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Integrating tradition and sustainability: Crafting with *Ton Bai Romkao* in Phang Nga Province, Thailand

Keywords

commodification
community products

Abstract

For the local communities of Thailand, traditional craft is a potential vehicle for sustainable economic development. This is a qualitative investigation to study the previously unreported characteristics

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of the Ton Bai Romkao, an Indigenous plant species unique to Phang Nga Province in Southern Thailand, and the development of the plant into cultural commodities for tourism and local sustainability. The research area for this investigation was Kapong District, Phang Nga Province, Southern Thailand. The research on Ton Bai Romkao aimed to identify the characteristics of the plant, understand its local significance and explore the potential for its development using traditional knowledge in the Andaman provinces. Through document studies, structured and unstructured interviews, participant and non-participant observations and focused group discussions, it was clear that the Ton Bai Romkao plant plays an important role in local economic development and cultural sustainability. The results revealed that Ton Bai Romkao can be propagated from seed and is planted within community forests. Once the plant has matured, local villagers use the leaves to create everyday products. The leaves are valued for their thickness, durability and flexibility. This investigation confirmed the suitability of Ton Bai Romkao for the creation of conical hats and potential development of more products.

plant-based handicrafts
local resources
rattan
bamboo
traditional knowledge

Introduction

This study investigates the potential of *Ton Bai Romkao* (Figures 1a and b), a local plant found exclusively in Ban Pak Pu and parts of the surrounding Tha Na subdistrict in Kapong District, Phang Nga Province, Southern Thailand, to contribute to contemporary craft practices. This single perennial plant has a distinctive appearance with a straight trunk that is about three metres high. The *Ton Bai Romkao* leaves (Figure 2) are thick, slender, about 45 cm long and are arranged next to the branches in a circle; the front has a smooth surface, while the back has soft hairs. The *Ton Bai Romkao* bears no fruit but has dark inedible red seeds, about 0.5–1 cm in size, like a bunch of grapes. It is a dicotyledonous plant and the leaves are quite durable and flexible. The species has yet to be formally, scientifically classified, but local communities have used it for many years to create unique handicrafts. This is consistent with practices across Thailand, where Indigenous flora serves as cultural artefacts and significant economic resources (Punchay et al. 2020; Suksikarn and Suksikarn 2021).

The *Ton Bai Romkao* has the potential to play a significant role in promoting the local economy. The plant can only be found in one specific area of Kapong District due to its preference for a hot and humid climate and soil in natural hot-spring sources. It is known locally in Phang Nga for being a sturdy, resilient resource that can be transformed into a variety of household products. Local people also transform the dried leaves of the plant into products for sale, which is consistent with standard definitions of commodification, referring to the process of transforming goods, services, ideas or nature into commodities or objects of trade (Smessaert et al. 2020). Such transformation

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Figures 1a and b: Ton Bai Romkao in the community area. The perennial plant grows with a straight trunk about 3-m high, with slender leaves arranged in a circle next to the branches. It is grown within community forests by local villagers and is commonly surrounded by other plants. 20 May 2022. Photo by Yuttapong Tonpradoo.



Figure 2: Six leaves from the Ton Bai Romkao plant. The leaves grow in a circular pattern to approximately 1 cubit in length. 20 May 2022. Photo by Yuttapong Tonpradoo.

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of local resources is a common practice among Thai communities (Phontharaphong et al. 2015; Skoglund 2021). The development of souvenirs from *Ton Bai Romkao* is a prime example of how the sustainable utilization of local plants can contribute to the social and economic development of communities in Thailand.

The *Ton Bai Romkao* is at risk due to its limited habitat but the leaves can be dried and stored for about ten years. They are used to make souvenirs by soaking them in water to make them sticky and soft. The tradition of using leaves for souvenirs was passed down from Chinese immigrants who came to Thailand during the reign of King Rama III (reigned 1824–51) and combined their wisdom of inventing hats with Thai culture. When adopted by locals, the resulting output was a distinctive hat in the style of woven bamboo headwear ubiquitous to the South East Asian region. There is currently limited research on the *Ton Bai Romkao*, and through this investigation the researchers aim to bring its potential into the broader discourse of craft research, highlighting its unique properties and suitability for sustainable craft practice. This article argues for the value of integrating such Indigenous plants into broader markets, thereby advancing local arts, culture and sustainable economic models. The findings presented have implications for academia, government policy and the craft industry, demonstrating how local plants like *Ton Bai Romkao* can be pivotal in shaping sustainable futures through craft.

Study context: Local natural resources and craft in Thailand

The integration of local natural resources into craft practices forms a crucial part of the Thai economic and social structure (Chatkaewnapanon and Lee 2022). Due to environmental factors, such as climate change, public health crises and political instability, there is dynamic and complex competition for resources and a foothold in regional markets that is difficult to control. This results in multiple operational challenges for local communities. Commentators have therefore argued that organizational unity within local communities is necessary for enhancing Thailand's competitiveness and achieving greater sustainability (Jarernpanit 2022; Ketprapakorn and Kantabutra 2019). In this light, craft practices emerge as a means of economic development and as tools for ecological and cultural preservation. Increasingly, local natural resources have been identified as the key to successful, adaptive community development due to their minimal upkeep demands and high potential for conversion into tradable commodities (Väänänen and Pöllänen 2020). The 2020 Vision of the Andaman Provinces focuses on sustainable development, especially environmental sustainability, with the main goals to stimulate visitor spending and reduce the economic risk for local people (Wan and Monpanthong 2023). In addition, the provinces along the Andaman coast have the potential to connect with nearby provinces, encouraging greater exposure to local culture and increasing visitor spending.

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This is where local plants can become an invaluable resource, but it is important to be mindful of the impact of commodification. While the process can drive economic development, it also raises ecological, cultural and economic concerns. In the context of ecological economics and critical geography, discussions on the human economy's relationship with the natural environment have led to divergent views on nature's economic valuation (Bakker 2005; Castree 2003; Robertson 2002). These debates, initially prominent in the 2000s, have since influenced other disciplines, including political ecology and ecological economics. The commodification of nature, and by extension, local natural resources used in crafting, intersects with ecological, cultural and economic concerns. There remains a lack of consensus on the definition of commodification and how it relates to processes like marketization and financialization, as well as on the normative aspects of such research. This includes debates on whether and to what extent commodification should be resisted or embraced as a strategy to achieve environmental goals (Bakker 2005; Castree 2003; Robertson 2002).

Despite these concerns, the adaptive ability of local communities and the diverse local plant range have been identified as potential vehicles for the promotion of local identity in the Andaman provinces (Bennett et al. 2014). Khunweechuay et al. (2022) argue that understanding values attributed to cultural treatment of local ecosystems is essential for government environmental policies to simultaneously manage the ecosystem and respect local ecological knowledge, culture and ethnic identity. The Andaman coast site for this study, Phang Nga Province, is home to a variety of crops, including the main cash crops of rubber and oil palm, as well as high-value fruit trees such as mangosteen and durian. These plants are in high demand, especially from Chinese tourists visiting Phang Nga and Phuket, and the high prices they command make farming more sustainable (Wetchasit and Lilavanichakul 2023). The Phang Nga Province fruit market, held in Takua Thung District, is designed to meet the needs of agricultural tourists and not only offers product sales but also exhibitions on farming techniques and local produce. The academic evidence is clear that the use of local plants to create tradable products can help improve cultural and environmental sustainability in the locality (Kaewpradit et al. 2013; Wisetkomolmat et al. 2019).

However, any development of Indigenous plants must proceed with caution. History has shown that economic potential can lead to over-cultivation and the disturbance of local ecosystem balances (Okole et al. 2004). Moreover, newfound economic value can lead to occupational concentration, the opposite to the diversification upon which many communities thrive (Capocchi et al. 2019). The academic warnings are clear: unchecked development and exploitation of local resources has caused environmental degradation, economic hardship, community competition, decline of traditional culture, species loss and the spread of disease (Buhalis et al. 2020). Moreover, it increases the need for robust legislation protecting traditional resource rights and intellectual property (Simatupang 2022). With this in mind, the objectives of this academic research article are

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to study the important characteristics of *Ton Bai Romkao* leaves and ways in which local communities can sustainably develop creative products to stimulate the local economy.

Craft as sustainable practice

The contemporary understanding of sustainability, particularly in the context of crafts, has evolved significantly over recent decades (Prados-Peña et al. 2022). The concept of sustainable development, initially emerging in the early 1970s, sought to harmonize environmental protection with development needs. It was formally defined by the World Commission on Environment and Development (WCED) in 1987 as the principle of meeting current needs without compromising future generations' ability to meet their own. This concept has since been expanded and endorsed through various United Nations (UN) agendas, including Agenda 21 (UN 1992), the Millennium Development Goals (UN 2000, n.d.a), and the Sustainable Development Goals (UN n.d.b).

In economic-environmental discourse, the industrial economics of Reday-Mulvey and Stahel (1977) initially emphasized the efficient combination of production factors for market-oriented products and services. Stahel (1982) later advocated for a shift from ownership to usage models to limit resource exploitation. Subsequent concepts like regenerative design (Lyle 1996), bio-mimetics (Benyus 1997), cradle-to-cradle design (McDonough and Braungart 2010) and the circular economy (Birat 2015) have further nuanced our understanding of sustainable practices. From a historical perspective, the evolution of craft has mirrored these shifts in sustainability thinking. Transformation from traditional rural crafts to more contemporary practices reflects a broader societal transition towards valuing design, quality and sustainability over mere price competitiveness, emphasizing the craft's potential role in promoting sustainable development through unique, locally embedded and culturally significant products.

Yet sustainable development extends beyond environmental concerns (Leal-Filho et al. 2015). A holistic view is crucial in crafting, where sustainability is an environmental, cultural and social imperative. The craft sector, once diminished by industrial production, has seen a resurgence, especially in rural economies in developing nations (Fox-Miller 2017). This is marked by an increasing appreciation of crafts as a form of cultural expression. The sector's growth and its contribution to regional development further solidify its role in the sustainable development narrative. They are often characterized by the use of renewable materials, manual skills and a focus on product longevity and traditional designs. The role of crafts in environmental sustainability is further emphasized through the use of sustainable materials and the promotion of responsible business practices (Cox and Bebbington 2014). UNESCO's (2003) recognition of crafts as part of our intangible heritage and the creative industry perspective (Hartley 2005; Hesmondhalgh 2007) place crafts at the intersection of cultural identity, economic vitality and ecological balance.

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Sustainable crafts are therefore a concept interlinking design, sustainability and societal transformation. However, as noted by Väänänen et al. (2017), the definition of sustainable crafts remains an area of ongoing debate and development. It is increasingly seen as a holistic system encompassing craft practice, product and intangible craftsmanship, necessitating a theoretical and practical conceptualization (Väänänen and Pöllänen 2020). In light of this definition, the present study seeks to explore the role of crafts, particularly the *Ton Bai Romkao*, within this framework of sustainability. The overarching aim is to contribute to the understanding of how traditional crafts can align with modern sustainability practices.

Methodology

The explicit research question for this investigation is: How do traditional crafts align with modern sustainability practices in Phang Nga Province? The researchers purposively selected three specific groups as the sample population. The first group, Key Informants, consisted of experts in arts and culture, teachers of local traditional knowledge and directors of the Tourism Authority of Thailand. The second group, Practitioners, included personnel of the Tourism Authority of Thailand and members of a *Ton Bai Romkao* planting group in Kapong District, Phang Nga Province. The third group, General Informants, consisted of teachers, students in performing arts at Phuket Rajabhat University and lecturers of cultural management at the Faculty of Arts and Cultural Sciences at Mahasarakham University. The selection of these groups ensured representation from key stakeholders directly involved in or affected by the *Ton Bai Romkao* craft. Ethical considerations, including informed consent and confidentiality, were rigorously adhered to. Participants were informed about the study's purpose, their voluntary participation and the anonymous treatment of their data. All participants gave written informed consent to participate in the study and publish the results.

The qualitative research was conducted in Kapong District, Phang Nga Province. The researchers used a combination of research tools to collect data, including the study of related documents and research, participant and non-participant observation, structured and unstructured interviews, small group discussions and a workshop. The document studies included review of literature related to the culture, historical development, identity and wisdom of Phang Nga Province, as well as other cultural documents related to biodiversity and geography in the south of the Andaman Sea and Phang Nga Province. The unstructured interview form was open-ended with the objective to inquire about the characteristics of the *Ton Bai Romkao*, the process of crafting products and the methods of making products from the leaves. The structured interviews consisted of two parts, with Part 1 focusing on personal information such as gender, status, educational background, main occupation and monthly income, while Part 2 focused on the main question about the characteristics

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of the plant. In-depth interviews were conducted with key informants and casual informants. Observations focused on the participants' interactions with the plant, crafting processes and local market dynamics. The researchers took part in local planting activities in Phang Nga Province as part of the participant observation, while non-participant observation involved observing the general conditions within the research area, studying the way of life and traditional local knowledge. Focused group discussions were then conducted with key Informants and practitioners to exchange ideas, analyse the problems and provide suggestions for applying *Ton Bai Romkao* leaves to craft souvenirs to promote tourism in Andaman provinces.

The data analysis was a collaborative process involving experts in the field and used thematic coding to identify patterns and themes in the responses. This process was iterative, involving a constant comparison of data across different groups to ensure a comprehensive understanding of the themes related to *Ton Bai Romkao*. The researchers brought the analysed data to a group including planters of *Ton Bai Romkao* plants, teachers of local traditional knowledge, designers of souvenir products and entrepreneurs in the tourism industry. This group of experts provided further advice and feedback on the information. Finally, a workshop was held with planters, souvenir designers, entrepreneurs selling souvenirs and tourism entrepreneurs on 20 May 2022 in Ban Pak Pu, Kapong District, Phang Na Province. The purpose of the workshop was to summarize issues related to the characteristics of the *Ton Bai Romkao* leaves, conclude their strengths, weaknesses and uses and to receive advice and guidelines for further development of souvenirs to promote tourism in the Andaman Province. It is acknowledged that the methodology has limitations, including potential biases in self-reported data and the limited generalizability of findings due to the qualitative nature of the study. These limitations were mitigated by triangulating data from multiple sources and recommending further areas for study to increase the relevance of the results for communities beyond this case study.

Results

The mechanical properties of *Ton Bai Romkao* leaves demonstrate a significant level of durability and flexibility, vital for various craft applications. Their strength surpasses that of many common materials used in handicrafts, providing a robust and resilient medium for artisans. The unique combination of strength and elasticity makes these leaves particularly suitable for crafting durable items such as hats, baskets and other woven products. Furthermore, the ability of the leaves to maintain structural integrity under stress suggests its potential for innovative uses in areas that require materials with a balance of toughness and flexibility. These findings not only validate the traditional use of *Ton Bai Romkao* in local crafts but also open avenues for exploring new product designs that leverage these mechanical properties.

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Methods for making Ton Bai Romkao hats

Prior to making the hats from *Ton Bai Romkao*, suitable leaves must be selected. If it is not the harvesting season, villagers will use pre-prepared leaves that have been stored throughout the year in a shady area. The leaves are dried in the sun for three to four days, either by stringing them with cane or by piling them and turning them daily. Once dried, the leaves are stored in plastic bags for use during the rainy season. The leaves are available in seven sizes, and each leaf is sorted and stored by size in plastic bags. The hats are not exclusively made from *Ton Bai Romkao* leaves: rattan palm (*Calamus pandanosmus* Furt.) is also a significant part of the hat. The rattan is collected and cut into pieces about 20- to 30-cm long. Each piece is split into four parts, stored in three sizes: large, medium and small. These bundles are kept ready for use at any time. The villagers then gather the bamboo used for the hat frame, which comes in two types: *miang* bamboo for the frame structure, and *pa* bamboo for the brim. *Miang* bamboo, with a circumference of 10–15 cm and a length of 1 cm, is split into 5- to 6-m pieces. The bamboo should be smooth and free of nodes. The preparation involves cutting, splitting and drying the bamboo to achieve the desired smoothness. After drying, the bamboo is sorted by size. *Pa* bamboo, which is stronger, is bent into a circular shape for the hat brim.

The prepared bamboo is combined with the rattan palm to create the hat's structure in two sets that will be stacked together. A foam mould in an inverted cone shape is used to measure the hat's size, which comes in three different sizes. The structure is woven into patterns (Figure 3), with the most popular ones being *ta nok plao* ('bird's eye'), *takab* ('centipede'), *khod krich* ('curved knife'), *nueng* (Thai 'number one') and *song* (Thai 'number two'). During the weaving process, water is sprayed or sprinkled onto the bamboo to make it more pliable and easier to weave. Once the hat structure is fully woven, the edges of the hat are neatly trimmed and secured.

The hat is flipped so that it is right-side up and the prepared *Ton Bai Romkao* leaves are trimmed at the tips and edges. These trimmed leaves are placed over the central area of the hat. Next, the artisan wets the leaves to make them soft and flexible. The are placed alternately at the front and back, around the hat in layers until the frame has been covered it twice. Once the leaves are fully layered, a second bamboo structure (the brim) is placed on top of the first, ensuring it is securely fastened. Any excess edges of the leaves are further trimmed to ensure a neat finish. The leaves are folded into rectangular shapes (called *mawn tum thong*) approximately 1.5 to 2 inches in length, depending on the hat's size. These folded leaves are used to fill the central peak of the hat and are secured by threading them in a centipede pattern, which adds both stability and decorative detail.

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*Figure 3: A local artisan weaving the frame for the conical hats from cut rattan palm and bamboo.
Source: 20 May 2022. Photo by Yuttapong Tonpradoo.*

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Figure 4: Conical hats made from leaves of the Ton Bai Romkao. In this image, the products are on sale in a local market stall. 20 May 2022. Photo by Yuttapong Tonpradoo.

The hat (Figure 4) is lightly burned to remove any loose fibres or fuzz from the bamboo. This recently adopted technique helps to smoothen the hat. Afterwards, craftspeople apply a coat of varnish to the hat. In the initial stages of making *Ton Bai Romkao* hats for sale, traditional methods did not include applying varnish or lacquer. The hats were sold at a price of 7 baht each, gradually increasing to 15, 20, 25 and finally 35 baht as the demand and value of the hats rose. As the price of *Ton Bai Romkao* hats increased, more villagers began to take up hat-making as a supplementary occupation, forming hat-making groups. The production of *Ton Bai Romkao* hats now averages around 200 hats per month. The hats are sold in local markets within the province and to other provinces with tourist attractions and various trade shows, so their durability is particularly important for consumers who cannot just get another hat made locally. The varnish therefore enhances the hat's appearance and provides a protective layer. The final hat is dried in the sun (Phangnga Provincial Agriculture and Cooperatives Office 2020).

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Conservation and support

Local workers have created a traditional handicraft by converting the otherwise unused *Ton Bai Romkao* leaves to invent everyday appliances. The locals recognized that the dried leaves are cheap, readily available and durable. They therefore created a number of everyday products from this local resource. At present, agricultural agencies in Nakhon Si Thammarat Province have supported the local people with a budget of 50,000 baht to conduct experimental planting in community forests. This enabled the locals to propagate 5000 plants, which are difficult to breed. The villagers in Ban Pak Pu have used grafting methods to plant in the community forest and use the natural ecosystems to help the saplings grow.

The villagers of Ban Pak Pu, Kapong District, Phang Nga Province have a strong sense of cultural heritage and local wisdom, as demonstrated by their guideline for designing souvenirs from the leaves of the *Ton Bai Romkao* plant. The guideline was the result of a small group meeting where the villagers shared their experiences and ideas. The chronology of the use and development of the *Ton Bai Romkao* plant in Ban Pak Pu can be traced back to 1991 when the villagers first began to gather together. This was followed by the establishment of various community groups in the following years, including the Ban Pak Pu Community Group in 1996, the Ban Pak Pu Weaving Group in 1997, the Ban Pak Pu Savings Group in 1998, the Truth Group of Women at Ban Pak Pu in 1999 and the Ban Pak Pu Long Drum Group in 2000. These groups not only demonstrate the villagers' commitment to preserving their cultural heritage, but also their willingness to work together and contribute to the development of their community. By using the *Ton Bai Romkao* plant to create souvenirs, the villagers are not only preserving their cultural heritage but also promoting economic development in their area. This is an example of how cultural preservation can lead to economic growth.

The villagers of Ban Pak Pu in Kapong District, Phang Nga Province, have not only identified the *Ton Bai Romkao* hat as a local product, but they are also exploring the possibilities of using the *Ton Bai Romkao* leaves to create souvenirs, such as lamps (Figure 5). Currently, bags and shirts with the logo of the *Ton Bai Romkao* leaves are being sold. The group is also considering creating cups from the leaves of the plant, but the high cost of production is being evaluated by the members.

Discussion

The commodification of *Ton Bai Romkao* has the potential to create new economic opportunities for local communities in Phang Nga Province. By utilizing the plant to create souvenirs and everyday appliances, the locals have been able to promote economic growth in their area. Moreover, this aligns with the concept of ecological economics, where natural resources are not just valued for their market potential but also for their cultural and environmental significance (Bakker 2005).

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Figure 5: Conversion of the Ton Bai Romkao hat into a souvenir lamp. 20 May 2022. Photo by Yuttapong Tonpradoo.

This approach to economic development is not only sustainable but also culturally sensitive, as it allows the locals to preserve their cultural heritage while also developing their economy (Viale and Vicol 2022).

The results directly support the feasibility of these craft initiatives, demonstrating the plant's suitability for various product applications. This practical aspect is crucial in translating theoretical sustainability concepts into tangible, community-level outcomes. The findings of the investigation also highlight the importance of collaboration between different stakeholders, such as agricultural agencies and local economic groups, to support the sustainable and responsible use of local resources. Such multidisciplinary collaboration is essential for crafting a holistic approach to sustainable development, as emphasized in the circular economy model (Birat 2015). The support provided by the agricultural agencies to conduct experimental planting in community forests is an example of how stakeholders can work together to promote sustainable and responsible use of local resources. Collaboration between stakeholders can also lead to the development of new and innovative ways to use the plant, as evidenced by the creative products developed by the locals. However, as this is the only community working with *Ton Bai Romkao*, collaboration efforts must ensure that knowledge exchanges are adapted for the peculiarities of the local plant – for the residents of Kapong District, the experiences of other community initiatives do not necessarily apply (Flachs and Stone 2019).

However, it is important to consider the potential challenges that may arise from the commodification of *Ton Bai Romkao*. For example, the high cost of production may limit the development of certain products, such as cups made from the leaves. Additionally, there is a risk of overuse or exploitation of the plant, which may have negative impacts on the local ecosystem and other aspects of the community (Buhalis et al. 2020; Capocchi et al. 2019; Simatupang 2022). These challenges underscore the importance of integrating sustainable practices and ecological considerations into the craft sector (Benyus 1997; Lyle 1996). It is important for stakeholders to work together to establish guidelines and regulations to ensure the sustainable and responsible use of the plant. Furthermore, this case study of *Ton Bai Romkao* can serve as a model for other communities seeking to harmonize traditional craft practices with sustainability objectives, thus contributing to the broader discourse on sustainable craft and community development (Prados-Peña et al. 2022).

Conclusion

The findings of the investigation have revealed the potential for the commodification of *Ton Bai Romkao* to promote both cultural and economic development in Phang Nga Province. This aligns with the conceptual framework that views craft and sustainability as interlinked, where the use of local plants like *Ton Bai Romkao* bridges traditional practices with modern economic opportunities.

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The study has identified the important characteristics of *Ton Bai Romkao* leaves, including their durability and strength, and the ways in which local communities have developed creative products using these leaves. The results of the investigation have also shown that the local people have a strong sense of cultural heritage and local wisdom, which has allowed them to develop innovative ways of using the plant to stimulate their local economy. This approach supports the broader goals of sustainable development and is a strategy that has been used successfully in similar communities around the world, relying on community collaboration, institutional support and considered, careful mitigation of risks (Gruère et al. 2006).

Recommendations

In light of the findings from this investigation, the researchers wish to make several recommendations to bolster the cultural identity and economic growth of Phang Nga Province. First, it is imperative to disseminate the knowledge about *Ton Bai Romkao* to educational institutions and government bodies. This can be achieved through workshops and training sessions focusing on innovative craft techniques, integrated within existing educational programmes and craft initiatives. Additionally, developing educational materials for schools and community centres can emphasize the value of local flora in craft making, fostering early appreciation of sustainable practices. Encouraging sustainable harvesting and crafting of *Ton Bai Romkao* is equally crucial. There should be clear guidelines for sustainable practices and collaboration with environmental experts and local conservation groups to ensure the resource's longevity. Community education programmes can equally teach local communities about these sustainable practices.

Furthermore, fostering partnerships between local craft communities, research institutions and universities can lead to innovation in craft design and diversification of products. Such collaborative efforts will be instrumental in exploring new applications and enhancing processing techniques for *Ton Bai Romkao*. It is vital to conduct a thorough environmental impact assessment to ensure that craft activities do not negatively affect the local ecosystem, especially if these activities are increased in the future. By implementing these recommendations, stakeholders in Phang Nga Province can harness the unique properties of *Ton Bai Romkao* to develop a sustainable and systematic craft industry, contributing significantly to cultural preservation, economic development and ecological sustainability.

Authors' contributions

All authors participated in the investigation and analysis outlined in this research article. All authors consent to the publication of this manuscript.

Ethical statement

This research received approval and was supported by the Research and Development Institute, Phuket Rajabhat University, Grant No. 01/2565. All participants gave written informed consent to participate in the study and publish the results.

Conflict of interest statement

The authors have no conflicts of interest to declare.

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