



RESEARCH ARTICLE

Kewadi sweet preparation from pandanus fruits by Nicobarese: Nurturing tradition and nutritional security

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Received: 12 August 2025; Accepted: 10 January 2026; Available online: Version 1.0: 14 April 2026; Version 2.0: 21 April 2026

Cite this article: Santosh K, Ajmal S, Deepoo M, Akshay, Sanketh GD, Sharath SY, Chakurkar EB, Jaisankar I. *Kewadi* sweet preparation from pandanus fruits by Nicobarese: Nurturing tradition and nutritional security. Plant Science Today. 2026; 13(2): 1-8. <https://doi.org/10.14719/pst.11059>

Abstract

This study elucidates the *Kewadi* sweet production from pandanus fruits (*Pandanus leram*) in the Nicobar Islands which represents a convergence of cultural heritage, food security and community resilience. Rooted in the indigenous knowledge of tribal people and also as a sustainable practice, *Kewadi* sweet production and consumption not only provides nutritional benefits but also fosters community strength and cultural identity among the Nicobarese tribe people. Despite facing challenges from modernization aspects and changing dietary preferences, the preservation and promotion of *Kewadi* sweet are crucial for maintaining this traditional delicacy and cultural legacy. Strategic policy initiatives that enhance value chains, promote market access and raise awareness of *Kewadi*'s cultural significance can bolster its production and consumption for a harmonious coexistence of tradition and modernity. By embracing and supporting traditional practices like *Kewadi* sweet preparation, we can ensure sustainability through local resource utilization systems, enhance food and nutritional security and foster the cultural richness in the Nicobar Islands. In this study, technical aspects of *Kewadi* sweet production were documented through one-on-one interviews with tribal community members, followed by a focus group discussion with key stakeholders. Using the SWOT-AHP framework, the study further analyzes and discusses the social and economic challenges and opportunities associated with the product.

Keywords: Indigenous foods; kewadi; Nicobar Islands; Nicobarese tribe; pandanus; SWOT-AHP framework

Introduction

The Nicobar group of Islands, a part of the Union Territory of Andaman and Nicobar Islands are a testament to the resilience of the human spirit. Separated from the Andaman group by the 10 Degree Channel in the Bay of Bengal, this island group comprises 22 islands, with 13 of them being inhabited. The largest tribal group in the Nicobar Islands is the Nicobarese tribe and they mainly reside on Car Nicobar Island. Traditionally herders, the Nicobarese people engage in limited agricultural activities such as coconut cultivation and pig rearing and some have also taken up goat and poultry farming. Despite the favourable agro-climatic conditions and resource availability in the region, agricultural development faces significant challenges due to the extreme backwardness of the area and other economic and social aspects (1). However, the Nicobarese people, who have a deep understanding of local natural resources has managed to address some of these challenges leveraging on their precious indigenous technical knowledge (2).

In the Nicobar region, traditional knowledge of adaptive food preparation and resource utilization has been crucial in overcoming agricultural development challenges. One notable example of this rich heritage is the making of *Kewadi* sweet, a delicacy created from pandanus fruits (*Pandanus leram*). The

pandanus tree, which is abundant in the Nicobar Islands, is an important food source for the local people and it demonstrates a deep understanding of local environmental conditions. *Kewadi* sweet is made by skillfully extracting the fragrant, nutrient-rich pulp from pandanus fruits which are then processed into an enjoyable sweet. This preparation method highlights the adaptability of Nicobarese food practices, which showcasing their ability to make the most of this available local resources. Natural sweetness of pandanus fruit and unique flavour profile make it a highly valued ingredient in traditional cuisine. The technique for making *Kewadi* sweet has been passed down through generations, demonstrating a sustainable approach to using local flora. This traditional knowledge is crucial for maintaining food security and resilience especially in the face of modern agricultural developmental concerns, other structural bottlenecks and also environmental challenges.

Moreover, *Kewadi* preparation is a communal activity that fosters social cohesion among the Nicobarese people. Making *Kewadi* is typically a group effort, where community members come together to prepare and share the sweets, especially during the festivals or bada dins. This collective activity strengthens interpersonal bonds and reinforces cultural traditions and collective identity. Through the shared experience of cooking and celebrating with *Kewadi*, the Nicobarese people maintain their

cultural heritage while simultaneously enhancing their social ties. Thus, *Kewadi* is much more than a food item; it is a symbol of community unity and cultural continuity. By preserving these kinds of practices, the Nicobarese continue to thrive the extreme backwardness while honouring their cultural heritage and adapting to their ecological context. These kinds of knowledge which developed through practices and passed down through generations are gradually diminishing due to modernization and the advance of the islands with the integration of modern societies (3).

Most notably, from the point of view of sustainable development, traditional foods like the *Kewadi* sweets are vital for advancing SDGs 2 (Zero Hunger) and 12 (Responsible Consumption). They consist of local, diverse indigenous crops and wild and semi-wild edibles that are significantly richer in essential nutrients, hence can combat directly the global fight against the hunger problem. Furthermore, these traditional food systems, rooted in local knowledge, are often highly resilient to local climate variations, strengthening the stability of food supply, conserving agrobiodiversity and promoting ecological health (SDG 12). Promoting these food systems also provides sustainable economic opportunities for smallholder farmers and indigenous tribal communities.

Therefore, recognizing the importance of preserving this traditional knowledge and the scope of it aiding sustainable development, this study aims to document *Kewadi* sweet preparation and evaluate its relevance in the tribal regions of Nicobar. The study also aims to inform policymakers about making policies that support local cuisines for the upliftment of local

traditions along with nutritional aspects by identifying the problems and prospects of the *Kewadi* sweet production.

Materials and Methods

Study area

The Nicobar Islands are part of the union territory of Andaman and Nicobar Islands, India. These Islands are situated 1200 km east of mainland India in the South-east Bay of Bengal between 6°–10° N latitude and between 92°–94° E longitude. Nicobar District is one of the 3 districts in the Union Territory of Andaman and Nicobar Islands. The Nicobar Islands are part of a great island arc created by the collision of the Indo-Australian Plate with the Eurasian Plate. The Nicobar Islands receive abundant amounts of rainfall from the southwest and northeast monsoons, around 2750 to 3100 mm with around more than 130 rainy days yearly. Maximum rainfall is received from May to December and the dry period extends from January to April for 3 to 4 months. The climate in Nicobar is tropical with high humidity and temperatures ranging from 23 °C to 31 °C throughout the year. The monsoon season from June to September brings heavy rainfall, which is crucial for agricultural and other related activities (4). A detailed map of the study area is presented in Fig. 1 and an image of the pandanus leram plant and its fruit found in the Car Nicobar Islands, which is used for the preparation of *Kewadi* sweet, is provided in Fig. 2.

Data collection

A purposive sampling method was used to select a sample of 48 tribal people who have experience in *Kewadi* sweet preparation for

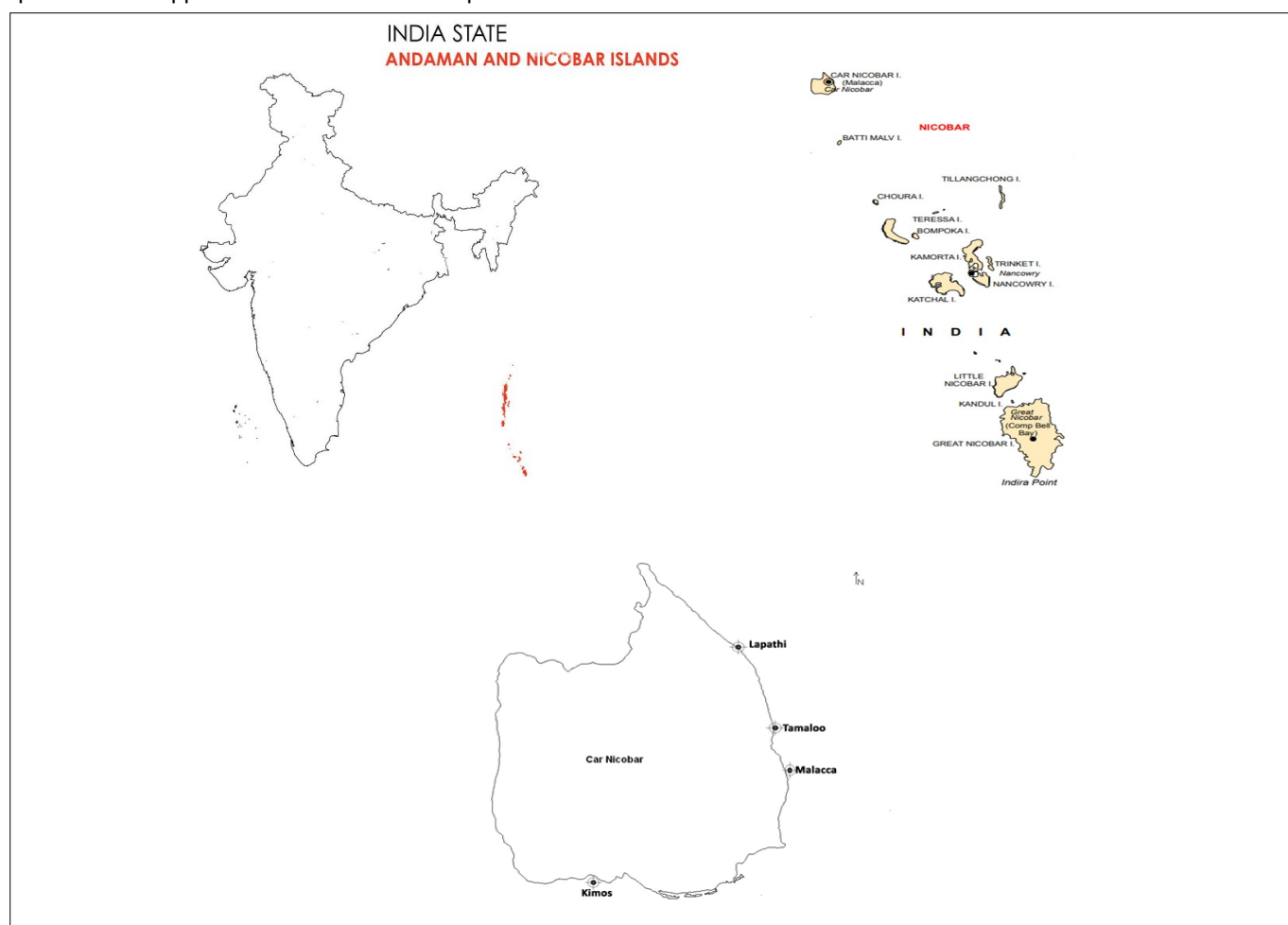


Fig. 1. Map of the study area: Nicobar group of islands and Car Nicobar Island.



Fig. 2. *Pandanus leram* plant and fruit seen in Car Nicobar Islands used for the *kewadi* sweet production.

the study. The one-to-one interview was done with the respondents focused on various aspects of the *Kewadi* preparation process, including the procedure, significance and associated social elements. The interviews were conducted in Hindi as well as in the local Nicobarese language with the help of a professional translator, since many Nicobarese people have only an elementary level of proficiency in spoken Hindi. The Tuheit wise (joint family system) distribution of purposive sampling followed is given in Table 1. The interviews were aimed at understanding the traditional practices, cultural importance and social context related to *Kewadi* sweet production in general using a thoroughly prepared survey schedule. A demographic profile of the respondents enumerated on the primary data collection is given in Table 2. In addition to individual interviews, a focus group discussion was conducted with 15 selected key stakeholders involved in the preparation and consumption of *Kewadi* to confirm our findings. These discussions provided insights into the social dimensions of the *Kewadi* sweet's preparation including its role in community events and cultural practices enabled us to provide a comprehensive evaluation of both technical, social and economic aspects of *Kewadi* sweet preparation. Data collection and the FDG were done in the period of January to April 2025.

SWOT-AHP framework

The first and most critical phase of the SWOT analysis was the identification of factors through the qualitative analysis of the transcribed data. Initially, coding of the text segments from the 48 individual interviews, where descriptive labels (codes) were assigned to specific phrases. Subsequently, these numerous specific codes were systematically grouped into broader, more abstract SWOT themes (factors). For instance, related codes such as "part of our society," "will do in our special occasions," and "it is our tradition" were aggregated to form the cohesive SWOT factor: "Cultural value and identity associated with the product." This systemic transformation of hundreds of different textual extracts was converted into a manageable and comprehensive set of potential SWOT factors. Following this, all identified factors were subjected to validation during the initial phase of the Focus Group Discussion (FGD) to ensure consensus before proceeding to the quantitative Analytical Hierarchy Process (AHP). Methodological

study followed in the study is given in Fig. 3 and few glimpses of data collection process in Car Nicobar Island during the study is given in Fig. 4.

AHP is a theory of measurement that applies pairwise comparison to derive a scale of priority from judgments of key stakeholders. It helps elicit complex expert judgments in a common platform and ensures accuracy by checking for inconsistencies among the judgments (5). We checked for consistency among the comparative matrices by reporting the Consistency Ratio (should be < 10 %) (6). In the current study SWOT-AHP is conducted in a 3-step process during the FDG. The first step includes the confirmation of SWOT factors identified to each category. In the second step, pairwise comparisons are made within each category using the fundamental scale. Fig. 5 shows the fundamental scale for comparison. Comparisons are made based on the relative importance of one factor over another factor. The factor with the highest priority value from each SWOT category is brought forward for further comparison using AHP. In the third step, the four most important factors (1 from each SWOT category)

Table 1. Distribution of *Tuheit* wise purposive sampling from Car Nicobar Island

Sl. No.	Name of village	Name of <i>Tuheit</i>	No. of respondents
1.	Perka	Cha-hu-uita	1
		Halol	2
		Hongrok	1
2.	Malacca	Hangsam	1
		Cochin	2
		Fektia	3
3.	Tamaloo	Otlial	1
4.	Small Lapathy	Sarong	3
5.	Kinmai	Cham	1
		Seiny	1
		Hinruyo	2
6.	Tapoiming	Hakon	1
		Panam ma	2
		Hako	1
7.	Kimios	Hong kamri	1
		Kurikngo	2
		Chong ih	2
8.	Kakana	Apara	2
		El kuopoi	1
		Keuheut	1
9.	Mus	Maheukre	1
		Hokkopchong	2
		Falko	1
10.	Teetop	Kuo yoh hek	1
		Chuokma	2
		Hakeuno	1
11.	Sawai	Urehengroon	2
		Hong Cha	1
		Oturoh	2
12.	Big Lapathy	Faika	2
		Lokpa	1
		Kalaha	2
13.	Arong		
14.	Chuchucha		
15.	Kinyuka		

Table 2. Demographic profile of the respondent (n = 48)

Sl. No.	Variable	Category	Number of respondents
1	Gender	Male	19 (39.5 %)
		Female	29 (60.5 %)
2	Age	18-30	3 (6 %)
		31-45	11 (23 %)
		46-60	20 (42 %)
		>60	14 (29 %)
		No formal education	18 (38 %)
3	Education	Primary level	5 (11 %)
		Above	5 (11 %)
		Household/Traditional activities	22 (46 %)
4	Occupation	Agriculture/Livelihood work	20 (42 %)
		Others	6 (12 %)

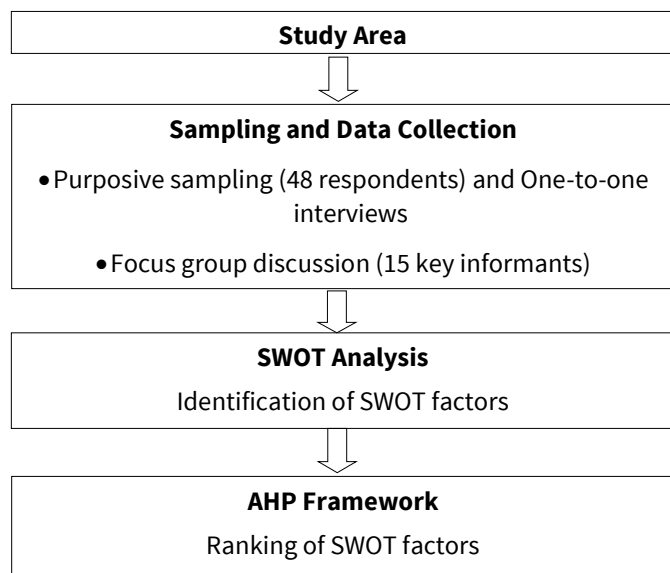


Fig. 3. Methodological framework followed in the study.



Fig. 4. Glimpses of data collection process in Car Nicobar Island.

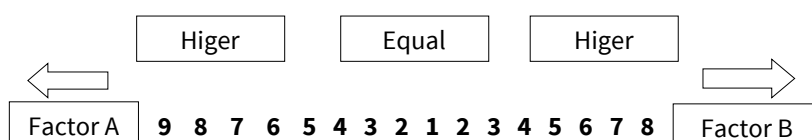


Fig. 5. Comparison of relative importance of factor A to factor B.

are compared and the scaling factor or global priority value for each category is determined. Finally, scaling factors multiplied with the local priority values were used to calculate the overall priority of each factor is calculated as follows:

Overall priority of a factor

= Priority value of a factor × Scaling factor of SWOT category

The overall priority of each factor calculated in this way can be used to rank the importance of the factors identified. Therefore, ranking the importance of each factor is made with the help of overall priority values (7). The sum of overall priority values is equal to 1, with higher priority values indicating greater importance.

Results

Pandanus plant in Nicobar Islands

Pandanus is a genus of monocots with approximately 578 species which is classified in the family Pandanaceae and order Pandanales. These palm-like trees are usually native to the Old-World tropics and subtropics with Madagascar and Malaysia having the highest diversity. *Pandanus* tree is commonly known as pandan, screw palm, or screw pine and they usually thrive in coastal regions and rainforests of tropical regions (8). In the Nicobar Islands, the species of *Pandanus leram* are generally used to prepare the traditional *Kewadi* sweet, also known as Nicobar breadfruit. The *Kewadi* sweet is made from two types of pandanus fruit: one with white to yellow flesh and the other with orange to red flesh.

Kewadi, a traditional delicacy of the Nicobarese people prepared from pandanus fruit, plays a vital role in their cultural and traditional life. This sweet preparation and consumption are a centerpiece of the Nicobarese celebrations and have practical significance. Apart from that, *Kewadi* sweet is mixed with tender coconut and this combination is a nutritious supplement for newborn babies in Nicobar region, providing essential vitamins and minerals like modern baby foods like Cerelac. By incorporating

Table 3. Proximate composition of *Pandanus leram*

Sl. No.	Parameter	Value
1.	Moisture (g/100 g)	6.56
2.	Total ash (g/100 g)	2.85
3.	Protein (g/100 g)	8.35
4.	Total fat (g/100 g)	32.51
5.	Crude fibre (g/100 g)	16.23
6.	Carbohydrate (g/100 g)	50.91
7.	Energy (Kcal/100 g)	521.71

Data source: (9)

tender coconuts, *Kewadi* supports the dietary needs of infants, ensuring they receive a wholesome, natural source of nutrition. The proximate analysis of *Pandanus leram* is given in Table 3.

Kewadi sweet preparation process

Based on the information collected from the tribal people from Car Nicobar Island, the process of *Kewadi* sweet-making is detailed as follows. Harvesting and gathering of pandanus fruits is the first step. Harvesting of fruit is done manually using a knife while scaling the tree. These collected fruits are then brought to the processing area, where they are chopped into tiny pieces (keys) for the next steps of the manufacturing process. Following cutting, the keys are heated in a pan with water. The cut keys are submerged in water for heating and covered with the leaf of the *Kinrul* tree (*Macaranga nicobarica*) to ensure even heating. The fruit must be heated to become softer so that the pulp can be removed more easily. The pulp extraction starts after heating the heating process. On a level surface, the softened cut keys are laid out and the pulp is gently separated from the fiber part by holding a heated key in one hand and pressing the stone against the fiber part with the other hand. Pressure is needed to apply carefully enough to separate the soft and edible pulp from the fibrous portions. Stone functions as a conventional tool to minimize the loss of precious pulp and to apply the proper amount of power needed for the separation of pulp. Followed by the pulp extraction, pulp dough and rolls are made in the next stage. The removed pulp is kneaded into a dough

-like consistency and then shaped into cylindrical rolls. During the rolling process, some fibers from the extraction may mix into the pulp. These fibers are removed by threading a piece of thread through the middle of the ball by hand.

The *Kewadi* sweet's fundamental units are these rolls, which are meticulously made by hand to guarantee consistency in size and shape. In the next stage, dough rolls are covered with arecanut leaves. The rolls are skillfully wrapped as a crucial step in the process to guarantee that they are securely packed and ready for the heating step. The last step in making *Kewadi* is to heat and cut the finished product. To produce the final texture and firm up the dough, the rolls are cooked once more after being firmly wrapped in leaves and placed in a cooking pan. Once the heating procedure is finished, the *Kewadi* rolls are taken off the heat source and given time to cool. They are then ready to be served or stored for later consumption after being cooled and chopped into smaller pieces. The whole process of *Kewadi* sweet preparation is depicted in Fig. 6.

SWOT-AHP framework analysis

A conceptual framework for SWOT analysis was developed based on the insights gathered through qualitative inquiries through individual interviews conducted with tribal community members (Table 4). This preliminary framework was further refined and validated through focused group discussions involving key stakeholders.

Based on the SWOT-AHP analysis results, the most significant strength identified was the cultural value and identity associated with the *Kewadi* product, followed by the rich indigenous knowledge related to its management and utilization. Among the weaknesses, the lack of proper mechanization and use of modern tools emerged as the most critical, followed by limited youth motivation. In terms of opportunities, the potential for value addition and income generation ranked highest, followed by the scope for inclusion in tribal development schemes. As for threats, the erosion of traditional knowledge was found to be the most pressing concern, followed by the increasing availability of cheap

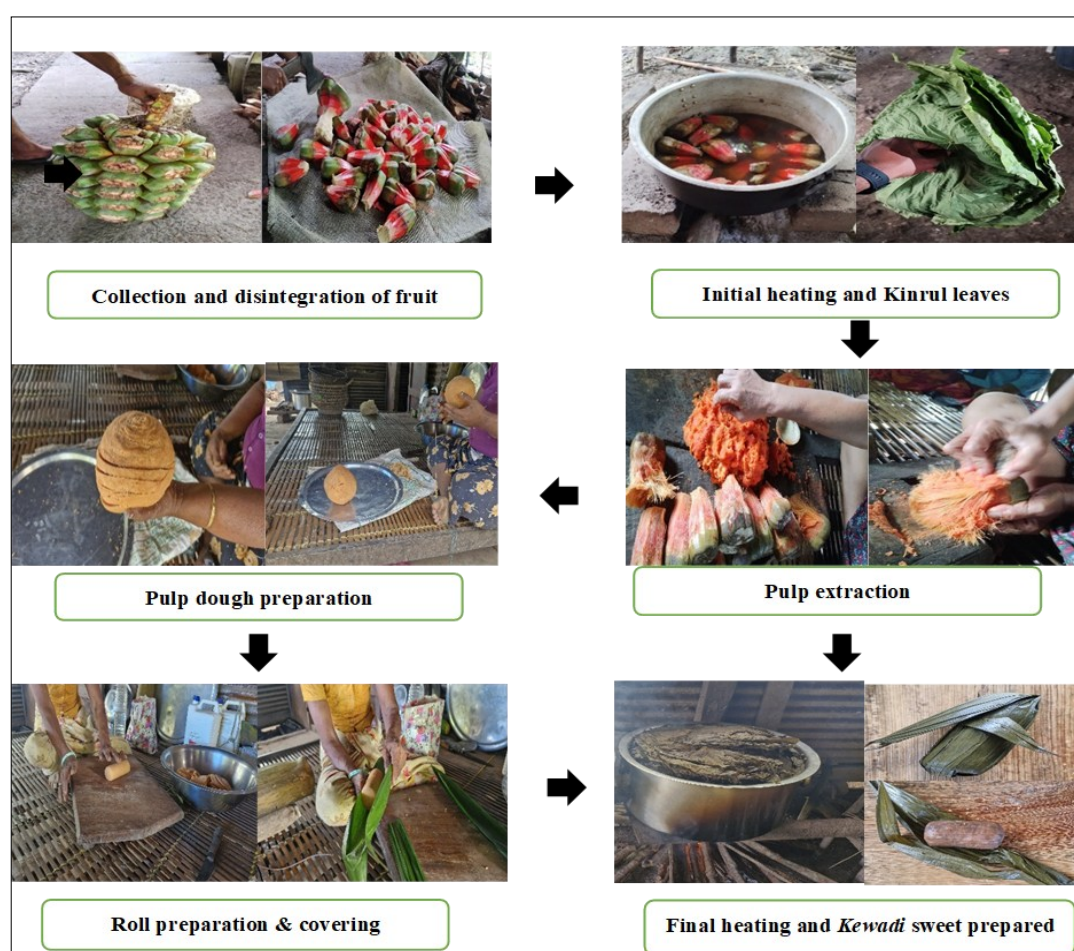


Fig. 6. Process of *Kewadi* sweet preparation from pandanus fruit.

Table 4. SWOT analysis on the *Kewadi* sweet production and consumption

Strength	Weakness
• Local resource availability • Indigenous knowledge • Cultural value and identity associated with the product • Traditional nutritional diversity	• Lack of proper mechanization and modern processing tools • Limited youth involvement and intergenerational transmission • Poor market access, packaging and promotional strategies • Low shelf life and absence of quality standards
Opportunities	Threats
• Potential for value addition and income generation • Skill development and entrepreneurship • Inclusion under GI tag, or tribal development schemes • Research and development	• Erosion of traditional knowledge due to modernization • Loss of productivity of pandanus • Dominance of mass-produced, low-cost food alternatives • Weak policy focus

Table 5. SWOT factors and their priority scores using the AHP analysis

SWOT group	Factor priority	Priority of the factor within group	Overall priority of the factor	Rank
Strength				
S1: Local resource availability	0.425	0.164	0.069	3
S2: Indigenous knowledge		0.287	0.121	2
S3: Cultural value and identity associated with the product		0.527	0.224	1
S4: Traditional nutritional diversity		0.022	0.009	4
Weakness				
W1: Lack of proper mechanization and modern processing tools	0.185	0.452	0.078	1
W2: Limited youth involvement and intergenerational transmission		0.321	0.059	2
W3: Poor market access, packaging and promotional strategies		0.212	0.039	3
W4: Low shelf life and absence of quality standards		0.015	0.002	4
Opportunities				
O1: Potential for value addition and income generation	0.275	0.421	0.115	1
O2: Skill development and entrepreneurship		0.124	0.034	4
O3: Inclusion under GI tag, or tribal development schemes		0.299	0.082	2
O4: Research and development		0.156	0.042	3
Threats				
T1: Erosion of traditional knowledge	0.115	0.425	0.048	1
T2: Loss of production and productivity of pandanus		0.124	0.014	3
T3: Dominance of mass-produced, cheap processed food alternatives		0.389	0.044	2
T4: Weak policy focus		0.062	0.007	4

(Consistency ratio of all the AHP pair wise comparison was < 10 %)

processed food alternatives in the market. The detailed results are presented in Table 5. Each SWOT category is further discussed based on the SWOT-AHP analysis.

Strengths

Traditional food products such as *Kewadi* sweet from Nicobar region have several inherent strengths that make them culturally, economically and nutritionally valuable. Most important strength is identified as these foods carry a strong cultural value and identity among Nicobarese, playing a vital role in festivals, rituals and traditional dietary practices. It is followed by the innate indigenous knowledge system associated with the preparation, preservation and use of these traditional foods. It is followed by the aspect that the region is endowed with abundant local natural resources like pandanus, which are naturally grown, chemical-free and readily available in the tribal villages, reducing dependency on external inputs. Another key strength which is ranked less but carrying importance they contribute significantly to nutritional diversity, offering naturally derived nutrients that align with local health and traditions.

Weaknesses

Despite their strengths, traditional food products in Nicobar face several internal challenges. Most important weakness is identified as the lack of proper mechanization and modern processing equipment which limits the ability to scale up production while maintaining hygiene and consistency. It was followed by discouraged youth involvement mainly due to time-consuming and labor-intensiveness in these practices. Hence, there is a noticeable decline in youth involvement, with many younger tribal members opting for modern livelihoods. Furthermore, these products suffer from poor market access, inadequate packaging and lack of promotional support, which limits consumer reach and brand visibility. The short shelf life of many items, coupled with the absence of food safety standards, reduces their competitiveness in broader markets.

Opportunities

There is an increased range of opportunities that can promote traditional food systems like *kewadi* sweet production in Nicobar. Complementing this aspect, from our analysis it was understood that Potential for value addition and income generation identified as the most important opportunity. With the increasing global and national interest in ethnic, organic and traditional foods like *Kewadi* sweet have a strong market potential, provided if value addition, proper branding and packaging are introduced. This can open avenues for income generation, especially for tribal women and youth through small-scale processing and marketing. It was followed by the opportunity that these products can be included under Geographical Indication (GI) tags or certified under tribal food branding initiatives, hence adding legal protection and enhanced commercial value. Another important opportunity is that there is also significant scope for skill development and entrepreneurship promotion through government schemes. Lastly, there are opportunities for research and development, especially in documenting, validating and improving the nutritional profiles and processing techniques of these foods in collaboration with different research institutes.

Threats

While the opportunities are promising, several threats could potentially undermine the traditional food ecosystem in Nicobar. Most important concern was identified as the erosion of traditional knowledge due to rapid modernization and changing food preferences. As the demographic dividend is strengthening, the knowledge transmission of these techniques and recipes is weakening, putting this heritage at high risk. It was followed by the threat that the growing dominance of cheap and processed food alternatives in the local market is drawing people, especially young people, away from traditional food products. Then the environmental and ecological threats are also significant causing the decline in productivity of pandanus coupled with overexploitation, poor regeneration and management practices.

Finally, the lack of targeted policy focus like inadequate inclusion of indigenous foods in development programs and limited institutional support further hinder the potential of traditional food systems to thrive.

Discussion

Indigenous food production plays an important role in maintaining food security, particularly in tribal and remote areas (10). These communities often rely on traditional food crop management practices that are environmentally sustainable but also culturally significant. The cultivation and consumption of indigenous crops help preserve biodiversity, support local economies and foster resilience against climate change (11). In this context, *Kewadi*, a traditional sweet made from locally sourced pandanus plant, is a typical example of this traditional food crop utilization. Also, *Kewadi* sweet production in the Nicobar region emerges as an illustration for understanding the intersection of food security, social relations and economic development in tribal regions. Food security in tribal and remote areas is inherently linked to the system of indigenous food production characterized by various crops adapted to local climatic conditions and cultural preferences (12). The *Kewadi* sweet production from the locally sourced pandanus fruits in the Nicobar region ensures that communities have access to nutritious food sources that reflect their cultural identity and community resilience. By relying on these local resources, tribal communities in the Nicobar region can mitigate the risks associated with frequent supply chain disruptions and other factors like agricultural development bottlenecks.

Kewadi sweet holds significant social value beyond its nutritional benefits in the Nicobar region. The production and consumption of *Kewadi* are deeply embedded in cultural practices and social relations within tribal communities. It confirms the aspect that indigenous food production improves the social resilience and cultural identity among the tribal people (13). Festivals and communal gatherings in Nicobar often feature *Kewadi* sweet, symbolizing unity and shared identity. The process of preparing *Kewadi* sweet mostly takes place as a group activity, bringing families and neighbors together and fostering strong community ties and collective resilience. By participating in *Kewadi* sweet production, individuals contribute to a shared cultural heritage, strengthening their sense of belonging and community identity. Another important aspect regarding the *Kewadi* sweet production is that it represents the effective utilization of local available resources, by turning into an indigenously value-added product that meets both nutritional and social needs. By focusing on the local resources, the tradition of *Kewadi* sweet production supports the conservation of the local flora of pandanus, creating a symbiotic relationship between people and the environment. This aspect underscores the importance of an indigenous knowledge system for food security along with the conservation of natural resources (14).

In addition to its local aspects and importance, *Kewadi* sweet production gains wider relevance when viewed alongside other global indigenous food productions and their traditional processing methods. For instance, in many Pacific Island communities, pandanus fruits are traditionally harvested, steamed or sun-dried and then woven or twisted into long edible strands for long-term storage, an approach that improves shelf-life and

ensures availability during periods of scarcity (15). Similarly, quinoa in the Central Andes region undergoes a unique post-harvest process in which the seeds are processed into edible whole seeds, soup ingredients and *pitu* (toasted refined flour), enabling safe consumption and long-term preservation (16). In a study documenting wild edibles and their economic significance in Eastern India, around 56 wild edible fruits were identified, many of which are already part of tribal diets (17). Likewise, in locally managed forests of Nepal, 62 wild food plants were recorded through traditional knowledge documentation (18). These indigenous practices demonstrate how local communities develop sustainable and culturally rooted food systems and in this context, *Kewadi* sweet through its own locally adapted processing and consumption methods can be seen as part of a broader set of indigenous food alternatives that highlight the value of local resources and culture in building ecologically aligned, culturally meaningful and sustainable food systems.

Conclusion

The current study emphasizes the cultural, nutritional and socio-economic importance of *Kewadi* sweet production in the Nicobar Islands. Rooted in indigenous knowledge this practice contributes to food security, cultural identity and community resilience. Through one-to one interviews and a SWOT-AHP analysis, we identified key strengths and challenges, highlighting the need for improved mechanization, better market access and increased youth involvement. Several policy initiatives can be implemented to harness the full potential of *Kewadi* sweet production. Firstly, establishing a robust value chain for *Kewadi* sweet production involves improving and standardizing the processing, packaging, storage and distribution. Support for the establishment of small-scale processing units can enhance product quality and marketability, ensuring that *Kewadi* sweet can effectively enter into small and large markets. Along with that creating platforms for marketing *Kewadi* both locally and nationally, including accreditation through geographical indication, participation in food festivals, tribal product outlets and online marketplaces can raise awareness about this traditional food. Initiatives aimed at educating both local youth communities and broader audiences about the cultural significance of *Kewadi* can enhance its value. Workshops, training and promotional campaigns can play a vital role in uplifting the status of *Kewadi* sweet as a cultural symbol and nutritional food item. Apart from that investing and promoting research to explore innovative ways to enhance *Kewadi* production, analyzing its nutritional value and diversification of its flavours and ingredients can lead to market competence that can match with modern consumer preferences. Through these kinds of targeted policies and community engagement, *Kewadi* sweet can evolve into a symbol of sustainable living that bridge the gap between tradition and modernity while fostering strong social ties and economic opportunities.

Acknowledgements

The authors sincerely thank the ICAR–Central Island Agricultural Research Institute (CIARI), Port Blair, Sri Vijaya Puram, for providing the necessary facilities, technical assistance and encouragement throughout the course of this research work. The authors also express their gratitude to the Tribal Council Car Nicobar for their

support, cooperation and assistance in facilitating access to resources and traditional knowledge essential for this study. Their guidance and logistical support were instrumental in the successful completion of the research.

Authors' contributions

SK, AS, DM and A conceptualised the study, designed the experimental work and conducted the preparation trials of Kewadi sweet from Pandanus fruits. SGD and SSY contributed to data collection, field coordination and documentation of traditional practices. EBC and IJ provided overall guidance, critical inputs and technical review of the research methodology and manuscript. All authors participated in the interpretation of results, drafting and revision of the manuscript and approved the final version for submission.

Compliance with ethical standards

Conflict of interest: The authors declare that they have no conflict of interest.

Ethical issues: None

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) used ChatGPT for grammatical correction and improving language clarity. After using this tool, the author(s) reviewed and edited the content as needed and take full responsibility for the content of the publication.

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Additional information

Peer review: Publisher thanks Sectional Editor and the other anonymous reviewers for their contribution to the peer review of this work.

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