

The Gastro Forestry Project as a Transparency Initiative in Green Gastronomy and Agroforestry Supply Chain Management

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Abstract

The Gastro Forestry Project is an initiative aimed at enhancing the transparency of the green gastronomy supply chain with the goal of revitalizing gastronomy and agroforestry in rural areas, specifically in Tasikmalaya, West Java. This project seeks to support forest food sovereignty and preserve traditional culture through an integrative approach that combines local gastronomic practices with forest ecosystem preservation. The main focus of this project includes the development of nature-based ecotourism, encompassing Gastro Forestry Tours, the sale of forest biodiversity, and the development of local products based on forest resources. Additionally, environmental services play a crucial role, emphasizing environmental conservation as an effort to maintain ecosystem sustainability while providing economic benefits to local communities. This research employs a Participatory Action Research (PAR) methodology that allows for active participation from local communities at all stages of the project, from identifying resource potential and developing ecotourism to managing biodiversity-based products. Through a participatory ethnographic approach, the study maps the social, cultural, and economic relationships of communities with forests and identifies opportunities to advance green gastronomy. Participatory mapping and social network analysis are utilized to chart local resources and the relationships among actors in the forest food system. Expected outcomes of the Gastro Forestry Project include increased food sovereignty through sustainable utilization of natural resources, preservation of local knowledge and culture, and the creation of an environmentally friendly and sustainable ecotourism model. This project is also anticipated to serve as a regenerative model promoting environmental sustainability, food sovereignty, and the economic empowerment of rural communities based on green gastronomy and agroforestry.

Keywords: Agroforestry, Environmental Conservation, Gastro Forestry, Green Gastronomy

A. INTRODUCTION

In the face of global challenges such as climate change, deforestation, and biodiversity loss, sustainable ecosystem management and environmental conservation have become critical focal points. The agricultural and culinary sectors play a pivotal role in addressing these challenges, especially through green practices that emphasize environmental stewardship and local development. One notable initiative in this context is *The Gastro Forestry Project*, which aims to enhance transparency in the green gastronomy supply chain while revitalizing agroforestry practices in rural areas, particularly in Cilangkap, Tasikmalaya Regency, West Java.

The project seeks to empower local communities by promoting forest food sovereignty and preserving traditional culture through an integrative approach that blends local gastronomic practices with forest ecosystem conservation. By focusing on sustainability, the project aspires to

support local product development, protect biodiversity, and foster nature-based tourism, ultimately contributing to a resilient and transparent food system. Cilangkap, a rural area in Tasikmalaya Regency, has witnessed significant ecological degradation over the years, primarily due to unsustainable agricultural practices, urbanization, and climate change.

These factors have led to soil degradation, reduced agricultural productivity, and loss of biodiversity. Additionally, the local food system faces uncertainties, with diminishing indigenous skills and knowledge about traditional farming and forest management. Given these pressing issues, *The Gastro Forestry Project* emerges as a strategic initiative aimed at addressing these ecological and cultural challenges by integrating sustainable agroforestry and green gastronomy.

The project is designed to promote ecosystem sustainability and environmental conservation through the adoption of agroforestry practices. Agroforestry, a land use system that combines trees with crops or livestock, offers a sustainable solution to soil degradation and enhances biodiversity. By reintroducing native tree species and integrating them with agricultural crops, the project aims to rehabilitate degraded lands, improve soil fertility, and provide habitat for diverse flora and fauna. This approach not only contributes to carbon sequestration and climate mitigation but also enhances the resilience of local ecosystems (Huxley, 1999).

Green gastronomy, a key component of the project, focuses on sustainable culinary practices that prioritize the use of locally sourced, organic ingredients. In Cilangkap, traditional culinary practices have deep cultural roots and are closely tied to the natural environment.

However, rapid urbanization and shifts towards modern food consumption patterns have led to a decline in the use of local, forest-based ingredients (Zheldybayeva, 2024).

The project seeks to revive these practices by promoting the use of forest foods and other locally sourced ingredients in modern and traditional dishes. By collaborating with local farmers, foragers, and culinary experts, *The Gastro Forestry Project* aims to create a transparent supply chain that supports small-scale producers and ensures that consumers have access to sustainably sourced products.



Figure 1. 1,4 ha Gastro Forestry Project Location in Cilangkap - Manonjaya (Tasikmalaya).

Local product development is a central aspect of the project, focusing on enhancing the value of forest-based products such as wild honey, mushrooms, and indigenous fruits. Despite their high economic potential, these products have often been underutilized due to limited access to markets

and processing facilities. The project plans to provide training and support to local communities, helping them develop skills in processing, packaging, and marketing these products. By creating value-added products, the project aims to increase the income of local producers and reduce their reliance on unsustainable agricultural practices. This initiative aligns with the broader goal of fostering economic resilience and promoting sustainable livelihoods in rural areas.

The preservation of traditional culture is another key objective of *The Gastro Forestry Project*. In Cilangkap, traditional culinary knowledge and practices have been passed down through generations, reflecting a deep connection with the local environment. However, the rapid pace of modernization has led to a gradual erosion of this cultural heritage.

The project seeks to document and revive traditional recipes, highlighting the use of local and forest-based ingredients. Workshops and community events will be organized to educate younger generations about these culinary traditions, thereby preserving cultural identity and promoting sustainable food practices. By integrating traditional knowledge with modern culinary techniques, the project aims to create a unique gastronomic experience that celebrates the cultural and ecological diversity of the region.

Forest biodiversity plays a crucial role in the overall sustainability of the project. The forests in Cilangkap are home to a wide range of plant species, many of which have medicinal, culinary, or economic value. However, deforestation and habitat loss have put these species at risk, threatening the delicate balance of the ecosystem. Through sustainable forest management and conservation efforts, the project aims to protect and restore biodiversity in the region (Sikor, 2006).

This includes promoting the sustainable harvesting of non-timber forest products (NTFPs), such as herbs, spices, and wild fruits, which can be incorporated into local culinary practices. By doing so, the project not only preserves biodiversity but also enhances the culinary repertoire of green gastronomy, offering unique flavors and ingredients that reflect the richness of the local ecosystem.

The development of nature-based tourism and ecotourism is another critical component of the project. With its rich cultural heritage and natural beauty, Cilangkap has significant potential as an ecotourism destination. The project aims to leverage this potential by promoting activities such as forest foraging tours, culinary workshops, and agroforestry education programs.

These activities will provide visitors with an immersive experience, allowing them to learn about traditional culinary practices, sustainable farming, and the local ecosystem. By involving local communities in these tourism activities, the project aims to create new income streams and raise awareness about the importance of environmental conservation. Ecotourism not only boosts the local economy but also fosters a deeper appreciation for the region's cultural and natural heritage, promoting a sustainable approach to tourism development.

The root problems addressed by *The Gastro Forestry Project* include land degradation, loss of traditional skills, urbanization, and the uncertainty of the local food system. Land degradation in Cilangkap has been exacerbated by intensive farming practices that deplete soil nutrients and reduce agricultural productivity. Urbanization has led to the abandonment of traditional farming methods and a decline in indigenous knowledge about forest management. At the same time, climate change poses additional challenges by affecting crop yields and increasing the unpredictability of weather patterns, which further threatens the stability of the food system.

In response to these issues, the project seeks to revitalize traditional skills and promote sustainable land management practices. By reintroducing agroforestry and supporting local product development, the project aims to restore degraded lands, enhance food security, and create

a more transparent and resilient supply chain. Through educational initiatives and community engagement, the project also aims to raise awareness about the importance of sustainable practices and empower local communities to take an active role in preserving their cultural and natural heritage (Gallaud, 2006).

Ultimately, *The Gastro Forestry Project* aspires to create a holistic experience that combines culinary exploration with environmental stewardship. It invites individuals to reconnect with nature, savor local flavors, and appreciate the cultural richness of Cilangkap. By fostering a deeper understanding of sustainable food systems and forest conservation, the project aims to contribute to a healthier and happier community, providing a much-needed respite in the form of a short yet meaningful escape into the beauty of rural Tasikmalaya.

The preserved commodity in this project is mahogany wood, which holds a longstanding ecological function rooted in the traditional farming practices of the Sundanese people. Historically, mahogany has been planted as a future investment, providing shade, enriching soil quality, and preventing erosion in agroforestry systems (Whitmore, 2003).

This practice reflects a deep understanding of sustainable land management passed down through generations. Additionally, mahogany has significant economic value; if cultivated and managed properly, it can serve as a profitable resource for local communities, offering timber and various non-timber products that can be developed for both domestic and international markets.

B. RESEARCH METHOD

The research for *The Gastro Forestry Project as a Transparency Initiative in Green Gastronomy and Agroforestry Supply Chain Management* is conducted using a Participatory Action Research (PAR) methodology.

This approach emphasizes the active involvement of local communities throughout all stages of the project. By engaging participants directly, the study aims to leverage local knowledge and promote a deeper understanding of sustainable practices that can be replicated or adapted in similar contexts. The main focus of this project includes the development of nature-based ecotourism, such as Gastro Forestry Tours, the sale of forest biodiversity products, and the creation of local goods derived from forest resources. Additionally, the project highlights environmental services, aiming to balance ecosystem conservation with economic benefits for local communities.

The Participatory Action Research (PAR) methodology was chosen because it aligns well with the objectives of community-based projects that require collaboration, feedback, and co-learning. PAR is a dynamic approach that fosters collaboration between researchers and community members, allowing both parties to contribute to the identification of problems, development of strategies, and implementation of solutions. This method is particularly relevant in agroforestry and green gastronomy contexts, where local knowledge and traditional practices play a significant role in shaping sustainable outcomes (McIntyre, 2007).

In this study, the PAR approach enables the community in Cilangkap, Tasikmalaya, to take an active role in all phases of the research process. The participatory nature of this approach ensures that the findings are not only reflective of local realities but also actionable, providing a framework for communities to continue sustainable practices independently after the conclusion of the project.

The study focuses on several key groups within the Cilangkap community (a) **Local Farmers and Foragers** : These participants provide valuable insights into traditional agroforestry practices and the current state of forest management. Their firsthand experiences help to map out existing agricultural and forest product practices, including the preservation of mahogany wood, a

commodity with long-standing ecological and economic significance, (b) **Local Culinary Experts and Rural Gastronomists (Gastronomy/Food Culture Researcher) or Academics** : These individuals are essential in identifying traditional dishes and ingredients that are part of the region's cultural heritage. Their involvement helps to bridge the gap between forest biodiversity and green gastronomy and Experts from fields such as ethnobotany, sustainable agriculture, and social sciences contribute to the analysis and interpretation of data, ensuring that the findings are scientifically robust and aligned with best practices, (c) **Sundanese Community Leaders and Elders**: Their participation is crucial in understanding traditional land-use practices, cultural values, and the historical context of agroforestry in the region (include sundanese and environmental history), (d) **Local Entrepreneurs and Ecotourism From Rural Society**: These local stakeholders/participant contribute to the development of local products and nature-based tourism initiatives, such as Gastro Forestry Tours, that align with the project's goals.

Our Conservation & Activities :



Sit on a mahogany tree branch chair priced (160 USD)



A 20-year-old mahogany tree is ready for harvest (3900 USD)



We continually implement restorative regeneration for reforestation to ensure soil fertility.

Our Service



Gastro Forestry Tour



Gastro Forestry Tour in Gastro Tourism Academy (Tasikmalaya)

Explore intercropped farms, experience forest food commodities, and savor traditional rural cuisine in an immersive agroforestry adventure.

Figure 2. Gastro Forestry Project Documentation.

C. FINDINGS AND DISCUSSION

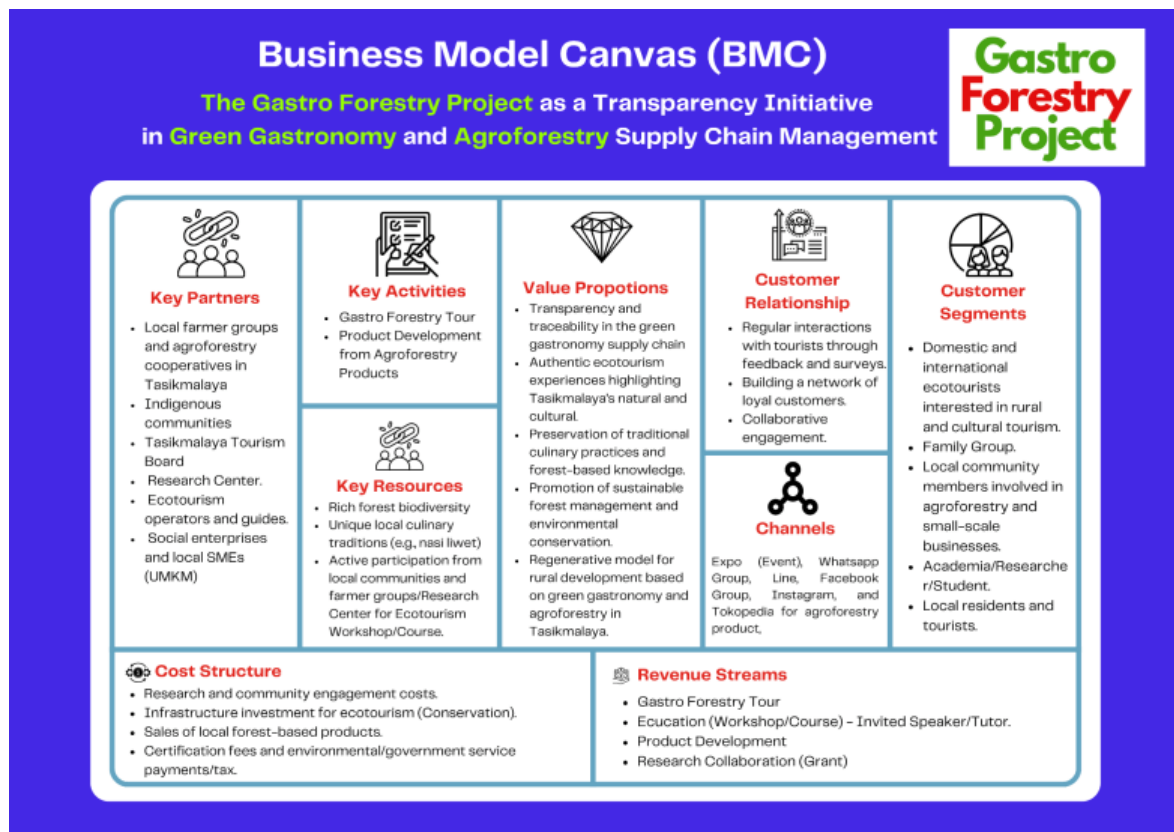


Figure 3. Business Model Canvas for The Gastro Forestry Project

The Gastro Forestry Project aims to enhance transparency in the supply chain of green gastronomy and agroforestry using the Participatory Action Research (PAR) methodology. This approach involves active collaboration with local communities in Cilangkap, Tasikmalaya, to develop sustainable practices that combine traditional knowledge with modern ecotourism and agroforestry initiatives. The research findings align with the elements of the Business Model Canvas (BMC), showcasing a comprehensive strategy for sustainable development.

Key Partners. The project engages various stakeholders, including local farmer groups, indigenous communities, social enterprises, research centers, and the Tasikmalaya Tourism Board. These partners provide essential resources, knowledge, and support, helping integrate traditional agroforestry practices with sustainable development strategies. Local Small and medium-sized enterprise (SMEs) and ecotourism operators contribute to product development and the execution of the Gastro Forestry Tours, ensuring a collaborative effort toward transparency and sustainability.

Key Activities. The primary activities include organizing Gastro Forestry Tours and developing products from forest resources. The tours offer immersive experiences that educate visitors about sustainable agroforestry practices and local culinary traditions, such as preparing “nasi liwet”. This initiative not only raises awareness of environmental conservation but also generates income for local communities. Product development focuses on creating value-added items like herbal teas and traditional food products, leveraging local biodiversity while promoting sustainability.

Key Resources, identified are the region's rich forest biodiversity, unique culinary traditions, and active community participation. The diverse flora and fauna serve as both educational and practical components of the tours, while local culinary practices provide a cultural experience that highlights traditional uses of forest products. Community involvement is vital, as it incorporates traditional knowledge and ensures the project's authenticity.

Value Propositions. The project offers several unique value propositions, including transparency in the supply chain, an authentic ecotourism experience in rural area in Tasikmalaya, and the promotion of sustainable forest management. By tracing the origins of ingredients and products, the project fosters trust and ethical consumerism. The immersive tours provide visitors with a unique experience, bridging the gap between culinary traditions and environmental conservation (Beeton, 1998).

Customer Segments and Relationships. The target customers include **domestic and international tourists, local communities, and researchers**. The project appeals to tourists seeking eco-friendly and culturally rich experiences, local entrepreneurs involved in agroforestry, and academics interested in sustainable practices. Customer relationships are maintained through regular feedback, surveys, and collaborative engagement, allowing continuous improvement of the offerings.

Revenue Streams and Channels. Revenue is generated through Gastro Forestry Tours, educational workshops, product sales, and research collaborations. The project utilizes various channels for promotion and sales, including social media platforms, e-commerce sites like E-commerce and community events, helping to reach a wider audience and increase engagement.

D. CONCLUSION

The study demonstrates the effectiveness of the PAR methodology in fostering community participation and sustainable development. By integrating traditional knowledge with modern sustainable practices, the Gastro Forestry Project creates a scalable model for green gastronomy and agroforestry. The BMC framework illustrates the project's holistic approach, highlighting its value in environmental conservation, cultural preservation, and economic growth.

Gastro Forestry Project include increased food sovereignty through sustainable utilization of natural resources, preservation of local knowledge and culture, and the creation of an environmentally friendly and sustainable ecotourism model.

This project is also anticipated to serve as a regenerative model promoting environmental sustainability, food sovereignty, and the economic empowerment of rural communities based on green gastronomy and agroforestry.

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