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Integrated Dry-Fermented Catfish Production to Promote Sustainable Livelihoods and Community-Based Economic Development: A Case Study of the Community Enterprise Group in Koh Tao Subdistrict, Pa Phayom District, Phatthalung Province, Thailand

Amonrat Thanonkaew^{1,*}, Vilailak Klompong¹, Pornpimon Mayachiew¹, Thanidchaya Luanunkarb¹, Pimchana Hoktha², Naruemon Intarat³, Kritsada Phatcharasi³, Nantiya Panomjan⁴, Suphada Kiriratnikom⁴

¹Faculty of Agro and Bio Industry, Thaksin University, Papayom District, Phatthalung Province, 93210 Thailand

²Faculty of Science and Digital Innovation, Thaksin University, Papayom District, Phatthalung Province, 93210 Thailand

³Faculty of Engineering, Thaksin University, Papayom District, Phatthalung Province, 93210 Thailand

⁴Faculty of Technology and Community Development, Thaksin University, Papayom District, Phatthalung Province, 93210 Thailand

*Corresponding author's E-mail: tamonrat@tsu.ac.th

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Abstract

Background: The Community Enterprise Group for Agricultural Product Processing in Village 13, Koh Tao Subdistrict, Pa Phayom District, Phatthalung Province, in Southern Thailand has pioneered an integrated approach to catfish farming and dry-fermented catfish (pla-duk-ra) production. The group engages in both aquaculture—raising hybrid and African catfish—and in processing, distributing fresh catfish and fermented products. However, its members historically faced significant obstacles. Catfish farming incurred high production costs, fingerling shortages occurred during the rainy season, and many earthen ponds were in poor condition. Processing methods lacked compliance with basic Good Manufacturing Practices (GMP), producing inconsistent quality. Drying facilities were insufficient, packaging failed to preserve freshness, and members had little knowledge of developing ready-to-eat products or adding value to by-products. To address these challenges, an integrated program was implemented with 40 vulnerable households and community members. The intervention was structured into five stages: (1) improving aquaculture methods, (2) upgrading processing to meet GMP standards, (3) conducting product quality analysis, (4) diversifying product lines into ready-to-eat foods and by-products, and (5) improving packaging and labeling to meet legal and commercial requirements.

Processing and Quality Enhancement: Hybrid catfish and African catfish were raised in canvas ponds as an alternative to deteriorating earthen ponds. Results indicated that African catfish grew faster and required lower feed costs than hybrid catfish, significantly reducing production risks. This innovation not only ensured a consistent supply of raw material but also stabilized farm-level incomes. Processing systems were redesigned to meet basic GMP standards. New facilities were constructed, formulas were refined, and workflows were simplified, reducing processing time while increasing monthly production capacity from just 50 kilograms to 200–300 kilograms. Comparative quality analysis revealed that African catfish yielded fermented products with higher protein, lower fat, and sensory qualities equivalent to those made from hybrid catfish, thereby validating African catfish as a cost-effective and high-quality alternative raw material.

Product Diversification, Packaging, and Branding: The group expanded beyond traditional pla-duk-ra by developing innovative ready-to-eat products and by-products. New items included sweet fish sauce, ready-to-eat fried pla-duk-ra, pla-duk-ra chili paste, and rice seasoning powder. By utilizing fish parts such as heads (22%), intestines (2.1%), and fat (4.9%), waste was minimized, consistent with circular economy principles. Defective or unsellable fermented fish (3%) were repurposed into chili paste and seasoning, thereby transforming potential losses into marketable goods. A major Extended Abstract (2/2) breakthrough came from the development of attractive, durable, and legally compliant

packaging. Improved designs enhanced shelf life, protected product quality, and increased consumer confidence. The enterprise also introduced proper labeling with clear production details, supporting compliance with food safety standards and strengthening market competitiveness.

Economic and Environmental Impacts: Before the intervention, the enterprise offered only two products: hybrid catfish and dry-fermented catfish, generating 21,600 Baht per month (\approx USD 620) with a net profit of 5,100 Baht (\approx USD 146). After expansion, the product portfolio grew to seven items: hybrid catfish, African catfish, pla-duk-ra, sweet fish sauce, ready-to-eat fried pla-duk-ra, pla-duk-ra chili paste, and rice seasoning. Income from hybrid catfish rose from 6,600 Baht (\approx USD 189) to 16,500 Baht (\approx USD 472), an increase of 150%. Income from pla-duk-ra surged from 15,000 Baht (\approx USD 429) to 60,000 Baht (\approx USD 1,714), a 300% increase. African catfish added 10,000 Baht per month (\approx USD 286), while the new products collectively contributed 4,500 Baht (\approx USD 129) monthly. Overall, total revenue increased from 21,600 Baht (\approx USD 620) to 91,000 Baht (\approx USD 2,600) per month, a remarkable 321.3% growth, while net profit rose from 5,100 Baht (\approx USD 146) to 22,750 Baht (\approx USD 650), a 346.1% increase. Environmental benefits were equally notable. Canvas pond farming improved water efficiency and reduced land use compared to earthen ponds, while better water management minimized risks of pollution to natural waterways. Solar-powered dryers replaced fossil fuel use, cutting greenhouse gas emissions. Circular economy practices—turning by-products into secondary goods—minimized waste while creating additional revenue streams. Packaging innovations further reduced food loss during storage and distribution.

Sustainable Development of Human and Social Capital: The initiative also built human and social capital within the community. Training in aquaculture, processing, and quality control enhanced vocational skills transferable to future generations. Vulnerable groups gained employment, improving household security. Knowledge-sharing among members fostered cooperation, while partnerships with universities and government agencies expanded technical support. Moreover, the initiative preserved local wisdom: pla-duk-ra is a traditional food of Phatthalung Province, and its modernization reflects a successful integration of indigenous practices with modern technology. The integrated dry-fermented catfish model reflects the principles of sufficiency economy by balancing economic, social, and environmental dimensions. Economically, diversified products reduce dependency on a single income stream while ensuring stable growth. Socially, the initiative strengthened community bonds, preserved cultural heritage, and empowered vulnerable groups. Environmentally, the adoption of renewable energy and efficient resource use reinforced sustainable practices. For long-term resilience, the group must continue to build strategic management capacity, foster innovation, and prepare new leadership to sustain operations across generations.

Conclusion: The case of this enterprise group demonstrates how integrated aquaculture and value-added processing can transform rural livelihoods. By combining improved production methods, product diversification, branding, and sustainability principles, the initiative not only enhanced household incomes but also strengthened social cohesion and environmental stewardship. The model illustrates a viable pathway for rural communities in Thailand and beyond to achieve inclusive and sustainable economic development.

Keywords: Phatthalung Province, Dry-fermented catfish, Food processing, Ready-to-eat food, Packaging



Srinaka Model: Development of Community Enterprise for an Inclusive Economy in Ban Na Subdistrict, Srinakarin District, Phatthalung Province, Thailand

Tiptiwa Sampantamit^{1,2}, Apinan Aueaungkul^{1,3,4,*}, Sanit Srichookiat^{1,3,4}, Ninna Jansoon², Anut Kiriratinikom², Naphat Keawpibal^{1,2}, Sutee Ngowsiri⁴, Wisan Odton⁵, Auttaphon Theppaya⁶, Muhammad Salaebing⁷, Kedsaraporn Intasaro¹, Auttapong Pinthongpan⁸, Khwanchit Suwannoppharat⁷, Supipat Wongprot⁴, Samak Kaewsuksaeng⁵

¹Research and Innovation Center for Provincial Poverty Alleviation in Phatthalung, Institute of Research and Innovation, Thaksin University, Phatthalung Campus, Pa Phayom District, Phatthalung Province, 93210 Thailand

²Faculty of Science and Digital Innovation, Thaksin University, Phatthalung Campus, Pa Phayom District, Phatthalung Province, 93210 Thailand

³Creative Economy and Social Innovation Research Center, Faculty of Economics and Business Administration, Thaksin University, Songkhla Campus, Muang District, Songkhla Province, 90000 Thailand

⁴Faculty of Economics and Business Administration, Thaksin University, Songkhla Campus, Muang District, Songkhla Province, 90000 Thailand

⁵Faculty of Technology and Community Development, Thaksin University, Phatthalung Campus, Pa Phayom District, Phatthalung Province, 93210 Thailand

⁶Faculty of Humanities and Social Sciences, Thaksin University, Songkhla Campus, Muang District, Songkhla Province, 90000 Thailand

⁷Faculty of Fine and Applied Arts, Thaksin University, Songkhla Campus, Muang District, Songkhla Province, 90000 Thailand

⁸Faculty of Science and Technology, Hatyai University, Hatyai District, Songkhla Province, 90110 Thailand

*Corresponding author's E-mail: apinan.a@tsu.ac.th

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Abstract

Background: Ban Na Subdistrict in Srinakarin District, Phatthalung Province in Southern Thailand, is endowed with abundant mountain forest resources and rich biodiversity. However, the community has long faced multidimensional poverty. Key challenges include the lack of effective mechanisms to manage natural resources for economic value creation, dependence on high-risk monocultural agriculture vulnerable to seasonal price fluctuations, limited access to professional skill development and marketing channels, and inadequate economic and social risk management at the household level. Against this backdrop, the Srinaka Model was developed as a grassroots economy framework designed to transform local livelihoods. Its central aim was to establish the Srinaka Community Enterprise and transition toward an inclusive economy, thereby addressing poverty through community-driven economic mechanisms, enhancing local capacity, and improving the long-term quality of life for vulnerable groups.

Methods and Processes: A total of 56 vulnerable community members in Ban Na Subdistrict participated in training workshops and enterprise-building activities. The Srinaka Community Enterprise emphasized shared value creation through collaboration among academic institutions, government agencies, the private sector, civil society, and public communication networks. Together, they promoted the production of eco-friendly, naturally dyed, printed fabric that reflects the community's cultural identity while integrating scientific knowledge and technological innovation. The implementation process unfolded across nine key steps: (1) strengthening collaborative power through leader discussions, focus groups, and workshops; (2) learning to prepare dyes from local raw materials and identifying native plants suitable for natural dyeing; (3) mastering dye extraction and mold making using betel nut sheaths and wood-metal composites; (4) skill-building workshops on fabric design and identity-based pattern creation; (5) developing

market-ready products in nine categories such as batik fabric, scarves, hats, T-shirts, trousers, dresses, bags, and notebooks; (6) applying eco-friendly production principles of reduction, recycling, and reuse; (7) building market linkages with external stakeholders; (8) forming networks with agencies such as the Department of Industrial Promotion and Thaksin University; and (9) knowledge transfer through school workshops and community learning forums, where experienced members mentored new participants.

Economic Impacts: As a result, the group achieved remarkable economic growth. Average monthly income rose from 1,478.83 Baht (≈USD 41.50) to 5,886.83 Baht (≈USD 165.20). The enterprise successfully developed niche-market products, including printed fabric panels, scarves, and handkerchiefs, and later diversified into shirts, hats, skirts, trousers, dresses, and bags. Production capacity also scaled up significantly, with the group able to produce up to 60 yards of printed fabric per week and at least 30 finished items weekly. This capacity expansion enabled continuous and reliable income generation. Importantly, Srinaka fabrics received national recognition, being awarded a 5-star rating under Thailand's OTOP (One Tambon One Product) program. The fabrics showcased innovative natural dyeing using mangosteen twigs and leaves in combination with sator pods, mordanted with limewater, and printed with betel nut sheath molds bestowed by the Thai Royal Project. These achievements underscore the group's ability to add cultural and economic value to local products while positioning itself competitively in domestic and international markets. The value chain transformation extended beyond production. Originally centered on simply dyeing and selling fabric, the enterprise diversified into experiential tourism activities such as DIY (Do-It-Yourself) workshops. Visitors actively participated in dyeing and printing processes, enriching their cultural experience as co-creators of value while generating higher service fees for the community. This tourism innovation not only increased income but also strengthened community branding and identity. The group's financial outcomes demonstrate clear progress. In 2023, total monthly revenue was 10,715.33 Baht (≈USD 300.30), with costs of 9,236 Baht and a net profit of 1,478.83 Baht. By 2024, revenue had surged to 30,147.34 Baht (≈USD 844.30), with costs of 24,260.50 Baht and net profit of 5,886.83 Baht. Average monthly wages for community labor also increased nearly threefold, from 6,429.17 Baht (≈USD 180.20) to 18,088.42 Baht (≈USD 506.40), ensuring more equitable distribution of income within the community. Although production costs rose significantly, the effective management of resources and diversification of income sources demonstrated improved resilience and financial sustainability.

Social and Environmental Impacts: Beyond economics, the social impacts of the Srinaka Model were substantial. The initiative created opportunities for participation across age and gender groups: women and the elderly took key roles in material preparation, dyeing, ironing, and customer service, while youth and children contributed to raw material collection, often as family activities. This inclusivity enhanced intergenerational collaboration and distributed benefits widely. Partnerships with government bodies, local administrations, and universities facilitated social learning and knowledge co-creation, reinforcing the community's role as a learning hub. Environmental sustainability was embedded throughout the process. By substituting chemical dyes with natural plant-based alternatives, the group reduced water contamination risks and production costs while revitalizing the use of indigenous plants with economic potential. Circular economy practices were applied by reusing materials and minimizing waste. The community also engaged in youth-focused activities, such as "STEAM BCG Mud-Yom Rom Mueang", promoting environmental awareness and aligning the Srinaka Model with Thailand's Bio-Circular-Green (BCG) Economy strategy and the United Nations Sustainable Development Goals (SDGs).

Conclusion: The Srinaka Model represents a holistic and replicable framework for grassroots economy development. By integrating local wisdom with modern knowledge, fostering inclusive participation, and linking natural and cultural capital with market opportunities, the model transformed Ban Na Subdistrict into both a production and learning center. Its success demonstrates how rural communities can build sustainable livelihoods, strengthen resilience, and contribute to inclusive economic growth in Thailand.

Keywords: Phatthalung Province, Community enterprise, Naturally dyed fabric, Grassroots economy, Poverty problem



Usuma Punpaisan

Faculty of Industrial Technology, Uttaradit Rajabhat University, Muang District, Uttaradit Province, 53000 Thailand

*Corresponding author's Email: design.love1997@gmail.com

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Abstract

Background: The Phii Talok Parade, a vibrant and distinctive tradition of Tha Pla District, Uttaradit Province, in Northern Thailand serves as a living expression of the community's cultural identity and history. Despite its cultural significance, the parade remains relatively unknown beyond the local area. This research aimed to design and develop Phii Talok-inspired art toys as a medium for raising public awareness, revitalizing local heritage, and engaging youth in creative cultural preservation. By transforming intangible cultural capital into tangible, contemporary products, the initiative sought to bridge traditional customs with modern consumer appeal, thereby contributing to sustainable community development.

The research engaged key stakeholders from local cultural organizations, government agencies, and educational institutions, alongside 100 upper secondary students from Tha Pla Pracha Uthit School. The process began with a cultural mapping of the Phii Talok tradition, which is held annually in October. The first day features subdistrict-level parades, displays of local products, and participation primarily from residents and neighboring communities. This stage identified the tradition's cultural elements, audience profile, and opportunities for reinterpretation.

Stakeholders participated in structured brainstorming and SWOT analysis sessions to assess the strengths, weaknesses, opportunities, and challenges of transforming the Phii Talok tradition into creative products. From these discussions, strategies emerged for reimagining the characters as collectible art toys aligned with current consumer trends, particularly the Japanese-inspired kawaii aesthetic. The aim was to maintain cultural authenticity while ensuring contemporary marketability.

Students were then immersed in a hands-on workshop based on design thinking methodology, moving from empathy and ideation to prototyping and testing. Eleven original Phii Talok characters were conceptualized, each rooted in local ghost lore: Phi Pla Sa-eun (Weird Fish Ghost), Phi Chang (Elephant Ghost), Phi Ped (Duck Ghost), Phi Chao Ra Khe (Crocodile Ghost), Phi Kratai (Rabbit Ghost), Phi Ngu (Snake Ghost), Phi Ling (Monkey Ghost), Phi Khwai (Buffalo Ghost), Phi Kai (Chicken Ghost), Phi Ma (Horse Ghost), and Phi Moo (Pig Ghost). Designs were created using 3D modeling software and fabricated with resin-based 3D printing technology. The completed figures were presented at a local exhibition to assess their cultural and commercial appeal.

Market testing yielded positive responses from local government officials, cultural councils, and the public. The Governor of Uttaradit Province expressed interest in promoting the Phii Talok Art Toys as an official provincial

souvenir, while the Tha Pla Cultural Council committed to supporting commercialization efforts. Initial sales were conducted through online platforms such as Line and Facebook, with pre-orders managed by ten community-based distributors. The pilot production run was deliberately limited, reflecting art toy market norms, resulting in the sale of 100 units. Each unit generated a profit margin of 250 Baht, averaging 2,500 Baht per distributor. Demand quickly outpaced supply, leading to 20 additional requests from prospective distributors.

Beyond economic impact, the project generated significant social and cultural benefits. It fostered intergenerational collaboration, with students, artisans, and elders co-creating designs rooted in local narratives. The school integrated the project into its curriculum, blending cultural studies with art, design, and entrepreneurship education. This model ensured continuity by engaging new cohorts of students each year, reinforcing the cultural relevance of the Phii Talok tradition. The initiative also demonstrated the potential for economic diversification through creative tourism. Prior to the project, no official souvenirs were available during the Phii Talok Parade. The introduction of culturally themed art toys not only created a new revenue stream but also rebranded the festival as a contemporary cultural attraction. Community members gained skills in product marketing, storytelling, and online sales, expanding both local and regional reach.

From a sustainability perspective, the project's success depended on maintaining production quality, managing limited-edition releases, and developing related merchandise such as T-shirts, tote bags, and plush dolls. Strengthening the production process and training additional community members were identified as priorities to meet growing demand. Furthermore, the integration of cultural product development into school programs ensured that youth participation—and thus cultural transmission—would continue over time. In the broader context of community development, the Phii Talok Art Toy Project exemplifies how intangible heritage can be revitalized through participatory design and creative industry strategies. The collaboration between government, local organizations, educational institutions, and community members created a shared sense of ownership and agency. By converting cultural capital into marketable goods without compromising authenticity, the project strengthened both local identity and economic resilience.

Conclusion: The transformation of the Phii Talok Parade into a source of inspiration for contemporary art toys illustrates a model for sustainable heritage-based product innovation. The approach simultaneously preserves and reinterprets tradition, engages youth in cultural stewardship, generates community income, and enhances the visibility of a unique local custom on a wider stage. Through strategic collaboration, creative design, and market-oriented thinking, the Phii Talok tradition has evolved from a local festivity into a catalyst for cultural pride, tourism development, and economic sustainability.

Keywords: Uttaradit Province, Art toy, Phii Talok, Cultural capital, Product design



Enhancing Household Income through Handwoven Plastic-Strip Bags: A Case Study in Don Mot Daeng Subdistrict, Ubon Ratchathani Province, Thailand

Piyamart Tupmongkol*, Sirisuda Sanew, Phengkamon Marnarath, Kwannapis Ratchathawan

Faculty of Political Science, Ubon Ratchathani University, Warin Chamrap District, Ubon Ratchathani Province, 34190 Thailand

Corresponding author's E-mail: piyamart.t@ubu.ac.th

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Abstract

Background: Rural households in Don Mot Daeng Subdistrict, Don Mot Daeng District, Ubon Ratchathani Province, in Northeastern Thailand rely primarily on rice cultivation, cassava and corn farming, livestock raising, and daily wage labor. Income is typically modest and vulnerable to shocks, particularly recurrent flooding that frequently damages crops and reduces opportunities for employment. As a result, many households struggle to meet basic expenses for food, consumer goods, and agricultural equipment. This study was designed to strengthen household economic capacity by introducing skills in weaving plastic-strip bags and by supporting community-based enterprise development as a sustainable source of supplemental income.

Training and Skill Development: At the outset, participating households had no prior experience in weaving plastic bags. Two training sessions, each lasting five days, were organized in collaboration with the Ban Non Daeng Village No. 11 Plastic Basket Weaving Enterprise Group. Participants were introduced to essential weaving tools such as plastic strips, scissors, knives, metal buttons, hammers, and stamping blocks. Training was delivered through one-on-one mentoring by experienced enterprise members, beginning with fundamental skills in laying out patterns, shaping bag corners, and ensuring structural stability so that bags could stand upright. Following the training sessions, participants were provided with plastic strips to continue practice at home. They brought completed bags back to the enterprise group for quality assessment. Once participants demonstrated proficiency in basic patterns, they advanced to more complex designs. Successful trainees were invited to join the enterprise as full members and were supplied with materials such as plastic strips, leather handles, and metal buttons. Finished products were compensated according to size and complexity: larger and intricately patterned bags yielded higher earnings, while simpler designs earned less. After deducting material costs, the remainder was distributed as household income.

Brand Development and Marketing Strategy: To increase competitiveness and market visibility, the enterprise undertook brand development training. A SWOT analysis revealed key strengths in weaving design capability, weaknesses in lacking a unique brand identity, opportunities in sustained international demand through intermediaries, and threats from intense competition in local and regional markets. In response, a new brand identity—Mot Daeng Handmade—was established, inspired by the local subdistrict name. The brand was visually represented through PU leather tags attached to bag straps, with the logo on the front and contact details on the back. In addition, the group developed new design variations, including English alphabet patterns (A–Z) for customized orders. Plans were also initiated to experiment with natural materials such as bulrush (krachut) to reduce reliance on synthetic inputs and expand environmentally friendly product lines.

Outcomes and Economic Impact: As skills improved, the enterprise group expanded its membership to 40 households, supported by a revolving fund of 50,000 THB (\approx 1,400 USD). Members collectively produced woven bags that were checked for quality, branded, and distributed for retail sale in local shops, across Ubon Ratchathani Province, and to international buyers. Efforts are underway to expand distribution via online platforms under the Mot Daeng Handmade brand. On average, participating households were able to produce about 15 woven bags per month, sold at 150–400 THB (\approx 4.20–11.20 USD) each depending on design complexity. For example, a simple diagonal pattern cost 50 THB (\approx 1.40 USD) to produce (excluding labor) and retailed at 199 THB (\approx 5.60 USD), while a star-patterned design cost 100 THB (\approx 2.80 USD) to produce and retailed at 400 THB (\approx 11.20 USD), yielding net profits of 100–300 THB (\approx 2.80–8.40 USD) per bag. This translated into an additional 2,250 THB (\approx 63 USD) per month or 27,000 THB (\approx 756 USD) per year for households producing mid-range bags. When added to the baseline average annual income of 42,000 THB (\approx 1,176 USD), total household income increased to 69,000 THB (\approx 1,932 USD)—an improvement of approximately 64.3%. For those capable of producing higher-value designs or larger volumes, income gains were even more substantial.

Sustainable Development of Human and Social Capital: Beyond direct financial benefits, the project contributed to the development of human capital by equipping households with practical vocational skills that can be sustained and transferred across generations. Weaving skills not only offered a pathway for income diversification but also provided opportunities for innovation, such as adapting new patterns or experimenting with natural fibers. At the same time, the initiative strengthened social capital within the community: enterprise members shared techniques freely, provided mutual assistance, and collaborated on branding and marketing. This collective effort fostered stronger relationships both within the community and with external buyers. The Ban Non Daeng Village No. 11 Plastic Basket Weaving Enterprise Group is positioning itself for long-term sustainability by continually innovating product designs, developing a recognizable brand, and reducing dependence on intermediaries. Direct-to-customer marketing and online distribution are expected to widen the consumer base and secure more stable demand. In addition, the skills and knowledge cultivated through this initiative can be transmitted to younger generations, ensuring that weaving remains both a cultural and economic asset for the community.

Conclusion: By combining skill development, enterprise branding, and market diversification, the project in Don Mot Daeng demonstrates how community-based interventions can enhance household income, strengthen resilience against economic shocks, and build sustainable pathways out of poverty. The case highlights the importance of integrating human capital development with market-oriented strategies to ensure long-term viability and equitable benefits for participating households.

Keywords: Ubon Ratchathani Province, Poverty, Weaving bag, Plastic lines, Level up income



Managing Farmer's Way Tourism in the Klong Pho Canal-Side Community, Phra Nakhon Si Ayutthaya Province, Thailand

Tharaneewawatnatee¹, Sukhum Kongdit¹, Praphat Klubnual², Phimphorn Phimsuwan^{1,*}

¹Faculty of Liberal Arts, Rajamangala University of Technology Suvarnabhumi, Phra Nakhon Si Ayutthaya District, Phra Nakhon Si Ayutthaya Province, 13000 Thailand

²Faculty of Science and Technology, Rajamangala University of Technology Suvarnabhumi, Phra Nakhon Si Ayutthaya District, Phra Nakhon Si Ayutthaya Province, 13000 Thailand

*Corresponding author: pim.catherine@gmail.com

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Abstract

Background: The Klong Pho Canal-Side Community, situated in Bang Pa-in District, Phra Nakhon Si Ayutthaya Province, Thailand, faces pressing challenges related to environmental degradation and socio-economic transformation. Rapid industrial estate expansion, urban sprawl, and extractive activities such as sand and clay pit operations have led to water pollution, brackish conditions, and salinization. These changes have rendered water unsuitable for consumption and agricultural use, resulting in a decline in rice cultivation areas and waning interest in farming among the younger generation. In response, this research sought to revitalize the community through the development of farmer's way tourism, leveraging local capital to sustain the traditional agricultural lifestyle while promoting socio-economic resilience.

The study involved 55 key informants—including community leaders, local scholars, homeowners, farmers, agricultural groups, and network partners—and 400 tourists from Phra Nakhon Si Ayutthaya Province. The research followed a five-step process:

1) Identity Search – The team employed participatory tools such as community mapping, seasonal and cultural calendars, and an inventory of community capital to design tourism activities rooted in the local identity. This process emphasized the importance of identifying distinctive cultural and agricultural assets that could differentiate the community as a tourist destination.

2) Human Development – Capacity-building initiatives were conducted to train residents as community storytellers, fostering skills in tourism management, service provision, communication, and environmental conservation. Study tours to other successful farmer's way tourism sites were organized to provide practical benchmarks for adaptation.

3) Community Development – An assessment of four subdistricts—Ban Krot, Khung Lan, Taling Chan, and Sam Reuan—was undertaken to evaluate tourism readiness. Improvements were made to infrastructure such as signboards, learning resource labels, reception areas, and public sanitation facilities. Efforts were made to align tourism standards with sustainable tourism principles, balancing development with preservation of natural and cultural heritage.

4) Working Mechanism Creation – A core group and working committees were established to oversee tourism initiatives, coordinate with local agencies, and ensure equitable benefit sharing among community members.

5) Marketing Promotion – The community collaboratively organized farmer-style tourism programs, integrating agricultural experiences, cultural heritage, and local cuisine. Marketing strategies considered tourist behavior and service marketing mix factors influencing visitation decisions.

Findings indicate that the Klong Pho Canal-Side Community successfully established a living museum to showcase its diverse wisdom and traditions. This initiative enhanced local awareness of cultural and environmental values, fostered pride in heritage, and encouraged active participation in conservation. Environmental resources, rice-farming traditions, and culinary practices were revived and transmitted to younger generations and visitors through experiential activities. Fair income distribution mechanisms were implemented, along with partnerships involving governmental, private, and civil society actors.

The project's impacts are multidimensional:

1) Tourism Development – By mapping and understanding five categories of community capital, the community identified unique features that differentiated its tourism offering. This process strengthened a sense of ownership and laid a foundation for sustainable tourism governance.

2) Knowledge Enhancement – Tourism knowledge dissemination created local tourism experts who could manage visitor experiences effectively while safeguarding resources.

3) Community Infrastructure – The installation of facilities such as clear wayfinding signage, learning station labels, and accessible restrooms improved the visitor experience and met sustainable tourism standards.

4) Culture and Environment – Environmental resources, traditions, and local wisdom—particularly those linked to rice cultivation—were restored and integrated into tourism activities, fostering both conservation and cultural pride.

5) Management and Governance – The formation of core management groups enabled effective resource allocation, equitable income distribution, and cooperative agreements with external stakeholders.

6) Awareness Building – Internal campaigns increased community engagement in tourism, while external marketing attracted continuous visitation and strengthened the community's image.

7) Economic Impact – Local wisdom was transformed into tourism products and services, generating supplementary income and stimulating a circular economy. Tourism activities were also incorporated into new tour packages marketed by local travel companies to both Thai and international visitors.

8) Social Impact – Tourism prompted social cohesion through professional and storytelling groups, while also reinforcing traditional festivals, rituals, and agricultural practices such as Lo Krathong moonlight bathing, local boat races, and rice harvesting ceremonies.

From a broader perspective, the project contributed to sustainable development across four dimensions:

1) Environmental – Restoration and preservation of natural resources and ecosystems.

2) Social and Cultural – Reinforcement of community pride, identity, and intercultural exchange.

3) Economic – Creation of income-generating opportunities and value-added local products.

4) Political and Governance – Strengthened collaboration among local administrations, tourism authorities, and private operators.

Challenges remain in managing tourism amid urban expansion and environmental change, particularly in maintaining water quality and integrating tourism development with the preservation of traditional lifestyles. Future Development Plan (3–5 years) includes:

1) Enhancing community capacity in tourism management through clearly defined governance structures, skill development in hosting, interpretation, marketing, and intergenerational knowledge transfer.

2) Diversifying and upgrading products and services, developing a unified brand, and expanding markets through external partnerships.

3) Establishing sustainable resource and environmental management mechanisms, including community regulations and a tourism development fund.

4) Building cooperative networks with government agencies, private sector entities, and educational institutions, as well as creating linkages with nearby tourist attractions for integrated route development.

Conclusion: The Klong Pho Canal-Side Community's transformation illustrates how rural communities can leverage local capital, foster inclusive governance, and integrate sustainable tourism to address environmental and socio-economic challenges. The success of this initiative lies in its holistic approach—combining identity preservation, capacity building, infrastructure improvement, cultural revitalization, equitable benefit-sharing, and collaborative marketing—which together ensure the long-term viability of farmer's way tourism and the community's resilience in the face of change.

Keywords Phra Nakhon Si Ayutthaya Province, Farmer's way tourism, Tourist attraction, Marketing mix, Community capital