

From Waste to Growth: A Circular Economy Initiative of Trieste Café for Environmental Sustainability and Community Greening

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SDG Focus

KEY POINTS



Purpose: Transforms organic and recyclable waste from Trieste Café into valuable environmental resources, promoting circular economy practices, sustainable waste management, and biodiversity conservation through campus and community greening.



Target Beneficiaries: Trieste Café, UM, & partner communities.



Major Activities: Recovers and repurposes café waste into seedlings, organic fertilizers, soil conditioners, and recycled planting containers, waste segregation, seed propagation, plant maintenance, and community tree-planting activities.

Key Partners: OJT students, the College of Hospitality Education (CHE) faculty, Trieste Café and Loleng's Mountain Spring Resort, Community College & Catigan Toril.

Key Outcomes: Propagated 200–250 seedlings, distributed approximately 25 packs of coffee grounds weekly for use as organic fertilizer, and engaged nearly 200 OJT students in experiential sustainability learning.

PROJECT DESCRIPTION

The **“From Waste to Growth Initiative”** is a sustainability-driven Green Campus best practice implemented by Trieste Café that demonstrates how a university food service operation can transform everyday waste into valuable environmental resources through the principles of the circular economy. Recognizing the environmental challenges posed by organic and recyclable waste generated in daily café operations, the initiative repurposes lemon seeds, coffee grounds, eggshells, used coffee pouches, milk cartons, and PET soda bottles into seedlings, organic fertilizers, soil conditioners, and eco-friendly planting containers. This innovative approach which started last March 2025 aimed to minimize waste, promote responsible resource use, and support biodiversity conservation while reducing dependence on commercial planting materials and synthetic fertilizers.

A distinguishing feature of the initiative is the active involvement of On-the-Job Training (OJT) students, CHE Faculty, and Trieste Café` custodians in waste segregation, seed propagation, preparation of recycled containers, plant maintenance, and community greening activities. These experiential learning opportunities strengthen environmental awareness, sustainability competencies, and leadership among hospitality professionals. The propagated seedlings were distributed to students, faculty and staff and subsequently planted at Loleng's Mountain Spring Resort, extending the project's impact beyond the university through ecological restoration and strengthened community partnerships. By integrating environmental stewardship with education and community engagement, the initiative contributes to the university's sustainability goals and advances the United Nations Sustainable Development Goals. The project serves as a practical, low-cost, and highly replicable model for sustainable waste management in educational institutions and small-scale food service enterprises.

TANGIBLE OUTCOMES

Impact to the University

The “**From Waste to Growth Initiative**” has generated significant environmental, educational, and institutional outcomes that support the university's commitment to sustainability and Green Campus development. Through the recovery and repurposing of lemon seeds, coffee grounds, eggshells, used coffee pouches, milk cartons, and PET soda bottles, the initiative has reduced organic and recyclable waste generated from Trieste Café's daily operations while promoting responsible resource management and circular economy practices.

Educationally, the initiative has served as a living laboratory for experiential learning by actively engaging almost 200 in-house On-the-Job Training (OJT) students in waste segregation, seed propagation, organic fertilizer preparation, recycled container production, and plant maintenance. These hands-on activities have enhanced students' environmental awareness and strengthened their competencies in sustainability, environmental management, teamwork, and leadership, enabling them to apply classroom knowledge to real-world hospitality and tourism operations.

Impact to the Community/ Society

The initiative successfully propagated approximately 200–250 seedlings, which were planted in various locations, including the homes of faculty, students, and staff, the ecological restoration activities at Loleng's Mountain Spring Resort, and the enhancement of the café's green spaces, thereby extending the environmental benefits of the project to both the campus and the wider community. Also, the café regularly prepares and distributes at least 25 packs of coffee grounds per week, each containing approximately 150 grams, which are displayed for free or provided upon customer request for use as organic fertilizer and soil enhancer.

Impact to SDGs

The project has fostered a culture of environmental stewardship and collaboration among students, faculty, staff, and community partners by embedding sustainability into the operational practices of the university's food service facility. More importantly, it demonstrates how simple, low-cost, and innovative waste recovery practices can

create meaningful environmental and educational impacts. The initiative serves as a practical and highly replicable model for sustainable waste management that can be adopted by other educational institutions and small-scale food service enterprises seeking to advance sustainability and circular economy initiatives.

SUSTAINABILITY PLAN

To ensure the long-term sustainability and scalability of the “From Waste to Growth Initiative”, Trieste Café is committed to continuously strengthening its circular economy practices, expanding stakeholder engagement, and continued monitoring of its environmental and educational impacts. Moving forward, the initiative seeks to support sustainable waste management practices, develop innovative products from recovered resources, and broaden its contribution to community development and environmental stewardship. The following future actions will guide the next phase of the initiative:

- 1) Establish a Monitoring and Evaluation System. Develop a systematic process for documenting the quantity of organic and recyclable materials recovered and repurposed, including the number of seedlings propagated and distributed, the volume of coffee grounds repackaged, and the extent of the participation of students and community stakeholders to the program, thus better measure its environmental and social impacts.
- 2) Strengthen Community Partnerships and Resource Sharing. Expand collaborations with local communities, particularly the adopted community of the College at Catigan, Toril, Davao City, through seedling distribution, collaborative tree-planting activities, and the endorsement or donation of suitable organic wastes that can be utilized in the community's vermiculture initiatives.
- 3) Establish a Community Lemon Garden. Support the planting and cultivation of propagated lemon seedlings in the farms and communal areas of the adopted community to promote

biodiversity conservation, sustainable agriculture, and livelihood opportunities.

- 4) **Develop Value-Added Sustainable Products.** Maximize resource utilization by processing residual lemon pulp from beverage production into homemade lemon marmalade and other potential food products, thereby reducing food waste, generating additional income, and showcasing sustainable food innovation.
- 5) **Enhance Campus and Community Greening Initiatives.** Increase the propagation and distribution of seedlings for planting in campus green spaces, community sites, and partner organizations to support ecological restoration and biodiversity enhancement.
- 6) **Undertake Research and Development on Waste Valorization.** Explore innovative uses and potential by-products from other food and beverage residues generated by Trieste Café, including fruit wastes such as watermelon residues from the preparation of watermelon-based beverages, and assess their potential applications for food products, composting materials, natural fertilizers, or other sustainable products.
- 7) **Promote Replication and Knowledge Sharing.** Encourage other university offices, academic units, and food service facilities (UM Cafeteria, Food Court Concessionaires) to adopt similar circular economy and waste recovery practices by documenting and sharing the initiative's experiences, lessons learned, and best practices.

Through these future actions, the “From Waste to Growth Initiative” aims to remain a practical and replicable model of sustainable campus operations, demonstrating that small, purposeful actions can create meaningful environmental, social, and economic benefits while advancing the university's sustainability goals and contributing to the achievement of the United Nations Sustainable Development Goals.