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Community-Based Participatory Design as a Human-Centered Management Approach for Sustainable Community Development: Evidence from the Chanthaboon Riverside Community, Thailand

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Abstract: This paper explores the application of Community-Based Participatory Design (CBPD) as a human-centred management approach for sustainable community development in the Chanthaboon Riverside Community, Thailand. The aim of this paper is to investigate the potential of participatory landscape enhancement and mural painting activities to promote stakeholder engagement, community capacity, social cohesion and community well-being. The method adopted was Practice Based Research with CBPD. This included site surveys, workshops, stakeholder engagement, mural making activities and post project evaluations. Observations, focus group discussions, semi-structured interviews and participatory design processes with residents, students, artists, community leaders, local authorities and educational institutions provided qualitative data. The findings reveal that collaborative participation improved stakeholder relationships, increased community ownership, fostered intergenerational learning, and created a sense of collective responsibility for public spaces. The initiative also enhanced community capacity through collaboration, shared decision making and local problem-solving skills. Furthermore, the participants had high social ties, pride in local identity and community well-being through active participation in community development activities. Overall, the findings suggest that participatory design initiatives are potentially effective human-centered management mechanisms for enhancing social sustainability, community resilience, and long-term stakeholder collaboration. The findings have practical implications for community managers, policy makers and development practitioners that aim to implement inclusive and sustainable management strategies through collaborative community engagement and capacity building approaches.

Keywords: human-centered management; stakeholder engagement; community capacity building; community well-being; social cohesion; participatory management; sustainable community development

1. Introduction

The Chanthaboon Waterfront Community in Chanthaburi Province, Thailand, has been acknowledged as a multicultural heritage district that combines Buddhist, Christian, and Islamic traditions (UNESCO, 2016). The area is culturally rich but has been blighted by environmental degradation, poor landscape management and

a loss of tourist appeal. Public art interventions (particularly mural painting) are increasingly being used as tools for community revitalization, place-making, and cultural communication (Miles, 1997)

The research investigates the physical improvement of the landscape and the creation of murals with the participation of the community in heritage areas as a strategy for sustainable cultural tourism. The study points to the relationship between art, cultural heritage and environmental sustainability, in line with the United Nations Sustainable Development Goals, specifically SDG 11: Sustainable Cities and Communities, SDG 12: Responsible Consumption and Production, SDG 13: Climate Action and SDG 17: Partnerships for the Goals (United Nations, 2020)

Aside from tourism development, this study considers participatory design activities as human-centered management mechanisms that promote stakeholder engagement, build community capacity, and support sustainable community development.

2. Literature review

2.1. Community landscape and urban sustainability

Community landscape improvement has been identified as an important aspect of urban sustainability, as it improves quality of life, environmental resilience and cultural identity (Douglas, 2012). Heritage sites' landscape interventions can preserve authenticity, while at the same time adapting the area to the needs of tourism development (Smith & Waterton, 2009). This idea aligns with life-cycle thinking in cultural heritage, which links adaptive reuse, circular economy and sustainable urban regeneration (Liu et al., 2026).

2.2. Mural art as cultural communication

Mural art can be a tool for cultural storytelling and place identity (Sharp et al. 2005). Murals have been found to be a way of creating local pride, tourism destinations and the transfer of culture between generations (Mathews, 2010). Narrative communication to audiences can be allowed, and intangible cultural heritage can be preserved using visual storytelling strategies (Wu et al., 2025).

2.3. Sustainable Development Goals and creative placemaking

The integration of creative arts as a tool to achieve the Sustainable Development Goals (SDGs) (UNESCO, 2016) in urban development is discussed. Community-led mural painting projects may also embody the SDGs principles through the promotion of social inclusivity, resource consumption and awareness of climate change through design-based approaches (Evans & Foord, 2008).

2.4. Stakeholder engagement and human-centered management

People are the main drivers of sustainable development. Human-centred management means the active participation of stakeholders in the decision-making processes. Stakeholder engagement is widely recognized as a key element of effective management because it promotes collaboration, trust, shared responsibility, and long-term commitment among participants, consistent with stakeholder theory (Freeman, 1984; Donaldson & Preston, 1995). Participatory management approaches involve people and communities in sharing their knowledge, experience and perspectives in development initiatives, which helps build ownership and improve project results.

The community-based development projects offer tangible examples of human-centered management by the cooperation of residents, local authorities, educational institutions and civil society organizations. These collaborative processes build community capacity, social capital, and collective problem-solving capability, consistent with the community capacity framework proposed by Chaskin (2001). Previous studies have found that stakeholder involvement can

strengthen social cohesion, community well-being, and sustainable management through the development of trust and social capital (Kahn, 1990; Putnam, 2000; Saks, 2006; Parmar et al., 2022). Therefore, Community-Based Participatory Design (CBPD) can be considered a design methodology and a human-centered management approach to promote inclusive stakeholder engagement and sustainable community development.

3. Research objectives

To investigate the process of stakeholder engagement in community-based development activities in Chanthaboon Riverside Community.

To examine the role of Community-Based Participatory Design in developing community capacity, social cohesion and collaborative decision-making.

To examine the role of participatory mural painting and landscape improvement activities on community well-being and sustainable management of the community.

4. Significance of the study

Theoretical, practical, and policy-related aspects of urban development and conservation of cultural heritage make this study contribute to the sustainable development of the Chanthaboon Waterfront Community. First, the present study addresses a gap in the literature on the integration of community landscape design and mural painting in multicultural heritage areas. This issue has not yet been widely explored in the Southeast Asian context, particularly in areas with complex social structures such as the Chanthaboon Waterfront Community, Ban Tha Ruea Chang and the Kalik Waterfront area. Previous research has pointed out the importance of landscape and public art (Douglas, 2012; Sharp et al., 2005; Smith & Waterton, 2009), but there is little or no systematic application of Community-Based Participatory Design (CBPD) in the design and development of real community space. Therefore, this research contributes to the knowledge of contemporary cultural landscapes and community-based public art in the Thai context. Second, the findings contribute to the community in practice with a design framework that is adaptable to real-world scenarios. Community landscape revitalization and mural painting can help to build a common identity and encourage a sense of belonging to the residents, according to the research. In addition, the project also contributes to improving the physical environment, reducing environmental degradation, and enhancing the quality of public spaces in accordance with international approaches to sustainable urban management. Third, this research is important for human-centered management and community development because it shows that mural painting and improved community landscapes can transform local spaces into cultural experience and creative capital that underwrite the local economy. The concept of creative tourism emphasizes tourists' active participation in cultural activities and meaningful experiences related to local life (Wu et al., 2025). Strategic factors in sustainable tourism also play a major role in destination brand value (Fan et al., 2025).

Finally, this research is in line with the United Nations Sustainable Development Goals, particularly SDG 11, SDG 12, SDG 13, SDG 4, SDG 8, and SDG 17. It covers sustainable cities, responsible resource use, climate change awareness and partnerships between academic institutions, local authorities and communities. The results can be contributed to the development of area-based policies, management of cultural heritage and long-term planning of sustainable urban development in Chanthaburi province.

5. Conceptual framework

5.1. Input

The input stage consists of the community context and the basic elements that

influence development, including the socio-cultural context of the Chanthaboon Waterfront Community; environmental problems and deterioration; cultural diversity and local heritage; and support from local authorities, network partners, and community members. These elements encourage a community-based creative design process which will improve the landscape and promote sustainable cultural tourism.

5.2. Process

This phase consists of participatory design and development process including a landscape survey for identifying existing site conditions and landscape related problems, CBPD workshops, co-created mural design and production in collaboration with the community, and environmental and landscape improvement for enhancing the usability of public spaces.

5.3. Outputs

The process results in both tangible and symbolic benefits such as cleaner, safer and higher quality public spaces; mural paintings that reflect community identity and cultural narratives; new culturally distinctive tourism routes and landmarks; and increased community pride and sense of belonging. These findings further contribute to sustainable cultural tourism, community revitalization and long-term place-based development.

5.4. Outcomes and Sustainable Development Goals (SDGs)

The findings demonstrate improvements in the physical landscape as well as deal with human, social and managerial issues for sustainable community development. The project used Community-Based Participatory Design (CBPD), engaging stakeholders including residents, community leaders, artists, students, local authorities and educational institutions from the start. The participatory process enhanced the stakeholders' involvement, encouraged inclusive decision-making and created a shared sense of responsibility for community development. The project helped with capacity building for communities at the individual and community levels through increased local knowledge, problem solving, leadership and collaboration skills. The co-creation process also improved social cohesion by promoting cooperation, trust, mutual respect and intergenerational learning among participants from diverse backgrounds . Moreover, the active participation in the activities of landscape beautification and mural painting contributed to the improvement of the well-being of the community through increased social interaction, community pride, sense of belonging and the collective ownership of public spaces.

These results contribute to the achievement of several SDGs. SDG 11 (Sustainable Cities and Communities) is evident in community revitalization and participatory urban development. The use of sustainable materials and environmentally responsible design practice encourages SDG 12 (Responsible Consumption and Production). SDG 13 (Climate Action) encourages environmental awareness and sustainability activities at the community level. The SDG 4 (Quality Education) is addressed through the experiential learning and knowledge exchange between the participants. SDG 8 (Decent Work and Economic Growth) is helped along by community empowerment and local creative activities. Finally, SDG 17 (Partnerships for the Goals) is evident in the collaborative partnerships created between community members, educational institutions, local authorities and other stakeholders. **Figure 1** shows the conceptual structure and relationships between these elements.

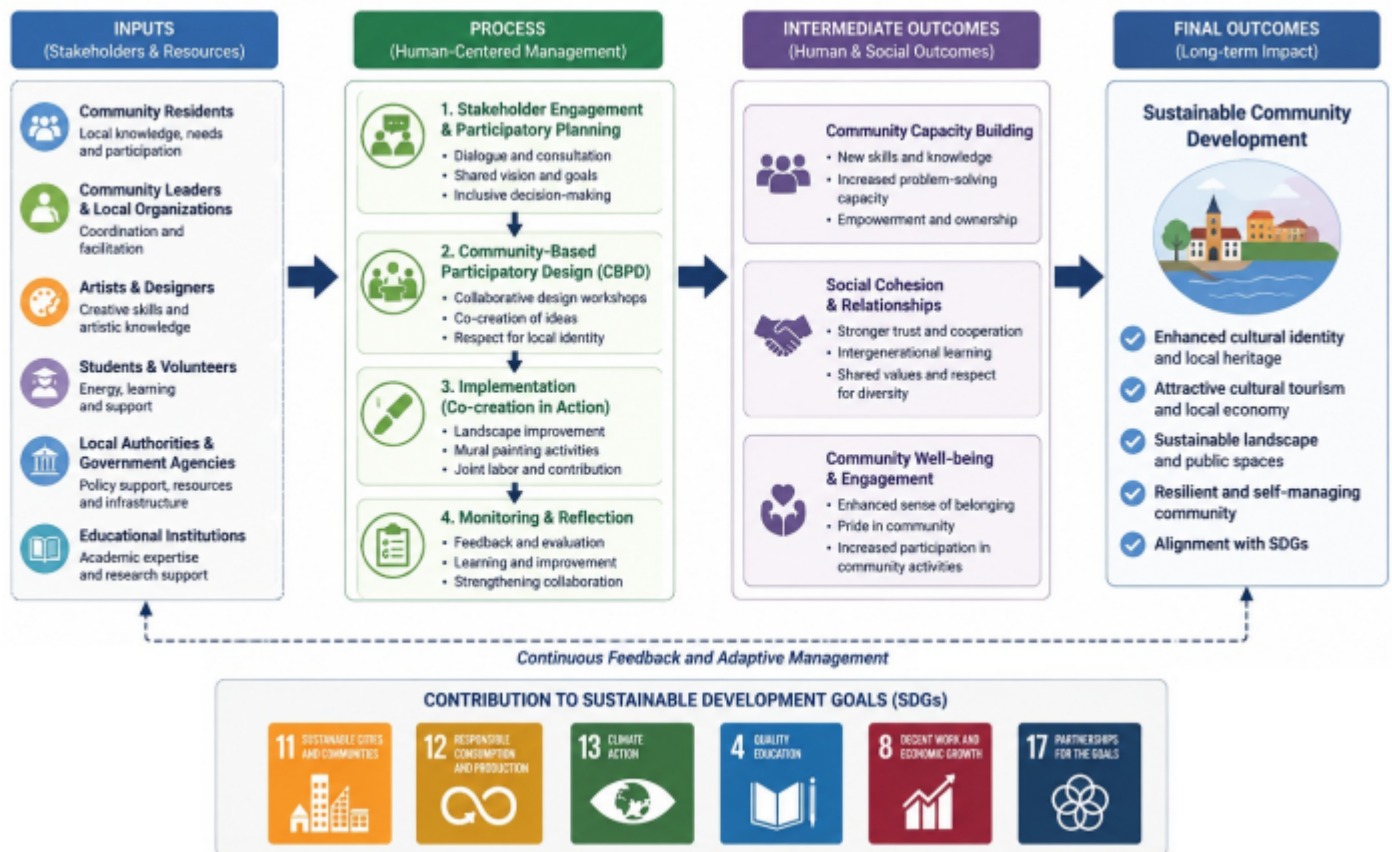


Figure 1. Conceptual framework: Human-centered management approach for sustainable community development.

6. Materials and methods

6.1. Research design

This study employed a creative research approach combined with Community-Based Participatory Design (CBPD).

6.2. Research methodology

This study used a Practice-Based Research (PBR) methodology combined with CBPD to explore, design, and create mural paintings and landscape improvements in the cultural heritage area of the Chanthaboon Waterfront Community. This methodological approach foregrounds creative practice itself as a mode of knowledge production, in which the creative works themselves are used as empirical evidence for academic analysis.

In conducting the research, the researcher gathered both qualitative and practice-generated data through site surveys, focus group discussions with community members, co-design workshops, sketch development, mural production, and documentation of design-based reflective practice. After the project, an evaluation with the relevant stakeholders was also undertaken. The data were analyzed by content synthesis, artistic interpretation and community-based analysis to understand the influence of the design process on spatial quality, cultural communication and creative tourism.

The combination of PBR and CBPD made it possible for the research to take on different dimensions such as the production of artistic knowledge, the development of the space and the empowerment of the community's role as co-designers. Therefore, the results of the research are complete both theoretically and practically.

6.3. Implementation process

The research started with the idea of community landscape, which aims to improve the physical environment and public spaces based on the social, cultural, and environmental context of the waterfront community. The concept was related to mural art and cultural communication. Mural painting is a medium of communication with the public transmitting the identity, narratives and cultural heritage of an area through an accessible art form with a powerful symbolic charge. **Figures 2–5** document the participatory mural process.



Figure 2. Artists collaborating with the community.



Figure 3. Preparation and color-mixing process for community mural painting.



Figure 4. Community mural artwork representing local landscape and cultural identity.



Figure 5. Completed mural artwork reflecting the waterfront landscape and community atmosphere.



Figure 6. Literature review framework linking community landscape development, mural art, stakeholder engagement, community capacity building, social cohesion, and sustainable community development.

Figure 6. Framework of literature review for understanding community development processes in the Chanthaboon Riverside Community. The framework is based on the theories of community landscape development, mural art and cultural communication, stakeholders' participation, participatory management, community capacity building and social cohesion. Community landscape

development and mural art are the basis for creating meaningful public spaces and strengthening local identity. Collaboration of community members, artists, educational institutions and local authorities enables the involvement of stakeholders and the practice of participatory management in development activities. These processes of working together develop local knowledge, leadership and problem solving and, in turn, increase community capacity. This leads to increased social cohesion, trust, community wellbeing and sense of community. Ultimately, these outcomes contribute to sustainable community development and support several Sustainable Development Goals, in particular SDGs 4, 8, 11, 12, 13 and 17.

6.4. Interpretative framework for case analysis

The literature review framework offers an interpretative pathway that links relevant theories and previous studies to the analysis of case studies in the Kalik Waterfront Community, Ban Tha Ruea Chang, and the Chanthaboon Waterfront Community. There are four levels of understanding on which the framework is built.

6.4.1. Community landscape level

The work of Douglas and Smith (Douglas, 2012; Smith & Waterton, 2009) indicates that urban and community landscape management is directly associated with quality of life and the ability to preserve cultural heritage. In this sense, the Chanthaboon waterfront area is not just a physical space but a space embedded in cultural and historical values that need to be revitalized.

6.4.2. Mural art and cultural communication level

Studies by Miles, Mathews and Sharp et al. suggest that public art, especially mural art, is important in creating a sense of belonging and promoting community participation (Miles, 1997; Sharp et al., 2005; Mathews, 2010). The main understanding is that murals are not just decorative images but a cultural language that communicates the identity and stories of the Chanthaboon waterfront community.

6.4.3. Cultural tourism and creative economy level

Creative tourism involves tourists' active participation in cultural activities rather than passive consumption through observation alone (Richards, 2018). This suggests that tourists are in search of authentic experiences that are truly linked to the everyday life and cultural practices of local communities. The Chanthaboon Waterfront Community's landscape is being revitalized and mural art is being created to express the local identity, turning the area from a physical space into a cultural experience.

Murals and reimagined landscapes work on this level as cultural capital and as instruments of the creative economy. They have the potential to attract tourists and increase length of stay, stimulate cultural learning activities and generate income for local entrepreneurs. These results extend the role of art as a means for community economic development and establish the Chanthaboon waterfront area as a destination that combines artistic, cultural and economic values.

6.4.4. Sustainable Development Goals level

The last level of interpretation links the transformations taking place in the local area to the larger global context of the Sustainable Development Goals (UNESCO, 2016; United Nations, 2020). In this context, landscape improvement and mural art are considered as main drivers contributing to SDGs 4, 8, 11, 12, 13 and 17.

6.5. Data collection

Site survey and observation The physical environment, public spaces, and

culturally important sites in the community were analyzed. The wall condition, surface deterioration, moisture, circulation patterns, and possible mural locations were analyzed over the Chanthaboon Waterfront Community, Ban Tha Ruea Chang, and the riverside area behind the Roman Catholic church.

Community representatives were consulted and focus group discussions were held before and during design development to collect local stories, cultural references, visual preferences, and practical concerns.

Co-designed the mural paintings through a two-day co-design and mural workshop with residents, students and artists. Day 1 included community consultation, wall preparation, sketch development and transfer, and color planning; Day 2 included collaborative painting, detail refinement, photographic documentation, site cleaning, and post-activity reflection.

Key stakeholders such as community leaders, local businesses, students, artists and tourists were interviewed using a semi structured questionnaire. The main participants' framework consisted of 22 coded informants, selected through purposive sampling: 12 community and local- enterprise stakeholders (coded A01-A12), 5 design and creative participants (coded D01, D02, D03, D04, D05), and 5 institutional partners and visitors (coded E01-E05). Among these, 16 codes (A01–A12, D04, D05, E04, E05) are supported by direct interview statements in question-and-answer format; 5 codes (D01, D02, E01–E03) are supported by summary-level evidence only and are not presented as direct quotations; and code D03 represents a synthesized account drawn from 10 task-based sub-roles (D3-1–D3-10) covering surface preparation, color mixing, sketching, base painting, detail finishing, coordination, intergenerational learning, work with children, photographic documentation, and post-activity site care. The D3 sub-roles were documented as synthesized process notes, not as independently verified individual transcripts, so they are presented descriptively, not counted as additional unique participants in the primary sample; if later verification confirms that D3-1–D3-10 represent ten distinct individuals, then the total documented sample would be expanded accordingly. The semi-structured interview protocol covered five domains: (1) participant background and project role; (2) perceptions of site conditions prior to the intervention; (3) access to information and shared decision-making; (4) learning, skills, and intergenerational relationships; and (5) pride, belonging, visitor responses, and recommendations for continuity.

The project was assessed based on participant feedback, ten task-based reflective records and photographic comparison of selected sites pre and post the intervention.

Ethical considerations Participation was voluntary. Informed consent was obtained prior to interviews, audio recording where applicable and photographic documentation. Personal identifiers were replaced by participant codes and written consent to publish identifiable photographs was obtained from participants or, in the case of minors, from a parent or legal guardian.

Table 1 summarizes the roles, group membership, and evidence status of all 22 primary participant codes.

Table 1. Participant Profile and Evidence Matrix (n = 22 primary codes).

Code	Group	Role / Profile	Evidence Type
A01	Community	Female, 58, resident 45 yrs	Direct interview
A02	Community	Male, 63, resident 60 yrs	Direct interview
A03	Community/enterprise	Female, 42, restaurant owner	Direct interview
A04	Community/enterprise	Male, 50, souvenir-shop owner, resident 35 yrs	Direct interview
A05	Community/family	Female, 38, homemaker, child enrolled locally	Direct interview

Continued table:

Code	Group	Role / Profile	Evidence Type
A06	Community/enterprise	Local restaurant operator, 50	Direct interview
A07	Community/education	Faculty/staff, 34	Direct interview
A08	Community/leadership	Community leader, 54	Direct interview
A09	Community/religious	Religious leader, 35	Direct interview
A10	Community/enterprise	Shop owner adjacent to mural site, 50	Direct interview
A11	Community	Male, 50, resident	Direct interview
A12	Community/enterprise	Female, 40, restaurant owner	Direct interview
D01	Design/creative	Artist/designer	Summary-level only
D02	Design/creative	Student volunteer	Summary-level only
D03	Design/creative	Synthesized account of 10 student/volunteer task-roles (D3-1–D3-10)	Synthesized
D04	Design/creative	3rd-year student, local resident/creative team	Direct interview
D05	Design/creative	Professional artist/designer, 52	Direct interview
E01	Institutional partner	Local government representative	Summary-level only
E02	Institutional partner	Academic institution representative	Summary-level only
E03	Institutional partner	Tourism/area-development coordinator	Summary-level only
E04	Visitor	Female tourist, 30	Direct interview
E05	Visitor	Male tourist, 34	Direct interview

Note: Codes D01, D02, and E01–E03 are supported by summary-level evidence only and are not quoted directly. Code D03 represents a synthesized account of 10 task-based sub-roles (D3-1–D3-10).

6.6. Data analysis

Qualitative thematic analysis was used to identify and categorize community viewpoints, design outcomes, and tourist responses, using a five-stage procedure consistent with Braun and Clarke's (2006) approach to thematic analysis. Familiarization included repeated review of all 16 direct interview records, 5 summary-level records (D01, D02, E01–E03), 10 synthesized D3 task-based notes, workshop notes, observations, and photographs. Second, statements and events were coded for participation, decision-making, cultural representation, ownership, learning, leadership, cooperation, well-being, capability development and place value. Third, codes were clustered into six interrelated themes: (1) stakeholder engagement and shared decision-making; (2) community ownership and responsibility; (3) intergenerational learning; (4) social cohesion and well-being; (5) capacity building and collaborative governance; and (6) cultural tourism and place-based value. Fourth, direct interview quotations and synthesized task-based reflective evidence were explicitly distinguished throughout the coding and reporting. Fifth, themes were linked to the conceptual framework and reported through analytic description, translated illustrative quotations, and explicit limitations.

Triangulation of direct interviews, task-based reflective records, observations, photographs and creative-process documentation strengthened credibility. Dependability was supported by a crosswalk of participant-code to role and evidence type. Transferability was considered through the detailed description of the waterfront context, participant groups, and the two-day implementation process. Reflexivity required the research team to consider their dual roles as facilitators, artists and institutional partners. Direct quotations were checked against the original Thai records for consistency. Task-based records remained explicitly labeled as synthesized evidence.

Table 2 summarizes the six themes that emerged from coding, together with their supporting participant codes and illustrative evidence.

Table 2. Thematic Evidence Summary.

Theme	Supporting Codes	Illustrative Evidence
1. Stakeholder engagement and shared decision-making	A03, A04, A07, D05, E01	“People asked for our opinions before the painting began...the finished image therefore feels like it belongs to the community” (A04)
2. Community ownership and responsibility	A01, A02, A08, A09, D04, D05	“The picture tells the story of our community, so I feel that we must help care for it” (A01)
3. Intergenerational learning	A05, A09, A11, D02, D03, D04	“Older residents told stories to students, and children saw that their hometown has stories to be proud of” (A09, paraphrased)
4. Social cohesion and well-being	A02, A08, A09, A12, D04	“People in the community became closer...it made us feel that this place belongs to everyone” (A02)
5. Capacity building and collaborative governance	D01, D02, D03, D04, D05, E01, E02	“I learned communication, division of responsibilities, and real problem-solving—things that do not appear in textbooks” (D04)
6. Cultural tourism and place-based value	A03, A04, A06, A10, A12, E03, E04, E05	“The murals function like a guide that does not need to speak” (E04)

Note: Supporting codes indicate which participants' accounts contributed to each theme during coding. Illustrative evidence quotations are translated from Thai interview records.

7. Results and discussion

7.1. Landscape improvement

Pedestrian pathways were improved, communal areas were cleaned, and green spaces were installed. These improvements enhanced the usability, safety, and visual quality of public spaces within the community.

7.2. Mural design and implementation

The murals represented riverside culture, religious harmony, historical narratives and tourist attractions.

Weather-resistant paints and sustainable materials were used.

New photo spots and tourist attractions were created for visitors.

7.3. Impact on the community and tourism

Residents developed a strong sense of ownership of the project. Participants related the mural to local memory, pride and a wish to care for the space around them. “The picture tells the story of our community”, said one long-term resident (A01). “So I feel we have to help to look after it. I don’t want anyone to write on it or to destroy it” (translated interview statement). A community leader (A08) noted that visible improvements motivated residents to clean and maintain the areas around their homes and shops.

Tourism: Good feedback from tourists, authenticity & creativity mentioned. A visitor (E04) described the murals as serving “like a guide that does not need to speak,” explaining that “by looking at them, visitors can sense the way of life, cultural diversity, and the community’s relationship with the river” (translated interview statement). Local entrepreneurs (A03, A06, A10, A12) also reported increased visitor photography, inquiries and patronage of nearby food businesses after the intervention; these accounts suggest perceived experiential change rather than verified increases in visitor numbers or revenue.

The process enhanced intergenerational learning by involving youth in heritage preservation through art. “I was happy to see children in the community creating images drawn from the places and culture of Chanthaburi,” said A05, mother of a school-age participant. “They can learn that their hometown has stories to be proud of” (interview statement, translated). Similarly, a religious leader (A09) and a long-term resident (A11) described older residents sharing

local history, religious coexistence, and riverside ways of life with students and younger community members during the workshop.

7.4. Human and social outcomes

Apart from the physical results, the participatory process produced important human and social benefits. Partnerships between community members, students, artists, local leadership, and supporting organizations increased stakeholder relationships and promoted shared responsibility for community development activities. “People asked for our opinions before the painting began—what we wanted to see in the image,” said a souvenir-shop owner (A04) in describing this sense of shared ownership as being involved in the process before the painting was started. It felt good to be talking and making suggestions, instead of just letting an artist paint whatever he pleased. The final image then gives the “feeling of belonging to the community” (interview statement translated). This view was confirmed by participating artist/designer from the creative team (D05): “We have to listen more, observe and put aside some of the artist’s ego so that the work genuinely belongs to the community” (translated interview statement).

The participatory process fostered social cohesion by providing opportunities for interaction and cooperation among participants of different ages and social backgrounds. As one long-time resident (A02) recalled, “People in the community became closer. They came to help, watch, talk and stay nearby while the mural was being painted. Some brought water for the students . It made us feel that this place is for all” (interview statement, translated). Residents reported greater sense of community ownership and willingness to engage in future community initiatives. In addition, the collaborative mural painting activities encouraged intergenerational learning, allowing younger participants to learn about local culture and heritage directly from senior community members; a third year student and creative team participant (D04) said the process was “painting together with the community” rather than painting for it.

The implementation process in two days allowed the acquisition of technical, organizational and relational skills reflected in the capacity building outcomes. The ten task-based participants described learning in the areas of wall-condition assessment, surface preparation, color mixing, image enlargement, base painting, detail finishing, coordination, intergenerational communication, work with children and youth, and post-activity care. “I learned communication, division of responsibilities and real problem solving, things that do not appear in the textbooks in the same way” (interview statement, translated). The differentiated responsibilities indicate a capacity building through structured task allocation than informal exposure alone (Heidarzadeh et al., 2025).

The evidence also demonstrates increased community well-being through greater social interaction, shared accomplishments and a greater sense of belonging. This change was echoed in a community entrepreneur (A12): “When beautiful murals came along, it was like a new breath had come into the community” (translated interview statement). These outcomes imply that community-based participatory projects can act as effective tools for building community capacity and ensuring sustainable stakeholder engagement (Saks, 2006). Given that the evidence is based on a single two-day implementation period and 16 direct interviews, these findings should be interpreted as preliminary, qualitatively supported outcomes rather than verified long-term change; durability of well-being and cohesion effects would require longitudinal follow-up. **Table 3** lists the source of the evidence and the strength qualification (Supported or Preliminary) for each of the key outcomes discussed in this section.

Table 3. Evidence-Strength Qualification of Key Outcomes.

Outcome	Evidence Source	Status	Rationale
Community ownership	Direct interviews (A01, A02, A08, A09); observation of clean-up behavior	Supported	Convergent evidence across multiple codes and observation
Stakeholder engagement / shared decision-making	Direct interviews (A03, A04, A07, D05)	Supported	Convergent evidence across community and creative-team codes
Intergenerational learning	Direct interviews (A05, A09, A11, D04); D3 synthesized notes	Supported	Convergent across direct and synthesized sources
Capacity building (skills, task roles)	Direct interview (D04); D3 synthesized task-role notes	Supported	Specific, differentiated task evidence; D3 portion not independently verified
Social cohesion	Direct interviews (A02, A08, A09, A12, D04)	Preliminary	Positive short-term accounts; no longitudinal or comparison data
Community well-being	Direct interview (A12); general interview tone	Preliminary	Single 2-day implementation window; durability unconfirmed
Tourism / visitor and economic impact	Direct interviews (A03, A06, A10, A12, E04, E05)	Preliminary	Perceived experiential change only; no visitor count or revenue data

Note: “Supported” indicates convergent evidence from multiple direct sources; “Preliminary” indicates a positive, qualitatively grounded outcome that requires longitudinal or quantitative confirmation before being treated as established long-term change.

7.5. Discussion

The findings confirm that mural paintings serve as an aesthetic element but also as a cultural mediator between the community and the visitors. Similar to worldwide case studies (Miles, 1997; Sharp et al., 2005; Mathews, 2010), the murals in Chanthaboon help to enhance place identity and encourage cultural tourism.

The initiative also contributes to the Sustainable Development Goals. The effort to make heritage communities more inclusive and sustainable reflects SDG 11. Responsible use of materials and waste management helps to support SDG 12. The climate awareness and green space development are part of SDG 13. SDG 17 is represented through multi-stakeholder partnerships (Ordóñez-Ponce, 2025).

The CBPD model applied in this study is more in line with recent calls in management literature for human-centred approaches that treat stakeholders as active co-creators of value rather than as passive beneficiaries, compared with top-down community development programmes (Parmar et al., 2022). Conventional project management tends to be more focused on efficiency and delivery of outputs. Human-centred management is more focused on voice, shared ownership and building local capacity –outcomes this study shows can be achieved in a short, structured implementation window. This distinction represents the primary theoretical contribution of the present study: it operationalises human-centred management as a community governance mechanism, demonstrating how participatory design can translate abstract engagement principles into concrete, measurable human and social outcomes.

8. Management implications

The findings have several implications for human-centred management and community development practice. Participatory design activities can also serve as management tools to enhance stakeholder participation and foster trust between community members and partner organizations. Second, collaborative projects promote shared responsibility and help build social capital, which is needed for communities’ long-term sustainability. Third, community-based participatory approaches may be used as practical strategies by local governments and community organizations to enhance community wellbeing, promote inclusive decision-making and support sustainable management outcomes. The findings demonstrate that creative community projects can serve not only environmental

and cultural goals but also broader human resource and stakeholder management goals.

9. Conclusion

This study demonstrates that CBPD is an effective human-oriented management strategy for sustainable community development instead of a method for community development and environmental improvement. In Chanthaboon Riverside Community, local people, community leaders, artists, students, educational institutions and local authorities were actively engaged in planning, implementation and evaluation processes through collaborative landscape improvement and mural painting activities. The evidence suggests that stakeholder participation and participatory management were important in enhancing community capacity, improving collaborative problem solving and encouraging shared responsibility for community development. The initiative also strengthened social cohesion through trust, co-operation, inter-generational learning and better social relations between participants. Furthermore, involvement in community-based activities also contributed to the improvement of community well-being through the promotion of local pride, sense of belonging and ownership of public spaces. The study highlights the importance of the use of participatory design, stakeholder involvement and concepts of human-centered management in community development projects. These approaches may help to contribute to sustainable community management by improving social capital, community resilience and the long-term commitment of stakeholders. The results also contribute to many Sustainable Development Goals, particularly SDGs 4, 8, 11, 12, 13 and 17. The findings have practical implications for community managers, policy makers, educational institutions and development practitioners in formulating inclusive and sustainable strategies for community development and stakeholder engagement.

10. Limitations

The bounded case and the culturally specific waterfront context limit the transferability of the findings to other communities. Transferability depends on the similarity of governance structures, heritage conditions, stakeholder relationships and institutional support.

The two-day implementation window limits the assessment of long-term maintenance, sustained participation, durable tourism effects, and lasting change in social cohesion or well-being; the findings should be interpreted as short-term, preliminary outcomes.

Some participants had attended workshops or interviews which may have influenced the qualitative findings through self-selection bias, with those involved in community development having more positive attitudes to community development than those not involved.

Researchers were also artists, facilitators, and institutional partners who may have influenced participant responses and thematic interpretation; reflexive documentation and independent review help to address, but do not eliminate, this positionality effect. Tourism growth, social cohesion and well-being claims are constrained in the absence of baseline data, comparison groups, standardized measures and longitudinal follow-up.

The dataset comprised 16 codes with direct question and answer interviews, 5 codes with evidence at summary level only, and 1 code (D03) with a synthesized account of 10 task-based sub-roles. The synthesized and summary level material provide useful process evidence but because it was not transcribed verbatim or independently checked, it should not be treated as direct quotations or substitute for full audio transcripts. We need to count the distinct persons in the D3 sub-roles before reporting them as other distinct participants.

Apart from these methodological limitations there were a number of operational constraints that affected implementation such as the short duration of the project limiting assessment of long-term impacts.

Budgetary constraints limited mural production.

Paint durability was affected by seasonal weather conditions.

11. Recommendations for future research

Longitudinal studies of socioeconomic effects of mural painting projects.

Comparative studies with other heritage communities in South East Asia.

Leverage digital media such as AR murals and QR codes to enhance cultural storytelling.

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