

The Matoli tradition from ritual practice to regenerative tourism: biodiversity, gastronomy, and social reproduction in Ganesh Chaturthi (Goa, India)

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Abstract

The celebration of Ganesh Chaturthi in India, particularly in Goa, is closely linked to cultural practices that reflect the region's heritage, traditional values, and ecological awareness. Central to these practices is the Matoli, a decorative canopy composed of locally sourced herbs, fruits, roots, and shrubs, which symbolizes the community's relationship with its natural environment and connects culinary customs to ritual practices. This study examines how the collection of Matoli elements, in Ganesh Chaturthi, and the preparation of festive foods contribute to biodiversity awareness, community participation, and social cohesion. Drawing on cultural ecology theory, the research adopts a qualitative-dominant mixed-methods approach, combining ethnographic fieldwork, botanical surveys, and semi-structured interviews with local stakeholders. The findings indicate that Matoli functions as an eco-cultural practice that simultaneously preserves biodiversity knowledge, reinforces intergenerational transmission, and strengthens community bonds. Furthermore, the study demonstrates that integrating Matoli-related practices into tourism can support regenerative, community-centered development. Aligned with the Convivialist Manifesto (<https://convivialism.org/>), we argue that tourism should coexist with host societies without structurally altering or subordinating them, operating instead within a post-neoliberal convivialist logic. By articulating the interconnections between tradition, biodiversity, and gastronomy, the study contributes to advancing regenerative tourism approaches grounded in cultural and ecological sustainability.

Keywords

Keywords: Convivialist Manifesto, Cultural Ecology Theory, Festival Tourism and Ganesh Chaturthi, Matoli (Goa, India)

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Conflict of Interest

The authors declare no conflict of interest.


Ethics Approval

Not required for this study.

Justification

This paper comes from India. There the rules are described in the document National Ethical Guidelines for Biomedical and Health Research Involving Human Participants" (ICMR, 2017). Despite, in general, all research (including with human beings) must undergo through "ethics review", the system is based on "levels" of risk, and there are situations, as the "Exempt review (formal exemption)", when research may be exempt from full review, which occurs when it: a) involves minimal risk; b) uses anonymized data; c) addresses non-sensitive topics; and d) does not involve vulnerable populations. This is the case of this paper. For social research and evaluation in India [see the attached document], informed consent is sufficient, and no need of any formal approval. This is the case of this paper. The informed consent was gathered from all participants, as indicated in the methodology.

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Authors' note

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1. Introduction

India's cultural landscape is richly defined by its festivals, which serve as platforms for religious expression, social cohesion, and economic activity (Preeti & Shivangi, 2024). Among these, Ganesh Chaturthi is one of the most widely and the most spiritually significant Hindu festivals., particularly in Maharashtra and Goa, characterized by elaborate rituals, idol immersions, and community-led celebrations (Agarwal, 2018). Ganesh Chaturthi is one of the most spiritually significant Hindu festivals.

This 10-day festival begins on Chaturthi (the fourth day) of the Shukla Paksha (waxing moon) in the month of Bhadrapada. It concludes on Anant Chaturdashi (the fourteenth day) of the waxing moon phase in the Hindu lunar calendar (Agarwal, 2018). An exclusive attraction of Ganesh Chaturthi in Goa is the *Matoli* tradition, in which a canopy of locally sourced wild herbs, shrubs, fruits, and medicinal plants is arranged above the deity (Ghate et al., 2022). This practice reinforces the region's deep ecological consciousness and serves as a repository of indigenous biodiversity knowledge, passed down through generations. Concurrently, festival-related food traditions, such as the preparation of *modak*, *patoli*, and *neuri*, play an equally significant role in preserving culinary heritage and shaping trends in religious tourism (Mohapatra & Biswas, 2017).

From a theoretical perspective, while the growing body of literature on religious tourism, particularly on Ganesh Chaturthi, has examined its socio-religious significance, the interconnections between ritual practices, biodiversity-based material culture, and food traditions, as an integrated eco-cultural system, remain insufficiently theorized within an integrated analytical framework (Ghate et al., 2022). Despite its strong cultural and ecological relevance, the *Matoli* tradition is gradually fading due to urbanization, commercialization, and lifestyle changes (Bhatt, 2024), also modernization processes have led to the replacement of traditional festival foods with mass-produced alternatives, threatening the authenticity of culinary heritage (Shivangi & Preeti, 2024).

From an empirical standpoint, as an empirical research object, it has received limited scholarly attention as a complex eco-cultural system that simultaneously articulates botanical knowledge, symbolic practices, and culinary expressions. The existing studies in the topic tend to examine these dimensions in isolation, overlooking how they converge in shaping community-based practices and sustainable forms of cultural reproduction. For example, current research primarily focuses on festival tourism in urban centers (Rautela & Joshi, 2022) or temple-based culinary tourism, such as the Mahaprasad tradition of Jagannath Temple in Odisha (Gäbel, 2017), while the potential of Ganesh Chaturthi in Goa as an eco-tourism and culinary tourism model remains largely unexamined.

This gap acquires particular analytical relevance when situated within the recent consolidation of debates on *regenerative and culturally embedded tourism*, where the articulation between ecological knowledge, gastronomy, and social cohesion remains theoretically underdeveloped and empirically underexplored. Insofar as these approaches seek to reposition tourism beyond extractive and growth-oriented logics, emphasizing instead the regeneration of socio-ecological systems and the valorization of locally embedded knowledge practices (Pollock, 2020; Bellato & Pollock, 2025). Although these perspectives advance a critique of extractive tourism models, they have yet to adequately specify the mechanisms through which ecological knowledge, food practices, and social relations are articulated in concrete contexts.

From a sociological standpoint, this limitation is further compounded by the relative neglect of the relational and structuring role of shared practices in sustaining social cohesion, a process that depends on the reproduction of collective dispositions and forms of participation embedded in everyday life (Bourdieu, 1977, p. 95). Consequently, the articulation between biodiversity, gastronomy, and social cohesion remains not only theoretically under-specified but also empirically underexplored, particularly in contexts where ritual practices operate as privileged sites for the simultaneous activation of ecological knowledge, symbolic systems, and collective action. Thus, this study seeks to fill the above mentioned gaps by analyzing how *Matoli* contributes to biodiversity conservation and how the food prepared during 'Chavath' – a Ganesh Chaturthi, commonly referred to in Goan homes – can be leveraged as a cultural tourism asset, thereby safeguarding sustainability, cultural preservation, and economic opportunities for local communities.

Considering these gaps in this context, the research aims to address the following key questions: *How does Matoli contribute to the ecological and cultural landscape of Ganesh Chaturthi? How do the preparation, sharing, and consumption of traditional Ganesh Chaturthi foods strengthen community bonds? How can regenerative tourism incorporate Matoli into sustainable development strategies?* To achieve this, the study is structured around three interconnected objectives: (i) to analyze the ecological and cultural significance of *Matoli* in Ganesh Chaturthi celebrations; (ii) To explore the role of traditional Ganesh Chaturthi food preparation, sharing, and consumption in fostering community bonding; (iii) to explore the potential of regenerative tourism in revitalizing *Matoli* traditions and ensuring sustainable development. Given the cultural and economic significance of religious festivals, this study advances the proposition that Ganesh Chaturthi in Goa, through the *Matoli* tradition and its associated gastronomic practices, can be strategically positioned as a distinctive Religious Festival Tourism and gastronomy-driven tourism attraction.

By bridging festival traditions, biodiversity, and gastronomic tourism, this study contributes to the development of experiential tourism models that balance authenticity and commercialization. Additionally, the findings are relevant to policymakers, tourism boards, and heritage conservationists. Furthermore, the findings provide relevant insights for policymakers, tourism authorities, and heritage conservation stakeholders, offering sustainable strategies to promote indigenous knowledge systems while boosting the local economy (Kumawat & Shekhar, 2024). As religious tourism continues to expand in India, understanding its intersections with gastronomy and biodiversity conservation becomes essential for designing culturally sensitive and ecologically grounded tourism policies capable of preserving both tangible and intangible heritage (Najar, 2020). As globalization and commercialization continue to introduce modern elements into authentic religious festivals, there is an urgent need to develop sustainable tourism strategies that preserve cultural authenticity while supporting economic viability (Mohapatra & Biswas, 2017).

2. Review of Literature

Indian festivals are intricately linked to food, which serves as a link between social cohesiveness, cultural identity, respect for Mother Earth, and spirituality. In religious festivities, ritualistic food practices have formed an essential component, for they promote collective participation and strengthen traditional values (Shivangi & Preeti, 2024). The role of food in Indian festivals has been studied by academics, who have emphasized its importance as a sacred offering to the Gods and as a symbol of joy. The widely celebrated Ganesh Chaturthi festival in India is an illustration of this enduring connection. *Modak*, an offering, is supposed to be a favourite of Lord Ganesha, which symbolizes devotion and culinary heritage (Agarwal, 2018). This Goan festival takes on even greater cultural significance because of the *Matoli* heritage (Agarwal, 2018). The *Matoli*, which entails covering the deity with a canopy of wild fruits, herbs, and plants, gives the festivity ecological significance.

Beyond its aesthetic value, *Matoli* educates communities to use local biodiversity sustainably by fostering an environmental conscience (Ghate et al., 2022). The integration of food into religious tourism has received increasing attention, particularly in destinations where local cuisine serves as an alternative tourism product (Privitera, 2018). Goa's Hindu culinary traditions offer a rich and diverse range that could be leveraged for cultural tourism (agoda.com). Food, when strategically positioned, can enhance a destination's appeal, as seen in Odisha's culinary tourism models, where temple food, such as the *Mahaprasad* of the Jagannath Temple, attracts pilgrims and gastronomes alike (Mohapatra & Biswas, 2017).

Similar opportunities exist within the framework of Ganesh Chaturthi, where festive foods such as *khatkhate*, *sasav*, *modak*, *manganne*, *kheer*, *patoli*, and *neuri* are not only sacred offerings but also culinary attractions. However, just as the unexplored cuisine of Uttarakhand remains underrepresented in tourism narratives (Bhatt, 2024), the gastronomic potential of *Matoli* and its associated food practices in Goa remains an untapped cultural asset. Religious festivals are more than just celebratory gatherings, because they also serve as catalysts for community engagement, strengthening bonds through collective food preparation and shared dining experiences (Shivangi & Preeti, 2024). These participatory culinary traditions, much like those seen in other Indian festivals, play an essential role in preserving intangible cultural heritage. Studies on festival food practices reveal that while rituals remain deeply rooted in tradition, they also evolve in response to modern influences. However, the proliferation of pre-packaged sweets during festivals and the gradual decline of home-cooked offerings raise concerns about the erosion of traditional knowledge systems (Shivangi & Preeti, 2024).

Matoli, a practice deeply embedded in the ecological and religious traditions of Goa, offers valuable insights into the intersection of biodiversity and cultural heritage. Comparable to Maharashtra's *Matvi* tradition, where wildflowers and plants are collected for religious decorations, *Matoli* highlights the importance of indigenous ecological knowledge (Ghate et al., 2022). It represents a sustainable practice that not only supports biodiversity conservation but also reinforces the community's connection to nature. As culinary tourism is gaining momentum as a tool for cultural preservation, there is growing recognition of the role that authentic local foods play in shaping visitor experiences (Mohapatra & Biswas, 2017). Studies on Almora's regional cuisine in Uttarakhand demonstrate how neglected food traditions can be repositioned as tourism attractions, much as Bihar's *Litti Chokha* and Punjab's *Sarson da Saag* have become representative of their respective regions (Rautela & Joshi, 2022).

The same principle applies to Goa's Ganesh Chaturthi, where naturally grown, locally sourced, and seasonal produce can be featured in food preparations for visitors through farm-to-table experiences, food trails, and culinary workshops, enhancing their appreciation of Goan gastronomic heritage. Destination branding through gastronomy has proven to be an effective strategy in regions where food is deeply tied to local identity (Rawal & Takuli, 2017). Research on pilgrimage tourism, such as the case of the Hazrat Hamza Shah Shrine, illustrates how religious sites serve as economic hubs, supporting local businesses and small-scale vendors (Shaikh et al., 2023; Shaikh et al., 2025). Similarly, the Chariot Festival in Odisha highlights how ritual feasting sustains temple economies while reinforcing social bonds (Gäbel, 2017). Recognizing these festivals not only as religious events but also as economic engines emphasizes the importance of preserving and promoting them within tourism frameworks.

A comprehensive examination of existing literature emphasizes the multi-layered significance of Ganesh Chaturthi, particularly in its ability to bridge biodiversity, food heritage, and religious traditions. While the festival's role in Goa's cultural landscape is well recognized, its potential as a regenerative tourism model remains underutilized. By integrating the festival's rituals, eco-cultural practices, and gastronomic heritage into a cohesive tourism experience, Ganesh Chaturthi can serve as a model for responsible and immersive cultural tourism. As globalization continues to reshape traditional practices, it becomes imperative to safeguard these intangible heritage elements, ensuring that they remain vibrant and relevant for future generations.

This approach often focuses on harm reduction rather than actively restoring ecosystems, revitalizing cultural traditions, and empowering local communities (Pollock, 2020). In contrast, regenerative tourism extends beyond sustainability by emphasizing restorative, community-driven, and ecologically conscious tourism practices. This is especially relevant for festivals like Ganesh Chaturthi, where traditions such as *Matoli* and authentic festival gastronomic culture serve as ecological markers of biodiversity conservation while also playing a sociocultural role in strengthening local community bonds (Ghate et al., 2022).

A key aspect of regenerative tourism is active community participation, which aligns with sociological theories on community engagement, cultural resilience, and social capital (Sawu et al, 2024). In Goa, Ganesh Chaturthi is not just a religious event but a social institution that fosters intergenerational knowledge transfer, collective action, and cultural continuity. The *Matoli* tradition, in particular, involves local families, farmers, and artisans who collect, trade, and assemble indigenous herbs and plants for canopy decorations above the deity (Agarwal, 2018).

This process not only strengthens local economic linkages but also ensures that traditional ecological knowledge is maintained and valued as part of Goa's intangible cultural heritage. This is where regenerative tourism offers a more holistic alternative—by ensuring that local communities are at the core of decision-making rather than passive participants in the tourism economy (Sawu et al., 2024). A sociological perspective on regenerative tourism emphasizes participatory governance, knowledge-sharing networks, and community-based tourism models (Paddison & Hall, 2024).

Furthermore, integrating festival-based tourism experiences—such as *Matoli* workshops, eco-trails, and traditional food-tasting events—can enhance socio-economic resilience while ensuring that tourists actively contribute to local livelihoods rather than merely consuming cultural experiences (Mohapatra & Biswas, 2017).

3. Research Methodology

This study adopts a qualitative-dominant mixed-methods research design, due to the fact that we have gathered data from several different sources, and we analyze using different techniques, also combined in a triangulation process, to check and ensure the reliability of the information and interpretative inferences. However, the qualitative component constitutes the primary analytical axis.

The framework employed includes integrating ethnographic fieldwork, botanical surveys, and semi-structured in-depth interviews with key stakeholders, including artisans, farmers, festival organizers, chefs, and cultural experts. Ethnographic observations were conducted during the festival to document *Matoli* -making practices, ingredient sourcing, and community participation. Botanical surveys were undertaken to identify plant species traditionally used in *Matoli*, assess their conservation status, and determine their local availability.

It supposedly allowed us to reach an in-depth interpretation of meanings, practices, and social relations embedded in ritual and everyday contexts, while the botanical survey functions as a complementary empirical strategy aimed at documenting the diversity and uses of plant species associated with *Matoli*. This integrative design allows for the articulation of symbolic, material, and ecological dimensions of the phenomenon, providing a more comprehensive understanding of how biodiversity, cultural practices, and food traditions intersect in the production and reproduction of socio-ecological systems.

The study was conducted in Goa, India, from 1st August 2024 to 30th September 2024. Participants were selected through purposive sampling, based on their direct involvement in *Matoli*-related practices and their relevance as key stakeholders within the community, including artisans, ritual practitioners, local residents, and individuals engaged in food preparation. Informed consent was obtained from the respondents before commencing interview, and all of the respondents voluntarily agreed to be part of the study as they informed that they want their opinions to be heard and used for making the festival known to others in the best possible manner. Additionally, semi-structured interviews with residents and culinary experts provided insights into the gastronomic relevance of *Matoli* -linked ingredients, their integration into Goan Hindu cuisine, and their potential role in regenerative tourism. A total of 14 participants were interviewed using a semi-structured format (see Table 1), allowing for both guided inquiry and the emergence of context-specific insights. Interviews lasted approximately 50-60 minutes and were conducted in situ during the festival period, enabling the capture of both

retrospective narratives and ongoing practices. This approach ensured the inclusion of diverse perspectives while maintaining analytical depth and contextual sensitivity.

Table 1: Stakeholder’s Profile

Sr. No	Code	Gender	Category	Quality	Native/Non-Native
	A1	Male	Artisan (A1)	Experienced <i>Matoli</i> Decorator	Native
	A2	Male	Artisan (A2)	Young <i>Matoli</i> Learner	Native
	G1	Male	Government (G1)	Tourism Department Official	Native
	C1	Male	Culinary Expert	Traditional Festival Chef	Native
	T1	Male	Tour Guide (T1)	Cultural Heritage Guide	Native
	T2	Female	Teacher (T2)	Educator	Native
	V1	Male	Vendor (V1)	Seasonal <i>Matoli</i> Vendor	Native
	T3	Female	Tourist (T3)	Eco-Tourist Enthusiast	Non-Native
	A3	Male	Anthropologist (A3)	Studies Cultural Ecology	Non-Native
	O2	Male	Festival Organizer (O2)	Leads Community Festivities	Native
	T4	Female	Teacher (T4)	Educator	Native
	A4	Female	Influencer (I4)	Cultural Enthusiast	Native
	H1	Female	Home Maker (H1)	Cooks authentic food	Native
	H2	Female	Home Maker (H2)	Expert in Festival Cuisine	Native

Source: own elaboration.

The collected data were analyzed thematically, using Content Analysis (CA) (Bardin, 1970), aligned with the Regenerative Theory (Bellato & Pollock, 2025) and the broad background and premises of the Convivialist Manifesto (2013), to assess *Matoli*'s potential as a driver of sustainable tourism initiatives. This methodological approach enables a holistic understanding of how *Matoli* functions as an eco-cultural tradition while highlighting opportunities for integration into sustainable tourism and food heritage conservation (Bhushan Bhawe, 2005).

4. Ganesh Chaturthi: A Festival of Cultural Heritage, Community Bonding, and Gastronomic Traditions in Goa

Object and Context of Research: Ganesh Chaturthi Festival

Ganesh Chaturthi, locally known as ‘Chavath’, is one of the most significant Hindu festivals in Goa, deeply embedded in the region's eco-cultural landscape. Celebrated at the end of the monsoon, the festival marks the arrival of Lord Ganesh and is characterized by elaborate rituals, vibrant decorations, and strong community participation (Khedekar, 2000). The word ‘Ganesha’ is derived from two words: Gana, which means group, and Isha, which means leader. Hence, Ganesha is believed to be the leader of the group (Dunghav, 2019).

In the Konkani region, *Matoli* is one of the remarkable eco-traditions observed during Ganeshotsav (Ganesh festival). It is a festival honouring the birth of God Ganesha. The first day of the festival is Ganesh Chaturthi, also known as Vinayak Chaturthi, *Chavath*. An idol of Lord Ganesha made of clay is worshiped on Chaturthi, i.e., the fourth day in the sixth month of the Indian civil calendar, Bhadrapada (which falls in Aug or Sept of the Gregorian calendar). These idols are placed privately in homes as well as publicly. The festival is usually observed for 1.5-10 days of Bhadrapada during the waxing moon phase (*Shukla Paksha*). The festival ends on the tenth day (i.e., Anant Chaturdashi) with immersion (*visarjana*) of the idol in a nearby water body.

The month also has other traditions of worship, along with the idol of Lord Ganesha. Haritalika pooja is on Tritiya, i.e., the third day of Bhadrapada, where Lord Shiva and Goddess Parvati are worshiped and garlanded with patri (leaves) by young girls and married women. Rushi Panchami is on the fifth day of Bhadrapada. In some households, a pair of goddesses, Gauri (elder and junior), is also worshipped alongside Lord Ganesha.

According to Ayurveda, or in Sanskrit grammar, ‘Gana’ is derived from ‘Guna.’ ‘Guna’ means qualities which are Satva, Raja and Tama. Ganesha means the controller of the three qualities. So, Ganesha is considered the God of intelligence and quality. To worship Lord Ganesha, people offer 21 ‘*Durva*’, a locally abundant sacred grass, to him (Dunghav, 2019).

During the month of Bhadrapada, ‘*Durva*’ grows swiftly and it is believed to absorb the heat of the body. In this season, pitta gets accumulated in the body, and so ‘*Durva*’ makes its strength low. In Ayurveda, ‘*Durva*’ is described as a medicinal herb. ‘*Durva*’ is said to have many medicinal properties and health benefits, including antimicrobial and antiviral properties. Recent research at the University of Allahabad in India has revealed that the glycaemic potential of *Cynodon dactylon* extract has significant hypoglycaemic and antidiabetic effects (Dunghav, 2019).

The festival is deeply connected to Goa's farming and ecological traditions, as seen in the *Matoli* canopy. Here, wildflowers and fruits are organized on a wooden square or rectangular frame, which is tied to the roof above the idol of Lord Ganesha during the Ganesh festival. A similar practice is observed under different vernacular names such as ‘matihalyar mandap,’ ‘mantap,’ matvi’ or ‘matov’ in the *Konkan* (Ghate et al, 2019). It is made from locally sourced wild fruits, herbs, flowers, and roots, which reinforces the warm relationship between people and nature. Traditionally, the central hall of every house would be smeared with cow dung, walls whitewashed, and naturally available materials like bamboo, areca nut, and banana stems were put to use to construct the sacred Makhar (altar), which houses the Ganesh idol (Khedekar, 2000).

The festival (see figure 1) is seen as a fundamental aspect that highlights the transmission of knowledge, where older generations educate the younger ones about the rituals, plant species used in *Matoli*, and the cultural significance of each offering. This is a time when families come together, emphasizing kinship ties and strengthening communal bonds.



Figure 1. Ganesh Chaturthi celebrations portray communal.

Source: Crishnaa Verlekar, Photographer designed for research

Ganesh Chaturthi in Goa is not just about individual household celebrations but also about collective experiences, where neighbourhood associations, temple committees, and even village panchayats come together to organize public installations of Ganesh idols, known as *Sarvajanik Ganeshotsav* (Public Ganesh Festival). While Bal Gangadhar Tilak promoted this practice in Maharashtra to invoke nationalistic fervour against British rule, its integration into Goa post-liberation was driven by the need to maintain cultural continuity under a changing socio-political landscape (Khedekar, 2000). The process of gathering plants and arranging *Matoli* is an act of communal effort, fostering collaboration and participation among villagers, where the act of foraging for rare and sacred plants also serves as an environmental conservation effort.



Figure 2. Traditional wooden *Matoli* frame

Source: <https://archive.org/details/Matoli0000bhus/page/12/mode/2up>



Figures 3 (upper left), 4 (upper right) and 5 (lower): Matoli arrangements showcasing domestic variations in plant selection, decoration style and placement above the Ganesh idol.

Source: Author's own picture.

Chavath and Gastronomy: Culinary Traditions as Cultural Expressions

Food is central to the Ganesh Chaturthi celebrations in Goa, with traditional sweets and savoury dishes made using seasonal ingredients sourced from local farms and forests. The preparation of these delicacies follows traditional recipes passed down through generations, thereby strengthening Goa's culinary heritage. *Modaks*, sweet dumplings made of rice flour, jaggery, and coconut, are considered Lord Ganesh's favourite treat and hold immense religious significance.

So also *Patoli*, a delicacy made of rice flour filled with coconut and jaggery, steamed in turmeric leaves, which are naturally aromatic, biodegradable, and seasonally available during the monsoon. Moreover, turmeric leaves (used for wrapping) are known for their antimicrobial properties, which promote health (Khedekar, 2000). Both *Modak* and *Nevri* underscore the importance of coconut-based desserts in *Chavath* gastronomy, linking them to the broader context of food sustainability and regional food heritage.



Figures 6 (left) and 7 (right): Goan Chavath Naivedya served on a banana leaf and other festive delicacies

Source: Author's own picture.

Khatkhate is a mixed vegetable curry that showcases the ecological wisdom at the heart of Goan cuisine. It includes a diverse range of seasonal, locally grown vegetables and tubers such as *yams*, *pumpkins*, *corn*, *raw bananas*, *drumsticks*, *sweet potatoes*, and *colocasia*. *Sasav*, a mustard-based sweet-and-sour curry typically made with *ambade* (hog plum), is rich in vitamin C and antioxidants. As a locally growing fruit, it contributes to biodiversity conservation and promotes the use of underutilized fruits in local cuisine. *Ambade* is added to *Aalu* (*Alocasia*) based curries as well .

Other dishes include *Neuri* (deep-fried sweet dumplings), *Mangane* (chana dal kheer), and *Kelyachi bhaji* (Raw banana vegetable), which highlight Goa's harmonization of agrarian and ritualistic food cultures. The festival also features wild tubers, roots, and medicinal herbs, many of which are incorporated into local dishes and traditional Ayurvedic remedies. The introduction of these wild plants into the festive food culture serves as a reminder of Goa's ancient ties to nature and the sustainable use of its biodiversity. The practice showcases how Goan cuisine reflects a deep understanding of seasonality, nutrition, and ecological balance.



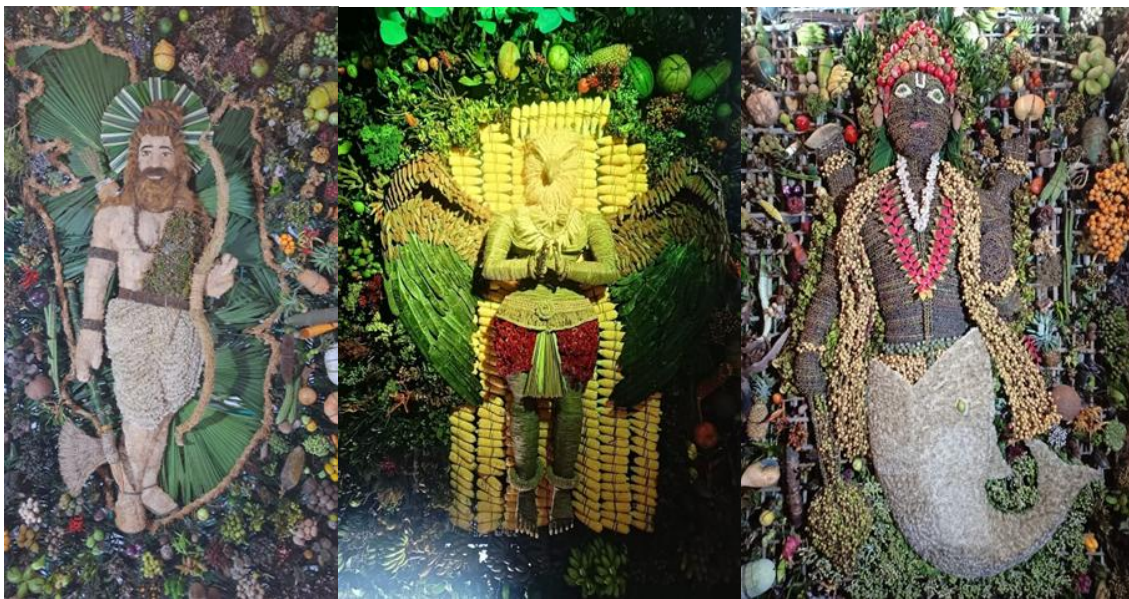
Figures 8 (left) and 9 (right): Vendors at a local market in Goa are displaying seasonal Matoli essentials

Source: Author's own picture.



Figure 10. Artistic representation of elements of *Matoli*

Source: Gadekar, D. (2024). *Matoli: Decoding Contemporary Ethnobotany in Ritual Practices*. Sunaparanta Goa Centre for the Arts.



Figures 11 (left), 12 (middle) and 13 (right). A traditional *Matoli* canopy prepared for a Ganesh Chaturthi competition in Goa.

Source: Crishnaa Vernekar, photographer.

Gastronomic Significance of Matoli and Festive Cuisine in Ganesh Chaturthi

Matoli, an integral part of the Ganesh Chaturthi festivities in Goa, incorporates a wide variety of roots, tubers, and fruits, many of which have significant gastronomic significance. These botanical elements not only serve decorative and ritual purposes but also play a strong role in local cuisine and traditional medicine. Many of these ingredients are rich in essential nutrients and are still used in local diets in various forms, contributing to the region's culinary heritage. Several tubers and roots, such as *Karano*, are recognized for their high carbohydrate content, making them an important energy source.

Similarly, *Tere* has been traditionally used in various Goan dishes (see Table 2), often prepared as a starchy vegetable and cooked with coconut-based gravies. Its leaves, rich in iron and calcium, are frequently used in patoli, a festive delicacy. Fruits such as *panas* (jackfruit) hold a special place in Goan gastronomy. The ripe fruit is used in desserts and jams, while the seeds are roasted or boiled as a protein-rich snack. Another notable fruit, *Kelicho Ghad/Bono*, or wild banana, is used both raw and cooked. It is commonly used in chutneys, curries, and festive preparations, offering a high potassium and fibre content.

Table 2: Ethnobotanical profile of Matoli elements, highlighting local names, parts used, and their significance

Local Name	Part Used	Cultural/Medicinal Significance
<i>Zirmulo</i>	Pods	Used in Ayurvedic medicine; effective for joint disorders, arthritis, and swellings.
<i>Annvare</i>	Flower	Roots treat ophthalmopathy, cough, burning sensation, stomach pain, constipation, and fever.
<i>Raanhalad</i>	Fruits & Flowers	Used in tribal medicine; roots beneficial for leprosy, cardiac diseases, dysentery, and general debility.
<i>Teeli</i>	Plant with Flowers	Antibacterial properties; used against skin fungi, Staphylococcus, and Streptococcus infections.
<i>Bede</i>	Fruits	Used for schizophrenia, glaucoma, as a mild stimulant, and digestive aid.
<i>Rui</i>	Flowers with Leaves	Used for digestive disorders, pain relief, and parasitic infections like elephantiasis.
<i>Chafyachi Falla</i>	Fruits & Flowers	Traditionally used to treat diarrhoea, cough, bronchitis, fever, and hypertension.
<i>Seetechi Veni</i>	Flower	Used against asthma, tuberculosis, nervous disorders, cramps, epilepsy, kidney stones, and menstrual disorders.
<i>Kudduk</i>	Flowers with Leaves	Treats cataracts, hypertension, infected sores, and wounds; antidote for snakebites.
<i>Patphanas / Raanphanas</i>	Fruits	Bark used for diabetes, anaemia, malaria, asthma, dermatitis, diarrhoea, and ulcers.
<i>Dhavarukh</i>	Bark	Bark produces Karaya gum, used as a laxative and for increasing sexual desire.
<i>Gel</i>	Fruits	Used to treat gastrointestinal issues, liver problems, inflammation, and microbial infections.
<i>Kavandal</i>	Fruits	Used as a laxative, anti-pyretic, and sedative; treats rheumatism, skin ailments, and intestinal issues.
<i>Ranmethi</i>	Flowers with Leaves	Used as a diuretic; relieves varicose veins, leg pain, night cramps, and circulation issues.
<i>Fagla</i>	Fruits	Used in Ayurvedic medicine for diabetes management and metabolic disorders.
<i>Naal Bonde</i>	Fruits	Antimalarial properties; used to kill parasites responsible for malaria.
<i>Salkando</i>	Fruits	Used for antibacterial and antimicrobial treatments, skin disorders, and hernia treatments.
<i>Tere</i>	Leaves with Flower	Used in Ayurvedic medicine for asthma, arthritis, diarrhoea, neurological disorders, and baldness.
<i>Kanakicho Kom</i>	Tender Shoot	Contains anti-cancer, antioxidant, and anti-aging properties; used in weight management.
<i>Nano</i>	Fruits	Used in traditional medicine for asthma, diabetes, bronchitis, and cold treatments.

Source: Gadekar, D. (2024). *Matoli: Decoding Contemporary Ethnobotany in Ritual Practices*. Sunaparanta Goa Centre for the Arts.

In addition to their culinary applications, several plants from *Matoli* have medicinal and preservative benefits that align with local food traditions. *Ran Halad* is known for its anti-inflammatory properties and is often used in herbal infusions and spice blends. *Bel* is another culturally significant fruit, widely consumed as sherbets or medicinal concoctions, aiding digestion and boosting immunity. *Toring*, a sour-sweet fruit included in *Matoli*, is known for its antimicrobial and digestive properties.

Other significant edible components of *Ambade* for pickles and tangy curries, adding a distinct sourness while offering high vitamin C content. *Makke* or corn is often consumed in the boiled form or in a dish called *khatkhatte*. *Supari*, although commonly used in religious rituals, is also chewed for its stimulant properties and is incorporated into digestive preparations.

By promoting *Matoli* -linked foods through gastronomic tourism, local communities can gain economic opportunities while also ensuring the long-term survival of traditional ingredients and food practices. From an analytical standpoint, ritual gastronomy emerges as a symbolic-material nexus that connects ecological resources to systems of meaning, demonstrating how food practices function simultaneously as cultural expressions and as structuring elements of socio-ecological relations (Harris, 1966).

Regenerative Tourism in Culinary and Festival-Based Tourism

Goa’s festival cuisine is a culmination of agrarian traditions and local food systems. However, modern commercial influences have led to the decline of home-cooked festival foods, which have been replaced by mass-produced alternatives (Shivangi & Preeti, 2024). A regenerative tourism framework can help restore these food traditions by incorporating farm-to-table initiatives, community-run festival kitchens, and immersive culinary experiences that allow tourists to engage in

traditional cooking methods (Rawal & Takuli, 2017). Such initiatives would not only revitalize lost culinary knowledge but also create direct economic benefits for local farmers, small-scale food producers, and women-led cooperatives (Hussain et al., 2023). Regenerative tourism positions economies and tourism at the centre of transformation, and is thus seen as an economic system that generates economic capital (Bellato & Pollock, 2025). Unlike mass tourism, which often erodes authenticity, regenerative tourism encourages deep engagement with local traditions, ensuring that visitors actively contribute to cultural preservation rather than observe it (Pollock, 2020). By embedding tourism into local livelihoods—rather than the other way around—Ganesh Chaturthi can serve as a model for cultural resilience, biodiversity conservation, and sustainable community development.

Findings, Discussion and Interpretation

- *Theme 1: Biodiversity and Knowledge Erosion*

The *Matoli* Artisan (A1) opined that *Matoli* previously combined over 50 plant species, compared to fewer than 20 today. This drop could be due to urban expansion, deforestation, and the deterioration of agricultural land, limiting the availability of native plants. The Festival Organizer (O2) noted that commercial plastic decorations have replaced mainly natural *Matoli*, weakening the tradition's ecological significance. This reflects broader patterns of modernization that disrupt eco-cultural practices (Zhao, 2024).

The observed reduction in plant diversity, from over fifty species to fewer than twenty, cannot be interpreted solely as a quantitative loss, but rather as an indication of the progressive erosion of environmentally situated knowledge systems, increasingly displaced by standardized and industrial substitutes, as also noted in broader transformations of eco-cultural practices under conditions of modernization (Zhao, 2024). These findings suggest that the *Matoli* operates as a socio-ecological assemblage through which biodiversity is not merely represented but actively mobilized within cultural practice, reflecting processes of socio-ecological co-evolution in which ecological knowledge is embedded in ritual action and materially anchored in the selective use of native species (Steward, 1955; Rappaport, 1967). Theme 2: Generational Knowledge Transmission and Cultural Memory

The Artisan (A2) expressed concern that younger generations view *Matoli* making as outdated and economically unviable, leading to a decline in intergenerational transmission. The Teacher (T2) emphasized that *Matoli* is missing from school education, contributing to a growing cultural disconnect among youth. Studies indicate that urbanization and shifting educational priorities often distance younger populations from eco-religious traditions (Joshi & Menon, 2022). The Cultural Anthropologist (A3) noted that *Matoli* reflects a deep eco-spiritual balance, linking people, nature, and culture. The mindfulness of land, resources, knowledge, and traditional practices is declining, especially among the young (Harisha et al., 2017).

These observations indicate that the continuity of the *Matoli* tradition depends upon mechanisms of social reproduction grounded in collective participation and intergenerational transmission, through which embodied knowledge, practical competencies, and culturally structured dispositions are sustained over time (Bourdieu, 1977). The declining engagement of younger generations, coupled with the absence of *Matoli* within formal educational curricula, signals not merely a shift in preferences, but a disruption in the institutional and relational conditions necessary for the reproduction of eco-cultural knowledge, a process further intensified by urbanization and changing socio-educational priorities (Joshi & Menon, 2022; Harisha et al., 2024).

- *Theme 3: Community Bonding and Social Cohesion Through Matoli*

The Festival Organizer (O2) described how *Matoli* was historically a collective effort, with families and neighbours gathering plants together. This communal activity reinforced social bonds, intergenerational knowledge sharing, and environmental awareness. However, due to commercialization, *Matoli* preparation has shifted from a community-led event to an individual or market-driven activity. The Teacher (T4) suggested reintroducing *Matoli* related activities in schools to strengthen both cultural knowledge and social cohesion. The *Matoli* Artisan (A1) also highlighted that, in earlier times, elder artisans taught younger generations through hands-on participation, thereby creating strong communal ties. This aligns with research indicating that the original activities foster ties among indigenous people, providing participants with social capital.

Regenerative Tourism Theory highlights the stimulation of cultural traditions through tourism-driven conservation and community empowerment (Pollock, 2020). The stakeholder responses suggest that *Matoli* can be transformed into an experiential tourism asset that sustains local traditions and benefits the local economy. The Tourism Department Official (G1) noted that integrating *Matoli* -making workshops into cultural itineraries could attract eco-conscious tourists while providing seasonal income for local artisans. Similarly, the Cultural Heritage Guide (T1) emphasized that showcasing the ecological and spiritual significance of *Matoli* along heritage trails would enrich tourists' experiences and deepen appreciation of Goa's intangible cultural heritage.

From a sociological standpoint, the collective preparation of Matoli can be understood as a relational practice through which social cohesion is actively produced and maintained, insofar as shared activities – such as gathering plants, assembling materials, and transmitting skills – function as structuring moments of social interaction and mutual recognition. The transition from collective to individualized or market-mediated forms of preparation reflects a broader transformation in the organization of social life, in which communal practices are progressively replaced by atomized forms of engagement, thereby weakening the density of social ties and the circulation of shared meanings. In this sense, Matoli operates not only as a cultural artifact, but as a social mechanism through which community bonds, environmental awareness, and intergenerational linkages are reproduced.

- *Theme 4: Matoli Conservation Through Eco-Tourism*

The Tour Guide (T1) noted that most tourists visiting Goa focus on beaches and nightlife, overlooking deep-rooted cultural traditions such as *Matoli*. If *Matoli* were incorporated into guided eco-tourism experiences, it could serve as a bridge between heritage tourism and biodiversity conservation. This aligns with research advocating for interactive heritage experiences in cultural tourism (Smith & Richards, 2018). The Government Official (G1) acknowledged that Ganesh Chaturthi is a major attraction in Goa, yet *Matoli* has not been formally integrated into tourism frameworks. If linked to community-based conservation projects, *Matoli* could ultimately achieve self-sufficiency and independence.

When situated within the broader field of cultural tourism, the limited visibility of *Matoli* in existing tourism circuits reveals a structural disconnect between dominant tourism models and locally embedded cultural practices. The potential incorporation of *Matoli* into eco-tourism experiences suggests a reconfiguration in which heritage, biodiversity, and experiential learning are articulated within more interactive and participatory tourism formats, as advocated in approaches to cultural tourism that emphasize lived experience and interpretive engagement (Smith & Richards, 2018). In this context, *Matoli* can function as a mediating interface between conservation and tourism, enabling the translation of local ecological knowledge into forms that are both communicable and experientially accessible to visitors.

- *Theme 5: Hands-On Cultural Experiences for Tourists*

The International Tourist (T3) stated, “I came to Goa for leisure, but I found the festival fascinating. If workshops allowed us to create *Matoli*, I would participate.” This aligns with research showing that experience-based tourism strengthens visitor engagement with cultural traditions (Goodwin, 2019). The Festival Organizer (O2) proposed integrating *Matoli*-making workshops into tourism programs, where visitors could learn about its significance, collect materials, and participate in its creation. Such interactive tourism models have proven successful in other heritage-based tourism initiatives (Skogvang, 2021).

The demand for participatory experiences, as expressed by visitors, indicates a shift from passive consumption toward more immersive forms of engagement, in which tourists seek to actively participate in the production of cultural practices. The proposal to integrate *Matoli*-making workshops into tourism offerings reflects broader trends in experience-based tourism, where learning-by-doing becomes a central mechanism for enhancing cultural understanding and emotional connection (Goodwin, 2019). Such initiatives, when carefully structured, can transform tourists from external observers into temporary participants within local socio-cultural systems, thereby increasing both the perceived authenticity of the experience and the valorisation of intangible heritage (Skogvang, 2021).

- *Theme 6: Economic Sustainability for Artisans, Vendors, and Farmers*

The Culinary Expert (C1) suggested that *Matoli*'s plants and tubers be integrated into Goa's food tourism sector, positioning it as a gastronomic experience tied to cultural and health tourism. Tourism leads to empowerment beyond basic household income, strengthened self-esteem, improved social status, a stronger sense of community and increased voice in decision-making (Scheyvens & Watt, 2021).

In this context, the articulation of *Matoli* practices with tourism development can be interpreted through the lens of regenerative tourism, insofar as it enables the emergence of feedback loops that simultaneously support ecological conservation, cultural continuity, and local economic diversification (Pollock, 2020; Bellato & Pollock, 2025). The integration of *Matoli*-related resources into gastronomic tourism, as suggested by stakeholders, illustrates how biodiversity-based knowledge can be transformed into value-generating activities without necessarily undermining its cultural integrity. Beyond income generation, such processes contribute to forms of community empowerment that encompass increased self-esteem, strengthened social status, and enhanced participation in decision-making processes, thereby reinforcing locally embedded development trajectories (Scheyvens & Watt, 2021).

Strategies for Integrating Matoli and Goan Hindu Cuisine into Tourism Promotion Efforts

The study on *Matoli* and festival gastronomy reveals that these traditional practices play a vital role in preserving cultural heritage, fostering community bonding, and supporting biodiversity conservation. The findings highlight three key aspects. Firstly, *Matoli*'s use of wild plant species reflects traditional ecological knowledge, emphasizing sustainable harvesting and conservation practices. Many respondents noted a decline in plant diversity in *Matoli*, with only 20 species

currently available, compared to over 50 in the past (Gadekar, 2024). This is echoed by studies highlighting the role of ritual-based plant conservation in biodiversity preservation (Hussain et al., 2023).

Secondly, the festive cuisine associated with Ganesh Chaturthi, such as modak, patoli, and various tuber-based dishes, carries both cultural and nutritional significance (Pal, 2020). Traditional foods are being replaced by commercial alternatives, leading to a loss of indigenous knowledge and culinary heritage (Hussain et al., 2023). Participants in the study suggested integrating *Matoli* plants into health-focused tourism experiences to promote sustainable food habits. Research on local food tourism models, such as those in Uttarakhand and Odisha, has shown that indigenous culinary traditions can be effectively positioned as heritage tourism attractions (Rawal & Takuli, 2017).

Thirdly, *Matoli* and festival-related food practices reinforce social cohesion. The communal effort of collecting *Matoli* plants and preparing festive foods fosters intergenerational knowledge transfer. Regenerative tourism initiatives, such as *Matoli*-themed eco-trails and culinary workshops, could revitalize interest in these traditions and provide economic benefits to local artisans, farmers, and vendors (Gadekar, 2024). Previous research on community-based tourism initiatives has shown that structured participation in heritage preservation can enhance both economic stability and cultural identity (Chauhan & Punia, 2021).

From a convivialist perspective, the empirical findings presented in this study can be interpreted as indicative of a socio-cultural configuration in which tourism, rather than operating as an external force of transformation or subordination, is potentially re-embedded within the host community's normative and relational structures. As articulated in the Convivialist Manifesto, the central challenge lies in organizing social life in ways that enable coexistence without domination, preserving plural forms of life while avoiding the homogenizing pressures of market-driven expansion (Caillé et al., 2014). In this sense, the *Matoli* tradition, as observed in the context of Ganesh Chaturthi, constitutes not merely a symbolic or ritual practice but a relational dispositive through which ecological knowledge, collective participation, and cultural meanings are continuously negotiated and reproduced.

This interpretation gains further analytical consistency when situated within the integrated framework presented in Appendix 1, which systematizes and highlights the interconnection among theoretical constructs, generative mechanisms, and empirical observations. From this perspective, the *Matoli* tradition can be understood as an empirical instantiation of multiple, interrelated causal mechanisms operating across different analytical levels. At the ecological level, processes of socio-ecological co-evolution (Steward, 1955; Rappaport, 1967) underpin the sustained use of native biodiversity, demonstrating how cultural practices are materially anchored in adaptive environmental relations.

At the socio-cultural level, mechanisms of social reproduction—mediated through shared practices, embodied dispositions, and collective participation—contribute to the maintenance of social cohesion and the intergenerational transmission of knowledge (Bourdieu, 1977). Simultaneously, from a political-normative standpoint, the convivialist orientation operates as a regulative mechanism that constrains the potentially disruptive effects of market-driven tourism, reorienting development trajectories toward coexistence without subordination (Caillé et al., 2014).

These dynamics are further complemented by regenerative feedback loops (Pollock, 2020; Bellato & Pollock, 2023), through which tourism practices, when appropriately configured, generate positive socio-ecological externalities that reinforce local systems rather than deplete them. By making these mechanisms explicit, the analytical framework not only clarifies how biodiversity, gastronomy, and social relations are articulated in practice, but also demonstrates that the viability of culturally grounded tourism depends on the alignment between ecological adaptation, social reproduction, and normative regulation. In this sense, the empirical evidence examined in this study substantiates the argument that tourism can function as a mediating institutional arrangement, capable of sustaining complex socio-ecological systems while fostering locally embedded forms of development.

There were, however, tensions identified between commercialization and authenticity, which can thus be understood as expressions of a broader structural contradiction between convivial social organization (Caillé et al., 2014) and extractive tourism logics. They are primarily and particularly associated with the commodification of festival elements and the gradual substitution of traditional practices. However, the persistence of community-based practices, including the collective preparation of *Matoli* and the transmission of gastronomic knowledge, suggests that alternative trajectories remain viable, insofar as they are anchored in shared norms, mutual recognition, and locally embedded systems of value. Under such conditions, tourism may be reconfigured as a mediating institution that supports, rather than disrupts, the reproduction of socio-cultural and ecological systems, aligning with a post-neoliberal convivialist logic in which development is not measured by growth alone, but by the capacity to sustain meaningful forms of collective life.

In order to mitigate – or reduce as much as possible – the negative effects of touristification, gentrification, and commodification processes ongoing in the place, along with the tourism activity develops, we have identified and proposed some practical recommendations that could be implemented along with a collaborative governance process, for

pursuing a real regenerative tourism according to the convivialist logic in context of (and dealing with) the post-neoliberal agenda.

One of them is to integrate Ganesh Chaturthi into Goa's tourism calendar, which is vital to develop collaborative, experience-based models that enhance visitor engagement while ensuring cultural and ecological sustainability. One of the primary strategies involves crafting *Matoli* eco-trails and ethnobotanical gardens where tourists can learn about the sacred plants used in the festival and their medicinal, cultural, and culinary significance. These guided trails can be developed in alliance with local farmers, artisans, and environmental experts, ensuring that knowledge about endangered *Matoli* species is documented and preserved.

Additionally, incorporating *Matoli-designed* workshops within these trails would provide an immersive experience, allowing visitors to engage in plant collection and arrangement, thereby reinforcing Goa's eco-cultural heritage. Likewise, Goan Hindu cuisine can be positioned as a key attraction in culinary tourism, highlighting seasonal, traditional dishes associated with Ganesh Chaturthi. Local eateries, home chefs, and food vendors can be encouraged to offer festival-themed food experiences, featuring dishes such as patoli, modak, mangane, and traditional tuber-based preparations, using ingredients sourced from local farms and from the wild. Culinary tourism packages can integrate live cooking demonstrations, exposure to temple Mahaprasad, and farm-to-table experiences, emphasizing the connection between agriculture, biodiversity, and religious food traditions. To augment outreach, digital marketing campaigns can showcase Goa's *Chavath* gastronomy and *Matoli*-based cultural trails through storytelling, ensuring these traditions gain recognition beyond local communities and attract heritage-conscious travellers.

Taken together, these actions could generate conditions – social, economic, political, among others – to balance the economic demands of the capitalist system (through the inclusion of tourism in it), and the non-unidimensional aspects of life (such as social, symbolic, and religious, among others) of human life, to empower people and increase their quality of life conditions.

5. Conclusions

This study began from a problem that is only partially addressed in the existing literature on religious tourism, gastronomic heritage, and eco-cultural practices: namely, the insufficient theorization of how ritual practices, biodiversity-based material culture, and food traditions become articulated within a single socio-cultural process, and how such articulation may be re-signified within tourism without being reduced to a mere commodity form. Against this background, the paper advanced the argument that the *Matoli* tradition associated with Ganesh Chaturthi in Goa should be understood not as an isolated ritual embellishment, nor as a residual ethnographic curiosity, but as a complex eco-cultural assemblage through which ecological knowledge, gastronomic practices, and collective forms of participation are simultaneously activated, reproduced, and contested.

More precisely, the study has shown that the analytical significance of *Matoli* lies in its capacity to condense, within a single ritual dispositive, a plurality of relations that are often treated separately in tourism studies: first, relations between communities and biodiversity, as expressed in the selective use of local species and in the embedded ecological rationality of ritual practice; second, relations between gastronomy and symbolic reproduction, insofar as festive foods operate not simply as consumption items but as vehicles of memory, identity, and culturally coded meanings; and third, relations between ritual participation and social cohesion, since the collective preparation of *Matoli* and festival foods functions as a mechanism of intergenerational transmission, mutual recognition, and community reproduction.

From this perspective, the paper argues that the persistence or erosion of *Matoli* cannot be explained solely by reference to heritage loss, modernization, or tourism pressure taken in isolation; rather, it must be read through the interaction of deeper mechanisms, including socio-ecological co-evolution, the reproduction or weakening of collective dispositions, and the tension between convivial forms of social organization and commodifying logics of market expansion.

The findings, when considered in condensed analytical form, reinforce this broader argument in at least three interrelated ways. First, under the criterion of biodiversity and ecological knowledge, the study demonstrates that *Matoli* constitutes a materially grounded interface between ritual life and local ecology, through which botanical knowledge is preserved, selected, and enacted in practice, even as urbanization, land-use transformation, and the replacement of natural materials by industrial substitutes increasingly threaten this socio-ecological continuity.

Second, under the criterion of gastronomy, the evidence indicates that the festive culinary repertoire associated with Ganesh Chaturthi is not external to the ritual field but integral to it, since dishes such as *modak*, *patoli*, *sasav*, and *neuri* embody a symbolic-material nexus in which food, biodiversity, and spirituality are mutually constitutive rather than merely juxtaposed.

Third, under the criterion of participation and social cohesion, the study shows that the collective preparation of *Matoli* and festive foods has historically operated as a mechanism of social reproduction, enabling the transmission of practical

knowledge, the reinforcement of social ties, and the reproduction of community-based forms of belonging. Conversely, the decline of these collective practices signals not merely a cultural change, but a weakening of the social infrastructures through which shared meanings and local forms of life are sustained. What emerges, therefore, is not simply the descriptive claim that Matoli is culturally important, but the stronger analytical proposition that ritual eco-cultural practices such as Matoli function as privileged sites in which ecological adaptation, symbolic production, and collective action converge, making them especially valuable for rethinking tourism beyond narrowly economic or consumption-oriented paradigms.

At a more general level, the central argument of the paper is that the future of culturally grounded tourism depends less on the mere inclusion of local traditions in tourism circuits than on the preservation of the relational, ecological, and normative conditions that make those traditions socially meaningful in the first place. In that sense, the study contributes to the literature by showing that tourism becomes analytically and politically defensible only when it is capable of operating as a mediating arrangement rather than as a subordinating force. This is precisely where the combined relevance of cultural ecology, convivialism, and regenerative tourism becomes visible: cultural ecology makes intelligible the material and adaptive grounding of ritual practice.

In our view, while convivialism provides the normative horizon through which coexistence without domination may be conceived, the regenerative tourism offers a framework for understanding how tourism might reinforce rather than deplete local socio-ecological systems. The broader implication is that festivals such as Ganesh Chaturthi should not be approached merely as heritage events to be consumed, but as dense social formations whose ecological intelligence, gastronomic meaning, and community-based organization disclose an alternative grammar of development, one in which the value of tourism lies not in its capacity to extract visibility, income, or spectacle, but in its capacity to sustain forms of collective life that remain locally rooted, ecologically informed, and socially reproductive.

Practical Implications

From a practical standpoint, these findings suggest that tourism planning and heritage policy should move beyond promotional and event-centered approaches and instead adopt forms of intervention capable of safeguarding the socio-cultural infrastructures that sustain practices such as Matoli.

This implies, first, recognizing ritual biodiversity and festive gastronomy not as auxiliary attractions but as core dimensions of cultural heritage management, Second, designing tourism initiatives that are participatory rather than merely exhibitory, such as Matoli workshops, ethnobotanical trails, and community-led culinary experiences. And third, establishing institutional safeguards to prevent the reduction of ritual practices to standardized commodities detached from their local social bases.

For tourism authorities, heritage organizations, and local governance actors, the key lesson is that cultural tourism is more sustainable when it is anchored in community participation, intergenerational transmission, and biodiversity-sensitive practices. In this respect, the study supports policy models that link cultural preservation, local livelihoods, and ecological awareness, while also cautioning against tourism development that intensifies commercialization without reinforcing the community conditions that sustain cultural continuity.

Limitations and Agenda for Future Research

Like all empirically situated studies, this research is marked by limitations that also define the scope of its future development. The study is grounded in the specific context of Goa and in the particular ritual ecology of Matoli within Ganesh Chaturthi, which means that the conclusions cannot be mechanically generalized to other festival contexts without careful comparative work. So, this limits the generalizability of its findings to other regions with similar but distinct cultural traditions. While Goa provides a rich context for examining *Matoli* and its cultural significance, further research is needed in neighbouring states where similar eco-cultural practices could exist.

Additionally, the study captures only a snapshot of current trends, making it difficult to assess the long-term evolution of *Matoli* usage and festival food practices. A longitudinal study tracking changes over multiple festival cycles would offer deeper insights into the sustainability of these traditions. Moreover, while the study included diverse stakeholders, the sample size was limited. Expanding the research to include multiple Ganesh Chaturthi celebrations across different Goan communities and beyond would provide a more comprehensive understanding of how *Matoli* and *Chavath* cuisine are evolving in contemporary society. Finally, although the qualitative-dominant mixed-methods design enabled a rich articulation between ethnographic observation, stakeholder narratives, and botanical documentation, the study captures a relatively bounded temporal moment and therefore cannot fully account for longer-term changes in ritual practices, ecological availability, and tourism incorporation.

It is also worth mentioning the ongoing The upcoming studies should explore similar eco-cultural traditions in other Indian states to assess commonalities and unique adaptations (Hussain et al, 2023). Pilot studies implementing *Matoli* eco-trails or culinary workshops should be evaluated to determine their economic, cultural, and environmental impacts (Pal, 2020). Creating an online repository of *Matoli* plants, their uses, and traditional recipes could aid in knowledge preservation and awareness (Gadekar, 2024). Studies analyzing tourist demand for heritage-based experiences can help tailor regenerative tourism initiatives effectively (Rawal & Takuli, 2017).

Beyond this empirically self-emerging and ongoing "agenda", based on the findings of this study, we suggest that future research could deepen this agenda in at least three directions. First, by conducting comparative studies across different regions and ritual traditions in order to identify whether similar mechanisms link biodiversity, gastronomy, and social cohesion elsewhere. A second aspect would be by examining longitudinally how tourism interventions reshape ritual practices over time, including both regenerative and commodifying trajectories. Finally, by further theorizing the relationship between eco-cultural practices and tourism through the explicit use of mechanism-based approaches, including critical realism, in order to better explain under what conditions tourism reinforces, rather than erodes, the socio-ecological systems on which cultural continuity depends. By addressing these gaps, future research can further bridge the intersection of cultural preservation, ecological sustainability, and tourism development.

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Appendices

Appendix 1: Integrated analytical framework: theoretical constructs, generative mechanisms, empirical anchors, and interpretive inferences

Theoretical Framework	Core Analytical Elements	Dominant Mechanism (Critical Realism)	Empirical Anchor (Data Reference)	Inference: Theory–Findings Articulation
Cultural Ecology Theory (Steward, 1955; Rappaport, 1967; Harris, 1966)	<ul style="list-style-type: none"> - Matoli as an eco-cultural assemblage linking biodiversity, ritual, and material culture - Integration of native species, medicinal plants, fruits, and herbs in ritual and gastronomy - Intergenerational transmission of ecological knowledge 	Socio-ecological co-evolution: cultural practices emerge from adaptive interactions between communities and ecological constraints, reproducing environmentally embedded knowledge systems	<ul style="list-style-type: none"> - Inventory of plant species used in Matoli (Table 1) - Interview excerpts on plant selection and traditional knowledge (Stakeholders A1, G1) - Observations of material preparation practices 	Matoli operates as a socio-ecological interface through which cultural meanings are produced and reproduced. The sustained use of native biodiversity evidences adaptive ecological rationality and reinforces intangible cultural heritage.
Convivialist Approach (Convivialist Manifesto, 2013)	<ul style="list-style-type: none"> - Normative proposition of balance between tourism development and local ways of life - Emphasis on coexistence without domination or cultural subordination - Identification of tensions between commercialization and authenticity 	Normative regulation of social interaction: collective values and ethical orientations constrain and mediate external pressures (e.g., tourism commodification), shaping acceptable forms of change	<ul style="list-style-type: none"> - Stakeholder perceptions of commercialization risks (interviews G2, C1) - Evidence of tensions between tradition and market-oriented adaptations - Observed concerns about loss of authenticity 	Tourism, when guided by convivialist principles, can function as a mediating institution rather than a disruptive force. The preservation of Matoli illustrates the possibility of aligning tourism development with ethical-cultural limits and community autonomy.
Regenerative Tourism (Pollock, 2020; Bellato & Pollock, 2023)	<ul style="list-style-type: none"> - Integration of biodiversity, local knowledge, and community-based economic practices - Proposal of experiential tourism (Matoli workshops, ecological trails, gastronomic participation) - Recognition of the festival as a platform for sustainable development 	Regenerative feedback loops: tourism practices generate positive socio-ecological externalities that reinforce local systems (e.g., knowledge transmission, biodiversity valorization, economic diversification)	<ul style="list-style-type: none"> - Stakeholder proposals for tourism integration (interviews T1, G3) - Observed practices linking Matoli preparation and visitor engagement - Local narratives on economic opportunities linked to the festival 	The regenerative model reframes tourism as a catalyst for systemic reinforcement rather than extraction. Matoli and gastronomy can be mobilized as experiential assets that simultaneously generate income and sustain ecological and cultural systems.
Festival and Gastronomy Tourism (Mohapatra & Biswas, 2017)	<ul style="list-style-type: none"> - Ritual gastronomy as an expression of identity and cultural continuity - Use of traditional dishes (modak, patoli, sasav, neuri) linked to local biodiversity - Embedding of food practices within religious and symbolic systems 	Symbolic-material articulation: food operates as a mediating structure that links symbolic meanings (ritual, identity) with material practices (resource use, biodiversity)	<ul style="list-style-type: none"> - Documentation of traditional dishes and ingredients (Table 3) - Interview excerpts on food preparation and meanings (Stakeholders C2, H1) - Observations of ritual food practices during the festival 	Gastronomy functions as both a cultural signifier and a tourism resource. Its integration into tourism strategies reinforces the inseparability of food, biodiversity, and spirituality, enhancing experiential depth and destination distinctiveness.
Sociocultural Perspective (Paddison & Hall, 2024)	<ul style="list-style-type: none"> - Decline of Matoli practices due to urbanization and lifestyle changes - Reduced intergenerational transmission (absence in formal education) - Shift from collective to individualized practices 	Erosion of social reproduction mechanisms: weakening of collective practices reduces the capacity to reproduce shared meanings, knowledge, and social cohesion over time	<ul style="list-style-type: none"> - Interview reports on declining participation (Stakeholders A3, G4) - Observed substitution of natural elements with industrialized materials - Absence of Matoli-related content in educational contexts 	The decline of collective practices signals a disruption in social reproduction processes. Reintroducing participatory and educational initiatives (e.g., workshops, community events) can reactivate cultural memory and rebuild social capital.

Source: Authors' own elaboration.