

## Analysis of the Impact of The Muaro Jambi Temple Area Development on the Social And Economic Environment of the Local Community

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### Abstract

**Introduction:** The arrangement of cultural heritage areas is an important strategy in preserving historical heritage while encouraging social and economic growth of the community. The Muaro Jambi Temple area, as one of the largest archaeological sites in Southeast Asia, has significant historical, cultural, and spiritual value.

**Objective:** This study aims to analyze the impact of the arrangement of the Muaro Jambi Temple on the physical, social, and economic environment of the community in Muaro Jambi Village and Kemingking Luar Village.

**Method:** The method used is a quantitative descriptive survey approach through the distribution of questionnaires to 43 respondents selected using purposive and simple random sampling techniques.

**Results and Discussion:** The results indicate that the development of the area has had a positive impact on environmental aspects such as infrastructure improvements, waste management, and area conservation. From a social perspective, there has been an increase in community participation, social interaction, and awareness of cultural preservation. Economically, the development of the area has encouraged business opportunities, increased community income, and the growth of both the formal and informal sectors.

**Conclusion:** The development of the Muaro Jambi Temple area has proven significant in improving the social and economic quality of the surrounding community, although further optimization of sustainable planning and comprehensive community involvement is still needed.

## **Introduction**

Preservation of cultural heritage must be aligned with aspects of cultural heritage that have a beneficial impact on society. Therefore, it is crucial to involve community members in efforts aimed at preserving cultural heritage, as it will impact the environmental, social, and economic aspects of the community. The Muaro Jambi Temple area is one of the largest archaeological sites in Indonesia, possessing significant historical, cultural, and archaeological value. Located in Muaro Jambi Regency, Jambi Province, this area covers an area of 3,981 hectares and consists of several temples and various cultural relics from the Srivijaya and Malay Kingdoms. The existence of Muaro Jambi Temple is not only a historical site, but also an integral part of the cultural identity of the local community. (Mardiansyah, 2023).

The Indonesian government, through various policies, has implemented various environmental management and preservation efforts in this area to ensure its sustainability. This environmental management includes infrastructure development, tourism facilities, and cultural heritage preservation efforts. However, environmental management in the Muaro Jambi Temple area cannot be separated from its impact on the surrounding environment, society, and economy (Nurhadi & Suryadi, 2022). Based on Government Regulation (PP) Number 26 of 2008 concerning the National Spatial Planning Plan, National Strategic Areas are areas whose spatial planning is prioritized because they have a very important influence nationally on state sovereignty, state defense and security, economy, social, culture, and/or the environment, including areas designated as world heritage.

Environmental planning in the Muaro Jambi Temple area is one of the government's efforts to advance Indonesian culture. Environmental planning at Muaro Jambi Temple will not only impact cultural progress in Indonesia but also impact the communities surrounding the national cultural heritage area in Muaro Jambi. These environmental impacts include social impacts and improvements in the local economy. The environmental planning at Muaro Jambi Temple area has seen a positive impact on community life, particularly on farmers, as the majority of the population in the Muaro Jambi Temple area is engaged in farming. With proper management, including environmental planning, it is likely to attract tourists to visit as a learning platform for culture, tourism, and religion, while also significantly impacting the social and economic well-being of the surrounding community. Environmental impacts resulting from this planning include changes in land use, potential environmental degradation, and impacts on the area's biodiversity.

Development activities in this area can damage the local ecosystem, impacting the flora and fauna. In addition to environmental impacts, the redevelopment of this area also brings social impacts, particularly in terms of changing community lifestyles. Communities that previously relied on traditional farming and fishing activities must now adapt to the changes brought about by tourism development. Economically, this redevelopment provides opportunities for local economic development. Increasing tourist visits to the Muaro Jambi Temple area can open up new business opportunities for the community, such as providing accommodation, food, and other tourism services. These changes create new opportunities, but also present challenges, such as unequal access to resources, potential social conflict, and changes in local cultural values.

The Muaro Jambi Temple complex is one of the largest temple complexes in Southeast Asia and holds significant historical, cultural, and spiritual value. In recent years, the government, along with relevant stakeholders, has been developing the area's

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environment to enhance the preservation and development of cultural tourism. This development includes tourism infrastructure development, site conservation, and zoning of cultural heritage areas. Muaro Jambi, a regency in Jambi Province, has the second-highest population density after Jambi City, with a population of 418.8 million people. Muaro Jambi and Kemingking Luar villages were selected as research subjects based on strong strategic and contextual considerations. These two villages are part of the Muaro Jambi Temple complex, which holds significant historical, cultural, and archaeological significance, particularly due to the presence of the Muaro Jambi Temple site, one of the largest and most magnificent temple complexes dating back to the Srivijaya Kingdom. Muaro Jambi Village has a population of 2,607 and Kemingking Luar Village 456, indicating that both are quite representative as part of the local community directly impacted by environmental planning in the cultural heritage area. The government's planning of this area, which includes the construction of infrastructure such as roads, piers, public spaces, and tourism facilities, aims to support cultural preservation while encouraging cultural advancement as mandated by Law Number 5 of 2017 concerning Cultural Advancement. However, this planning process is not without various challenges, such as changes in community lifestyles, potential conflicts of interest between stakeholders, and impacts on agricultural activities which are the community's main livelihood.

This location was chosen based on the strong interaction between the community and the cultural heritage area, so changes resulting from environmental planning will be more visible in the social and economic aspects of the surrounding community. Furthermore, these two villages have diverse socio-cultural characteristics and are representative enough to see how the impact of planning can differ depending on the community's condition. This phenomenon is interesting to study more deeply, considering the importance of balancing the preservation of cultural heritage sites with the empowerment of local communities. Therefore, an academic study is needed that comprehensively analyzes the impact of environmental planning at Muaro Jambi Temple on the social and economic environment of the surrounding community. This aims to assess the extent to which the planning policy has provided benefits to the surrounding community, while also identifying potential risks that may arise. This way, the planning policy can be adjusted to minimize negative impacts and maximize benefits for all parties involved. Given the importance of Muaro Jambi Temple as a national cultural heritage and economic resource for the surrounding community, an in-depth analysis of the impact of environmental planning implementation in this area is necessary.

## **Method**

The type of research used in this study is a quantitative research method with a descriptive research type. This research was conducted from May to June 2025, in two villages based on the impact, namely Muaro Jambi Village and Kemingking Luar Village and the surrounding community. The data sources used are primary data and secondary data, theses consist of used library books, theses, journals and documents related to the implementation of the research. The total sample in the study was 43 people obtained based on a proportion of 5% of the number of families in each village, which will then be taken randomly from the family list using a simple random sampling technique where 37 families from Muaro Jambi Village and 6 families from Kemingking Luar Village

## Results and Discussion

### The Impact of Arrangement on the Physical Environmental Conditions Around Muaro Jambi Temple

The data collected included community perceptions regarding accessibility, infrastructure conditions, water quality, and waste management prior to the redevelopment. The following table presents a description of respondents' responses:

**Table 1**

Analysis of Respondents' Answer Descriptions on the Impact of Arrangement on the Physical Environment

No	Indicator	Before					After				
		STS	TS	KS	S	SS	STS	TS	KS	S	SS
1	Land Utilization	27.6	35.7	36.7	0	0	0	0.4	24.8	64.8	10
2	Circulation	33.3	31.9	34.8	0	0	0	1	15.2	75.2	8.6
3	Pedestrian Path	27.6	37.7	34.7	0	0	0	0	20.5	68.1	11.4
4	Signs or Clues	36.7	30.5	32.8	0	0	0	0.4	18.6	70.5	10.5
5	Air Quality	29.0	34.3	36.7	0	0	0	0	22.8	67.2	10
6	Cleanliness of the Area	38.1	30.5	31.4	0	0	0	0.4	18.6	72.9	8.1
7	Water Quality	32.4	31.9	35.7	0	0	0	0.4	21	67.6	11
8	Area Noise Level	35.2	29.1	35.7	0	0	0	0	17.6	73.3	9.1
9	Building Condition	36.2	34.3	29.5	0	0	0	0	19.5	72.9	7.5
10	Water Supply Conditions	31.4	36.2	32.4	0	0	0	0	22.8	65.8	11.4
11	Environmental Drainage Conditions	34.8	32.8	32.4	0	0	0	0	19.5	70	10.5
12	Waste management	30	34.8	35.2	0	0	0	0	26.7	59.5	13.8
13	Fire Protection Conditions	36.2	34.8	29.0	0	0	0	0	14.8	74.3	10.9

Based on the summary of questionnaire data in Table 1 regarding 13 physical environmental indicators prior to the redevelopment of the Muaro Jambi Temple area, it can be concluded that the majority of respondents gave negative assessments, with a predominance of "Strongly Disagree" and "Disagree" categories. The area's cleanliness indicator recorded the highest percentage in the "Strongly Disagree" category at 38.1%, followed by signs or directional signs (36.7%), building condition (36.2%), and drainage system (34.8%). This indicates that prior to the redevelopment, the area lacked a proper sanitation system, lacked visual information, and lacked proper buildings and basic infrastructure.

Negative impacts experienced prior to the redevelopment included poor land use, which left the area looking chaotic and disorganized. Circulation and pedestrian paths were poorly organized, complicating visitor movement and endangering their safety. The lack of directional signs made navigation within the temple area confusing. Air quality was also perceived as poor, possibly due to the lack of green open space or high levels of pollution in the area. Poor environmental hygiene makes the area appear squalid and uncomfortable. Furthermore, supporting facilities such as drainage channels, clean water supply, and waste management are inadequate, increasing the risk of flooding, waterlogging, and pollution. Fire protection is also considered inadequate, posing a threat to the preservation of this cultural heritage area.

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Prior to the redevelopment, land use in the Muaro Jambi Temple area was chaotic, with many areas neglected and lacking clear functions. Visitors had difficulty navigating the area due to inadequate paths, narrow access, and a lack of signage. Poor drainage caused water to pool during the rainy season, while environmental cleanliness was neglected, making the area appear untidy and uncomfortable. Furthermore, the air felt stuffy due to a lack of maintained vegetation, and the waste management system was suboptimal. After the redevelopment, land use became more organized, functional, and supported visitor comfort. Circulation and pedestrian paths were improved, facilitating access and movement around the temple area. Well-established signage now helps visitors navigate the site without difficulty. Air quality and cleanliness of the area have also improved, reflecting better environmental management and attention to aesthetics and environmental health.

**Impact of Arrangement on Social Conditions Around Muaro Jambi Temple**

Data were obtained by distributing questionnaires to respondents living in the area, focusing on social aspects such as relationships between residents, community service activities, and participation in community activities. The results of these responses were analyzed and presented in the following table:

**Table 2**  
 Analysis of Respondents' Answer Descriptions on the Impact of Arrangement on Social Conditions of the Community

No	Indicator	Before					After				
		STS	TS	KS	S	SS	STS	TS	KS	S	SS
1	Availability of gathering place	33.3	32.4	34.3	0	0	8.09	31.4	27.6	29.1	3.8
2	The existence of a place for community activities	35.3	31.4	33.3	0	0	5.7	15.2	33.3	40.5	5.3
3	Social interaction in society	36.2	33.8	30	0	0	1.9	16.7	29.0	37.6	14.8
4	Changes in people's way of thinking	32.4	33.8	33.8	0	0	1.9	18.1	27.6	40	12.4
5	Increasing community participation in conservation	33.8	33.8	32.4	0	0	1.9	14.8	27.1	43.3	12.9
6	Empowerment of local community economy	33.3	32.4	34.3	0	0	4.3	15.7	17.1	47.7	15.2
7	Availability of public space	30.5	39.0	30.5	0	0	3.3	14.8	25.7	47.7	8.5
8	Social impact	36.2	31	32.8	0	0	3.8	17.6	21.4	47.7	9.5

Environmental management in the Muaro Jambi Temple area has not shown significant social changes in public perception. This is evident from various social indicators that are still dominated by the "Disagree" (KS) category, both before and after the management. Regarding the indicators of changes in community mindsets and increased participation in conservation, before the management, the majority of the community expressed disagreement (more than 66% combined STS and TS). Although after the management there was a slight increase in the S and SS categories (a total of

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52.4% for conservation participation), the KS value remained quite high (27.1%), indicating that some people are still passive or not very involved. Prior to the environmental planning of the Muaro Jambi Temple area, the community's social conditions were considered suboptimal. This was reflected in the lack of adequate social facilities, such as gathering places and community activity spaces, which limited interaction between residents. Furthermore, the community tended to be passive toward environmental and cultural heritage preservation. Conventional thinking and a lack of collective awareness of the area's potential also hindered the creation of positive social change. This negatively impacted the community's social dynamics, including low involvement in communal activities, limited opportunities for local economic empowerment, and a lack of functional public spaces.

Following the restructuring, positive shifts in the community's social conditions began to emerge. Residents began to gain access to improved public facilities, such as gathering spaces and activity areas for social and economic activities. Social interaction among residents also increased as spaces became available that enabled people to communicate and participate. Furthermore, a new awareness of the importance of preserving cultural heritage areas indicated a shift in mindset toward a more progressive approach. Communities began to participate in various preservation activities, and local economic empowerment began to grow through involvement in activities based on local potential, such as tourism and cultural products. Based on interviews with local residents, researchers reported that the positive impacts felt by the environmental management program are still very limited. The government also lacks community involvement in activities around the area, only involving them under certain circumstances, such as providing food during events. This suggests that the social dimension has not been a priority in the implementation of the management program. However, active and comprehensive social involvement is crucial for building social solidarity, strengthening community cohesion, and ensuring the sustainability of the management program itself.

### **Impact of Arrangement on Economic Conditions Around Muaro Jambi Temple**

The following table presents the percentage of respondents in each category against ten predetermined economic indicators, both before and after the implementation of environmental planning. This data serves as the basis for analyzing the extent to which the economic impacts are felt by the community and identifying any shifts in perception indicating an increase, decrease, or no change in the economic conditions of the community at the study site.

**Table 3**  
 Analysis of Respondents' Answer Descriptions on the Impact of Arrangement on the Community's Economic Conditions

No	Indicator	Before					After				
		STS	TS	KS	S	SS	STS	TS	KS	S	SS
1	Job Creation	30.9	34.3	34.8	0	0	4.8	21	39.5	29.5	6.2
2	Increasing Education	35.2	32.4	32.4	0	0	9.1	21.9	39.5	29.5	0
3	Improving the Community's Standard of Living	30.5	30.5	39.0	0	0	5.2	25.2	41.4	28.1	0
4	Increased Economic Activity	32.4	31.4	36.2	0	0	6.2	15.7	45.7	32.4	0
5	Increase in the Number of Local Tourists	28.6	37.6	33.8	0	0	10	17.6	30.5	41.9	0
6	Increased Investment	36.7	30.9	32.4	0	0	7.6	23.9	31.4	37.1	0
7	There is Financial Benefit	31.4	39.1	29.5	0	0	7.6	21.9	29.1	41.4	0
8	Improving the Formal and Informal Sectors	32.9	32.9	34.2	0	0	5.8	25.2	31.9	37.1	0
9	Improving Event Management	35.7	30.5	33.8	0	0	5.2	16.2	38.1	40.5	0
10	Increase in Tourists	32.4	34.3	33.3	0	0	3.8	18.6	38.6	39.0	0

Based on the data obtained, public perception of economic impact indicators showed an increase in the "Agree" (S) and "Strongly Agree" (SS) categories after the implementation of environmental planning. For example, for the employment provision indicator, the "Agree" response increased from 0% to 29.5% and the "Strongly Agree" response from 0% to 6.2%. Similarly, for the increased economic activity indicator, the "Agree" category increased from 0% to 32.4%. After the planning, specifically for the employment provision indicator, 35.7% of respondents agreed and strongly agreed. A similar trend was observed for the increased economic activity indicator, where 32.4% agreed and 6.2% strongly agreed. However, the majority of respondents still disagreed with the implementation of environmental planning because they felt that some of the facilities built hampered economic growth. This was due to restrictions on MSMEs operating within the temple area.

Overall, environmental planning creates new opportunities for tourism-based economic growth, but not all residents have access to or benefit from these benefits equally. This creates a gap between perceptions and the reality on the ground, indicating that the implementation of the planning still requires improvement, particularly in terms of local economic empowerment and policy sustainability. Based on interviews conducted by researchers with residents of Kemingking Luar Village, the implementation of the environmental planning did not have a significant economic impact on the community. This is because most residents in the area do not directly depend on economic activities in the temple area, and their involvement in the planning activities was minimal. Therefore, neither perceptions nor reality on the ground indicate significant changes in their economic conditions before and after the planning. Thus, despite an increase in positive perceptions in the quantitative data, the economic impact felt by the community, particularly in the first location, actually decreased due to restrictions on business access. Meanwhile, in the second location, the impact tended to be neutral or non-existent. This

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is an important note so that going forward, environmental planning implementation pays more attention to sustainability and equitable distribution of economic benefits for all affected communities.

### **Conclusion**

Based on the research results and discussions, the conclusion obtained in this study is that the arrangement of the Muaro Jambi Temple area is carried out through infrastructure development, public space arrangement, site preservation, and community involvement. This effort prioritizes the preservation of cultural values with a cross-sectoral approach. The impact of the arrangement on the physical environmental conditions in the Muaro Jambi Temple area is very significant. Before the arrangement, the area was unorganized, with minimal public facilities, damaged access routes, and the absence of public toilets, trash cans, and information centers. After the arrangement, there was a significant improvement through the provision of pedestrian paths, toilets, official kiosks, directions, seating, good drainage, and a cleaner and safer environment. In addition, digitalization facilities began to be implemented such as modern information boards and technology-based information systems.

The results of the Wilcoxon test showed a significant difference, proving that the arrangement succeeded in significantly improving the physical quality of the area. The impact of the arrangement on the social conditions of the community around Muaro Jambi Temple began to show changes, although not evenly. Before the arrangement, the community did not have access to public spaces for interaction or social activity facilities. After the arrangement, gathering places began to be available and preservation activities involved the community. Cultural awareness and concern for the area also increased. The impact of the restructuring on the economic conditions of the community around Muaro Jambi Temple indicates a shift from informal economic activity to a more structured formal economy. Before the restructuring, people traded freely without regulation and relied on uncertain daily income. After the restructuring, formal kiosks were provided and economic activity began to return to normal. However, the access restrictions have resulted in some residents losing their source of income, as they are no longer able to sell freely.



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