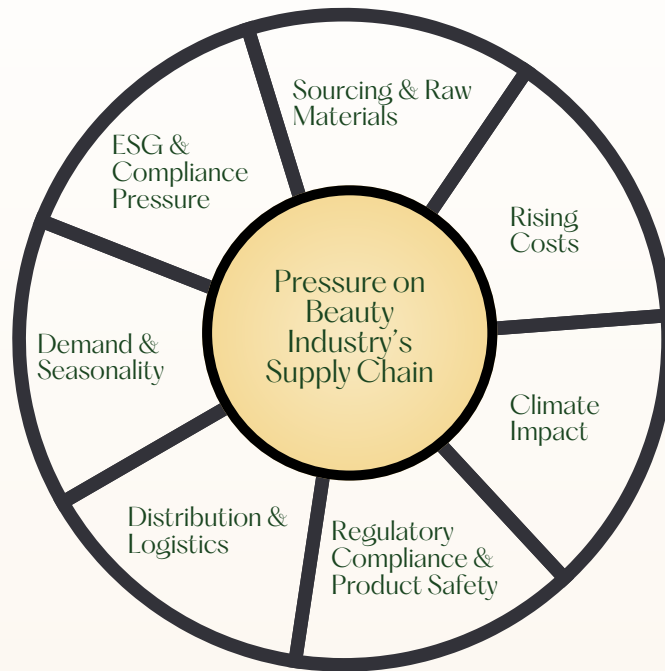


Figure 2: Key Pressures on the Beauty Industry's Supply Chains

Table 1: Beauty Industry Supply Chain: Key Challenges & Insights

CATEGORY	SUBCATEGORY	DESCRIPTION
Sourcing and Raw Materials	Raw Material and Packaging Shortages	Limited availability due to supply chain disruptions
	Ethical Sourcing and Transparency	Demand for responsibly sourced materials
	Ingredient Compliance	Meeting safety and quality regulations
	Traceability Issues	Difficulty tracking materials across the supply chain
	Ingredient Scarcity Due to Climate and Land Degradation	Reduced supply due to environmental factors
Demand and Seasonality	Volatility in Consumer Demand	Unpredictable shifts in buying behavior
	Demand Forecasting Challenges	Difficulty predicting future demand
Regulatory Compliance and Product Safety	Product Outages	Stock shortages due to supply chain or forecasting issues
	Strict Regulatory Scrutiny	Increased oversight and compliance demands
	Product Safety Risks	Risks of defects, contamination, or hazards
Distribution and Logistics	Varying Compliance Standards	Different regulations across markets
	Omnichannel Complexity	Managing inventory across multiple sales channels
Rising Costs	Freight and Shipping Cost Increases	Rising transportation expenses
	Raw Material Price Hikes	Increased costs due to shortages or market shifts
	Labor and Manufacturing Costs	Higher wages and production expenses
	Freight and Distribution Costs	Growing logistics and transportation costs
Climate Impact	Inflation Impact on Consumer Behavior	Changing spending habits due to rising prices
	Extreme Weather Disruptions	Natural disasters affecting supply chains
	Deforestation and Regulatory Shifts	Policies impacting land use and sourcing
ESG & Compliance Pressures	Water Scarcity	Limited water affecting production
	New Sustainability Regulations	Stricter environmental laws
	SEC's Proposed Climate Disclosure Rules	New climate reporting requirements
	Consumer Demand for Sustainable Products	Preference for eco-friendly goods

A close-up photograph of a person's hands holding a large, dense bundle of palm fronds. The fronds are light brown and have many small, dark, round berries attached to them. The person is wearing a dark red long-sleeved shirt. The background is blurred, showing more of the same plant material.

Formulas that work for the skin and
the soil.

3. BioTara – A Future-Read Solution for Regenerative Beauty

3.1 Delivering Excellence in Amazonian Ingredients

The global beauty industry is shifting toward clean, ethical, and high-performance formulations, creating a demand for reliable, sustainably sourced natural ingredients. BioTara meets this demand by offering premium Amazonian botanicals that adhere to the highest standards of efficacy, purity, and sustainability. With their proprietary BioTara Protocol, BioTara guarantees strict quality control, environmental responsibility, and supply chain integrity, ensuring that brands receive innovative, effective, and traceable raw materials.



Figure 3: BioTara Secure, Climate-Resilient Supply Chains

3.2 Supply Chain Security & Risk-Free Sourcing

Sourcing natural ingredients from emerging markets often comes with challenges related to supply volatility, quality inconsistencies, and compliance risks. BioTara eliminates these risks through a structured network sourcing model, ensuring a secure, traceable, and scalable supply of premium Amazonian botanicals.

supply volatility, quality inconsistencies, and compliance risks. BioTara eliminates these risks through a structured network sourcing model, ensuring a secure, traceable, and scalable supply of premium Amazonian botanicals.

Key Advantages of BioTara's Supply Chain Model

- **Guaranteed Supply & Consistency** – Our structured network of trusted bioeconomy actors (communities, cooperatives, and processing facilities) ensures a steady, uninterrupted flow of raw materials, reducing supply chain volatility.
- **Quality Assurance at Every Step** – We apply rigorous quality control measures from harvest to final processing, guaranteeing ingredient purity, stability, and performance.
- **Traceability & Certification** – Using advanced traceability systems and certification protocols, we document every stage of ingredient sourcing, giving brands confidence in ethical and sustainable supply chains.

Through proactive supply chain management and strategic partnerships, BioTara minimizes sourcing risks while ensuring brands receive high-quality, ethically harvested ingredients.

3.3 Climate-Safe & Resilient Ingredients

As climate change disrupts global ingredient supply chains, BioTara proactively monitors and adapts to environmental risks, ensuring long-term sustainability for our partners.

How BioTara Maintains Supply Chain Stability

- **Active Climate Monitoring** – We track climatic conditions in our harvesting zones, allowing for early risk detection to prevent disruptions.
- **Climate Resilience Measures** – We implement adaptive harvesting strategies and regenerative land-use techniques to maintain supply chain integrity when climate risks arise.
- **Stability in a Changing World** – By decentralizing our sourcing model, BioTara ensures continuous ingredient availability, even as environmental conditions shift.

This proactive, climate-resilient approach allows brands to source sustainable, high-performance ingredients without concerns over supply chain disruptions.

3.4 Regenerative Harvesting: Restoring Ecosystems While Producing

BioTara's regenerative harvesting model prioritizes biodiversity conservation and long-term ecosystem health, ensuring that ingredient sourcing benefits rather than depletes the environment.

Regenerative Harvesting Principles

- 50% of annual productive capacity of raw fruits must be left for nature, ensuring species regeneration and ecological balance.
- No fertilizers or pesticides are used, maintaining soil health and preventing water contamination.
- No deforestation of primary tropical forests for monoculture expansion, preserving critical Amazonian habitats.

By applying these nature-first principles, BioTara provides brands with scalable, sustainable, and ethical ingredient solutions.

3.5 Regenerative Processing: Reducing Waste and Optimizing Efficiency

Beyond ethical ingredient sourcing, BioTara's regenerative processing methods maximize efficiency, minimize environmental impact, and align with global sustainability benchmarks. Key Aspects of BioTara's Regenerative Processing Model

- Reduced Yield Loss at the Processing Stage
 - We optimize low-impact extraction technologies to increase ingredient efficiency, reducing raw material waste.
- Regenerative Packaging
 - Biotara's minimalist, biodegradable, and recyclable packaging, reducing plastic waste and supporting circular economy initiatives.
- Efficient Transportation & Carbon Footprint Reduction
 - Our logistics are optimized to minimize transportation distances, lowering carbon emissions.
- Aligned with Industry Standards
 - BioTara ensures compliance with leading ESG frameworks, helping brands meet EU Deforestation Regulations (EUDR 2024), SEC Climate Disclosure rules, and industry sustainability requirements.

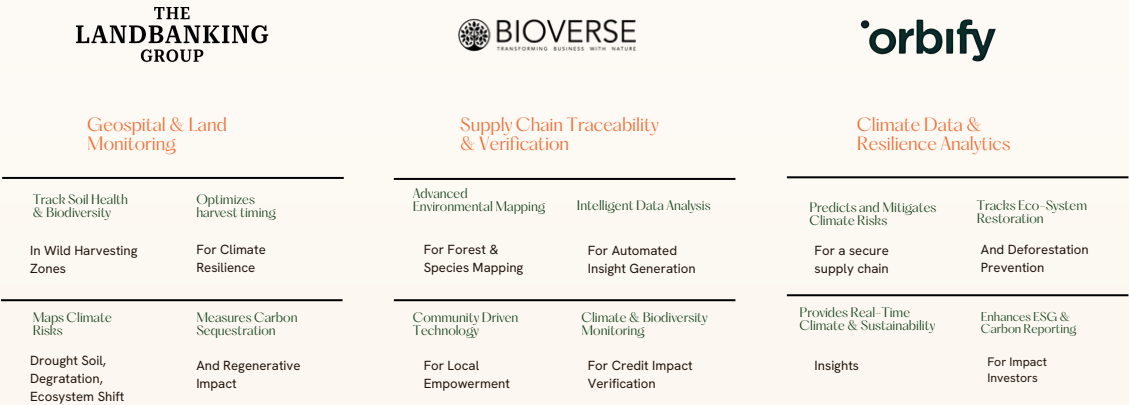
These regenerative processing practices reinforce BioTara's commitment to efficiency, transparency, and responsible production.

3.6 Smart Supply Chains: Ensuring Transparency & Compliance

To provide full traceability and regulatory compliance, BioTara collaborates with advanced supply chain intelligence partners:

- Landler – Provides real-time environmental data, enabling timely, location-specific actions for natural capital management.
- Bioverse – Maps forest cover and species distribution using satellite, drone, and AI technologies, while enabling regenerative harvesting and decision-making through community-powered mobile tools.
- Orbify – Enables EUDR compliance through deforestation analysis, real-time alerts, and streamlined supplier data collection.

By integrating climate monitoring, blockchain-backed traceability, and ESG compliance tools, BioTara guarantees ingredient transparency from source to formulation.



3.8 Why Leading Brands Choose BioTara

With BioTara, brands don't have to choose between quality, reliability, and sustainability—they get all three.

- Climate-resilient, wild-harvested ingredients ensure long-term supply stability.
- Regenerative, deforestation-free sourcing aligns with evolving ESG and compliance mandates.
- Sustainable processing and circular economy practices minimize waste, emissions, and ecological impact.
- Direct partnerships with Amazonian communities support fair-trade economic models while ensuring ethical ingredient sourcing.

BioTara enables brands to future-proof their supply chains, meet evolving sustainability goals, and maintain the highest product quality standards.



Every hectare protected is a story
preserved.

4. BioTara's Climate Impacts: Quantifying the Regenerative Advantage

As the beauty industry reckons with its environmental impact, brands are seeking credible, data-backed solutions to ensure their supply chains align with climate goals, biodiversity preservation, and ethical sourcing commitments. While many companies have made pledges toward carbon neutrality, few have taken the science-driven approach to measuring their actual footprint—let alone achieving a carbon-negative impact.

For BioTara, regenerative harvesting has always been about more than just sustainable ingredient sourcing—it is about actively reversing environmental degradation. But how do we quantify this impact?

To answer this, BioTara partnered with RegenIntel, a leader in Life Cycle Assessment (LCA) and carbon impact analysis, to conduct a comprehensive evaluation of the climate benefits of its wild-harvested Amazonian botanicals. The study not only examines emissions from harvesting, processing, and transportation but also measures CO₂ sequestration, avoided deforestation, and the long-term impact of biochar application.

4.1 Measuring BioTara's Climate Footprint

Through rigorous data collection, field research, and comparative modeling, the RegenIntel team assessed four of BioTara's core ingredients—Murumuru Butter, Tucumã Oil, Tucumã Butter, and Andiroba Oil—sourced from its Brazil operations in equal partnership with the Camtauá community. Unlike conventional ingredient sourcing, which often relies on monoculture plantations or chemical-intensive extraction, BioTara's wild harvesting model operates within an existing forest ecosystem, minimizing environmental disruption.

The analysis focused on key areas:

- Carbon footprint calculation - Measuring emissions from harvesting, transportation, and processing.
- CO₂ sequestration assessment - Estimating how much carbon BioTara's forest protection efforts naturally absorb each year and what's the carbon stock of these sustainably managed forest areas.
- Avoided deforestation impact - Quantifying how BioTara's regenerative model prevents forest degradation compared to conventional land-use practices.
- Biochar application benefits - Evaluating the carbon sequestration potential of converting fruit waste into biochar instead of letting it decompose.

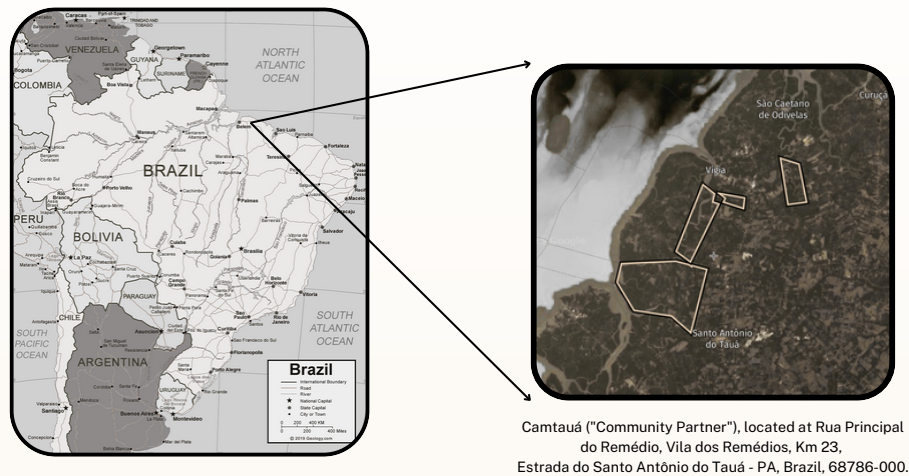


Figure 5: BioTara Project Location Map

4.2 The Carbon Story: From Emissions to Sequestration, Deforestation to Regeneration

While traditional carbon footprint assessments focus on how much CO₂ a process emits, BioTara's regenerative model takes a holistic approach. By integrating conservation and regenerative harvesting practices, it ensures that its supply chain not only reduces emissions but also actively removes carbon from the atmosphere. This quantitative analysis of BioTara's climate impact demonstrates how its approach goes beyond conventional sustainability models to deliver a net-positive carbon outcome—focusing not only on minimizing negative impacts but also on maximizing positive ones.

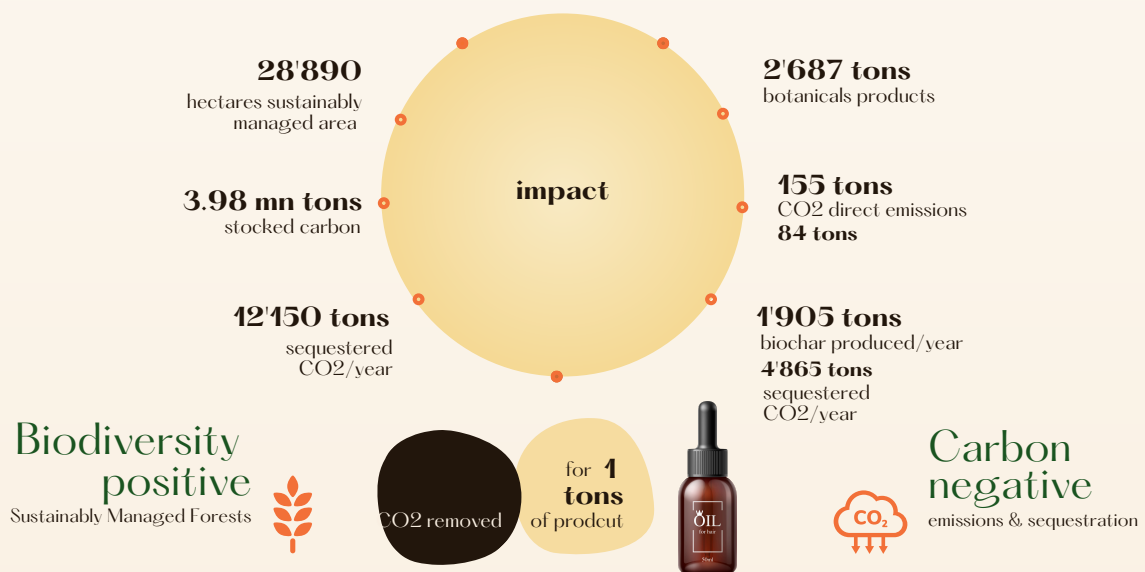


Figure 6: BioTara and Camtauá's Impact Summary

Historical Deforestation Impact in the Region

Deforestation remains one of the most significant contributors to global carbon emissions. When forests are cleared, the carbon stored within trees and soil is released into the atmosphere, accelerating climate change. Before BioTara's intervention, the region where its sourcing operations now take place had undergone significant deforestation due to unsustainable agricultural expansion and resource extraction. The consequences were substantial:

- 2.44 million tonnes of CO₂ emissions due to deforestation (2002–2023).
- 21% decline in tree cover, driven by land-use change for agriculture and resource extraction.

Without intervention, this trend would have continued, leading to further carbon release, biodiversity loss, and long-term environmental degradation.

How BioTara Reverses This Trend

Instead of following conventional industry practices that contribute to deforestation, BioTara implements a forest-first approach. Its model is designed to work within standing forests, ensuring that ingredient cultivation occurs without harming the ecosystem. This strategy supports natural regeneration, maintains biodiversity, and enables long-term carbon sequestration.

Through its conservation and regenerative harvesting efforts, BioTara has achieved:

- 3.98 million tonnes of carbon stored in 28,890 hectares of regeneratively managed forests under BioTara and Camtauá's stewardship.
- 121,500 tonnes of CO₂ sequestered annually through forest conservation and regenerative harvesting practices.

This means that while most ingredient suppliers contribute to deforestation, BioTara's approach actively removes carbon from the atmosphere while providing valuable botanical ingredients to the beauty industry.

4.3 Emissions vs. Carbon Capture: The Net Climate Benefit

The Camtauá community operates across an area of 28,890 hectares and regeneratively harvests 22,000 tonnes of raw products. However, after removing all fruit waste, the final yield of oils or butters is only 2,686.52 tonnes. While every production process inevitably results in some level of emissions, BioTara's circular and regenerative approach is designed to minimize these impacts while maximizing carbon sequestration. This balance ensures that the net climate impact remains significantly positive.

BioTara's operations generate carbon emissions primarily through electricity use, fuel consumption, and transportation. A breakdown of direct emissions includes:

- 155 tonnes of CO₂ emitted from electricity and fuel use during ingredient processing for 2,687 tonnes of final products.
- 84 tonnes of CO₂ from transportation of these products to the nearest port for export.
- Total direct emissions: 239 tonnes of CO₂ per year.

Sequestration from Biochar: Capturing Carbon from Waste

Beyond forest conservation, BioTara further enhances its carbon sequestration potential by converting agricultural waste into biochar. Rather than allowing fruit waste from ingredient processing to decompose and release CO₂, BioTara repurposes it into biochar—a stable, carbon-rich soil amendment that locks carbon into the ground while improving soil fertility.

- 2,687 tonnes of biochar produced annually from processing waste.
- 4,865 tonnes of CO₂ sequestered annually as a result of this biochar application.

This process not only prevents emissions from organic waste but also enhances soil health, making it an essential tool for long-term carbon storage and agricultural sustainability.

The Net Carbon Impact Per Product

By integrating conservation, regenerative agriculture, and biochar sequestration, BioTara has achieved a net-negative carbon footprint—meaning its operations remove more carbon from the atmosphere than they emit.

- For every tonne of oil or butter produced from Tucuma, Andiroba, and Murumuru fruits, BioTara achieves a net carbon reduction of -3.10 tonnes CO₂.
- Switching from conventional palm oil (which emits 6.20 tCO₂-eq per tonne) to BioTara's oils and butters results in a net carbon benefit of 9.30 tCO₂ per tonne, factoring in both emission reductions and carbon sequestration.

This finding confirms a shift in how sustainability is measured and highlights the need for regeneration, which focuses on actively restoring the environment. BioTara's approach provides a new blueprint for regenerative ingredient sourcing—one that not only reduces emissions but also contributes to carbon sequestration and ecosystem restoration. As industries seek more effective climate strategies, businesses must move beyond conventional carbon footprint assessments. The future of sustainability lies not in minimizing damage but in creating systems that regenerate, restore, and reverse environmental harm. Through its innovative model, BioTara demonstrates that ingredient supply chains can be more than sustainable—they can be climate-negative and biodiversity-positive catalysts for change.

4.4 The Social and Ecological Ripple Effect

Beyond the numbers, BioTara's climate strategy is deeply interwoven with social and ecological benefits. Sustainable ingredient sourcing isn't just about carbon—it's about livelihoods, biodiversity, and resilient ecosystems.

Community and Social Impact

BioTara's sourcing model has directly improved the well-being of Camtauá community by:

- Providing sustainable income to 12 forest based families and 180 local community members.
- Ensuring fair wages and long-term economic opportunities for Amazonian harvesters.
- Empowering traditional land stewards to protect rather than extract from their forests.

Biodiversity Protection

While palm oil plantations displace native wildlife and reduce biodiversity, BioTara's regenerative harvesting ensures that:

- No habitats are destroyed in the sourcing process.
- Wildlife corridors remain intact, allowing species to thrive.
- Local tree species are preserved, maintaining genetic diversity in the rainforest.

4.5 Why BioTara's Climate Impact Matters for the Beauty Industry

With sustainability mandates tightening and consumers demanding greater environmental accountability, brands need supply chain partners that offer tangible climate benefits, not just greenwashed claims.

BioTara provides:

- A truly carbon-negative ingredient supply - Unlike most carbon-neutral claims that rely on offsets, BioTara's ingredients actively sequester more carbon than they emit.
- A deforestation-free alternative to palm oil - As regulatory scrutiny on palm oil increases, BioTara offers a scalable, ethical, and environmentally superior replacement.
- A transparent, data-driven approach - By partnering with RegenIntel for LCA assessments, BioTara provides science-backed carbon data, setting a new standard for traceability in the beauty industry.

For brands looking to future-proof their formulations, achieve carbon reduction goals, and align with global ESG regulations, BioTara presents an unparalleled opportunity.

A man with dark, wavy hair and a focused expression is seated in a wooden boat on a river. He is wearing a light blue t-shirt and dark trousers. His right arm is extended forward, holding a long wooden pole, with a white cloth wrapped around his hand. In the foreground, two large, woven baskets filled with dark, round berries are visible. The background shows a dense forest of green trees along the riverbank.

From forest to formula without
compromise.

5. Conclusion: Transforming Beauty Supply Chains for the Future

5.1 The Need for a Future-Proof Ingredient Supply

The beauty industry is facing an urgent need to evolve. Climate change, biodiversity loss, and shifting consumer expectations are redefining how ingredients are sourced and how products are made. Brands must now ensure that their supply chains are:

- Resilient to Climate Change – Reducing dependence on climate-vulnerable ingredients and securing stable, long-term sources.
- Regenerative and Ethically Sourced – Moving beyond sustainability to models that restore ecosystems, empower communities, and eliminate deforestation-linked ingredients.
- Transparent and Compliant – Aligning with new regulations such as the EU

Deforestation Regulation (EUDR) and SEC climate disclosure rules to meet global sustainability standards.

In this new landscape, companies that fail to adapt risk supply chain disruptions, rising costs, and eroding consumer trust. Those that embrace regenerative supply chains will not only safeguard their businesses but also help shape the future of ethical beauty.

5.2 The Path Forward: A New Standard for Sustainable Beauty

To build a resilient and ethical supply chain, brands should:

- Invest in Regenerative Sourcing – Shift from extractive models to ingredient sourcing that restores ecosystems and supports biodiversity.

5.3 How BioTara Can Support This Transition

For brands seeking to integrate regenerative and ethical principles into their supply chain, BioTara offers:

Regenerative, wild-harvested ingredients that are ethically sourced and meet the highest standards of sustainability—supporting biodiversity, preventing deforestation, and empowering forest based and local communities with dignified livelihoods. These efforts directly contribute to the achievement of key Sustainable Development Goals, including SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth) by creating inclusive, fair-wage employment and strengthening food and income security in vulnerable regions.

Our traceable and transparent supply chain solutions ensure full compliance with global environmental and social regulations while promoting responsible production and consumption (SDG 12) and climate action (SDG 13). By protecting ecosystems and promoting regenerative practices, BioTara also advances life on land (SDG 15)—safeguarding forests, soil health, and native species for generations to come.

Through strategic partnerships, we help brands future-proof ingredient sourcing with climate-resilient, community-powered solutions that align with the next generation of beauty innovation—one rooted in planetary health, ethical integrity, and social equity. By embracing regenerative solutions, beauty brands can transform their supply chains from extractive to restorative, from vulnerable to climate-resilient, and from opaque to fully transparent—all while delivering tangible, measurable social and ecological impact.

For companies ready to take the next step, BioTara provides a scalable, climate-resilient solution that ensures beauty products are not only effective and ethical, but also a force for positive environmental and social transformation—without compromise.

Together, we can redefine beauty as a catalyst for regeneration, resilience, and a more just and thriving planet.

BIOTARA

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Would you like to....

explore how BioTara's model aligns with your sustainability initiatives?

Contact us to discuss potential collaborations at

info@biotara.earth.