

International Conference on Engineering and Technology Development



3rd ICETD 2014

28, 29 October 2014, Bandar Lampung, Indonesia

Hosted By :

Faculty of Engineering and Faculty of Computer Science
Bandar Lampung University, Indonesia



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3rd ICETD 2014

THE THIRD INTERNATIONAL CONFERENCE
ON ENGINEERING AND TECHNOLOGY DEVELOPMENT

28 -29 October 2014
Bandar Lampung University (UBL)
Lampung, Indonesia

PROCEEDINGS

Organized by:



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PREFACE

The Activities of the International Conference is in line and very appropriate with the vision and mission of Bandar Lampung University (UBL) to promote training and education as well as research in these areas.

On behalf of the Second International Conference on Engineering and Technology Development (3rd ICETD 2014) organizing committee, we are very pleased with the very good response especially from the keynote speaker and from the participants. It is noteworthy to point out that about 80 technical papers were received for this conference.

The participants of the conference come from many well known universities, among others : University Kebangsaan Malaysia – Malaysia, IEEE – Indonesia, Institut Teknologi sepuluh November – Indonesia, Surya Institute – Indonesia, International Islamic University – Malaysia, STMIK Mitra Lampung – Lampung, Bandung Institut of Technology – Bandung, Lecture of The Malahayati University, B2TP – BPPT Researcher – Lampung, University of Kitakyushu – Japan, Gadjah Mada University – Indonesia, Universitas Malahayati – Lampung, Lampung University – Lampung,

I would like to express my deepest gratitude to the International Advisory Board members, sponsor and also to all keynote speakers and all participants. I am also grateful to all organizing committee and all of the reviewers who contribute to the high standard of the conference. Also I would like to express my deepest gratitude to the Rector of Bandar Lampung University (UBL) who give us endless support to these activities, so that the conference can be administrated on time

Bandar Lampung, 22 October 2014

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Urban Tourism Development Through Low Impact Development (LID) Towards Green-Tourism

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Abstract : World Tourism Organization (WTO), is one of the global issues on the international scene, because of the impact of tourism activities on the development and improvement of the economic, social, cultural and environmental quality to the green-tourism. It is based with the Surakarta- city as tourism and cultural city towards the eco-city culture.

The aim of the research, will focus on urban tourism and build formulation development through low impact development, in the realization of green-tourism. It is based on explorative descriptive method combined with the mapping spatial of potential physical character (layout, building, and environment), included cultural, social and economic effects of tourism. The location of the research is Kauman urban settlement having a valuable unique and local potential and also its activities which are still exist right now.

The result of the research, shows that the existence layout and environment of Kauman urban settlement has not been handled optimally. Moreover, it tends to lose its characteristics because it isn't protected. Therefore, structuring a tourist area that emphasizes the use of natural and cultural resources wisely by prioritizing continued existence and local knowledge to minimize the negative impacts of tourism on the environment. The concept is conceived for all parties concerned agreed that the application does not give rise to contradictions between the various interests, useful as a guide to apply sustainable development of urban tourism is paying attention to the environment and local communities.

The conclusion, that purposed to fulfill the formulated of urban tourism development policies that are environmentally friendly and sustainable.

Keyword : urban tourism, low impact development and green-tourism

I. INTRODUCTION

A historical district in urban architecture is one of the assets of a tourist attraction that will provide strong continuity bond, between the past, present and future. It is, born with the

idea of serial vision, stating that combines heritage tourism and cultural significance of the work of architecture as a sustainable tourist village.

On the other hand, tourism is a global issue as the focus of international attention through the WTO (World Tourism Organization) in improving the economic, social, cultural, and environmental dimensions. Until now the Government and relevant stakeholders have not noticed the existence of domesticated tourist village which has local knowledge as a valuable asset to the green-tourism. The tourist village is a comprehensive development by integrating the various stakeholders related to the increase in the potential influence of local wisdom. In fact, people tend to not pay attention and understand the potential existence of local knowledge can be packaged tourist village green-tourism as an asset of great value.

The research was carried out in an integrated manner, based on a descriptive exploratory method, a blend of indigenous studies at potentials characteristic spatial structure, as well as cultural and socio-economic mapping behavior setting with green-tourism approach. Until now, no study has recommended the formulation of the model on the concept of village tourism development as the realization of green-tourism. Therefore, this study as well as the formulation of village tourism development model as the embodiment of green-tourism through the exploration potential of indigenous domestication characteristics (physical and non-physical), with variable green-tourism.

Thus the potential for domestication of indigenous areas can be preserved, developed and packaged into asset green-tourism in the development of appropriate tourist Lampung, unique and original. For the Architectural Heritage Assessment Unit (UKHA) FT. UNS has a moral obligation to care about the action initiated this study in accordance with the RIP and road map UNS in 2009-2020 on the preparation of conservation, domestication, conservation.

Kauman village is known as the hometown of the students, in this village residence palace courtiers in charge of the mosque Big Kauman courtiers and most established schools in his home, hence this village came to be known as the hometown students. In addition to the expertise of managing mosques and schools, the courtiers has a privilege in batik. Therefore entrust the King of Surakarta batik work on the courtiers 'kaum' is. Batik is a special work orders from the King and not the routine work that is considered special because it is a job that has been "chosen" king

In the development, the village developed into a village Kauman 'Ketib' (mosque of courtiers) as well as the village of batik (batik batik specifically for the king not to the general public). Until now this village is still known as the hometown Ketib / students because the character persists in this village.

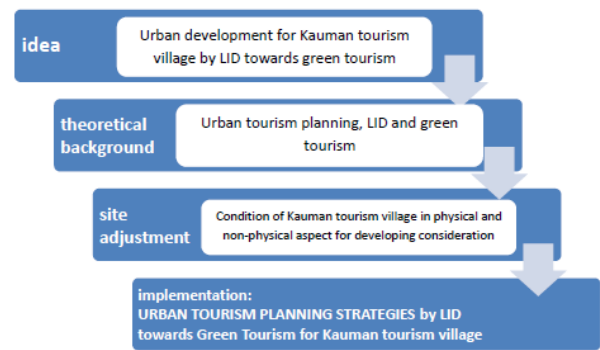
Because of this unique village is known as the tourist village and in the growth of many new buildings have sprung up to support the functions of this tourist village, on the other hand the emergence of many new buildings will have an impact on environmental quality. Program in line with the town of Surakarta as a cultural city, the development of the area leads to the concept of green. Kauman region is suitable to serve as a tourist village pilot project to implement the system LID (low impact development) to make Kauman region with a unique and distinct character to the concept of green tourism area.

The purpose of this study was to determine how the concept and application of urban tourism development in Kauman by implementing LID towards green.

Having regard to the Constitution No. 5 of 1992 on tourism, a team of Architectural Heritage Studies FT UNS as a learning center of Javanese culture, Puspari UNS and the Indonesian Heritage Preservation Board and the Ministry of Tourism and culture of the charter tourism to avoid tourist areas management inattentive potential domestication character wisdom thus damaging the local environment diwujudkanlah Tourism Village Through Low Impact Development In embodiment Green Tourism

II. METHODOLOGY

The study was conducted in the historical district of Surakarta Kauman tourist village, based on local knowledge of potential factors that have historical value. Village Kauman selected as the research object because it is associated with the presence of Surakarta palace compound as a symbol of a cultural center that still exist. The study begins with the primary and secondary data collection, verification and subsequent data processing. Data collection through: a). surveys and interviews with questionnaires to map the socio-economic and cultural conditions, b). methods refer and reference maps, as well as c). FGD and PRA to capture the needs and aspirations of the people. Data processing using SWOT analysis techniques, descriptive statistics and interactive analysis and behavioral approaches background.



Gambar 1: Research Framework

III. RESULT AND DISCUSSION

1. Development of Village Tourism

Kauman region as a whole is a conservation area with Significance Cultural values are high enough to be preserved.

- Historical: have a close attachment with formation Kasunanan Royal Palaces, which is a residential Abdi Dalem / cleric Grand Mosque.
- Culture: an area formerly known as Abdi Dalem Masjid Kampung area and is often referred to as the hometown students in the city center, in the spread of Islam must be acculturation between Islamic culture and beliefs.
- Building: The main function of the building is a residential area Kauman or residential, residential buildings with traditional Javanese structuring monetary affairs. Distribution of private space to public use levels in the hierarchy floor split-level differences. In addition, as the Palace courtiers scholars who are financially able to build magnificent houses and beautiful.
- Building home industry batik showrooms
Home building industry is an additional building opens with a simple structure. Processing in addition to its function of making batik cloth, also used as a temporary shelter, for the batik / workers.
 - ↳ Building Lojen / showcase batik Building shop / lojen also an additional enclosed building. Its function is in addition to the sales showroom showroom is also used as a place to stay the pelanggan-tetap/saudagar who come from out of town. An additional facility to trade in direct contact with the road. Its function as a public space, so that the architectural style applied more unique and complete with details. From the data that has been presented, the district Kauman unique tourist village and has a distinctive character which should be developed and preserved since there are cultural values and history of high viscosity which is related to the history of the formation of Surakarta, especially Kasunanan palace.

A. Development vision of tourism

In the vision concerning the development of tourism destinations tourism development, described in the direction of development of active community engagement role. Society has a role and strategic position is as a subject and as beneficiaries of development, are stakeholders in tourism development (Stupa, 2010).

Thus, the above illustration shows that there is still much to be done to improve the capability and capacity of local communities so participation have strong roles and access to be able to take part in a greater variety of tourism development efforts in their respective areas.

B. Kampung City

Suhartanti (2000), says that is a typical characteristic of Indonesian life, the settlement must reflect the presence of family life, the degree of worth, religious harmony and promote mutual support and mutual benefit. Thus the character of the settlement that grew to support the development of tourist villages in Surakarta. There are three main components as the basic foundation of the development of the city kampung (Access; resources and motivation, with different ability levels of each component, it will be in shape or different phenomena in the city village. Components

are:



Figure 2: Eight Components Shaping Tourism Village
Sources: Typologi tourist village, Wiwik, 2011

C. Tourism Village

Lane (1994) argues that the tourist village is a series of activities taking place in the tourism village. The idea of the tourist village stems from the demand of tourists come to visit several villages tersendiri. Oleh considered unique because the atmosphere and the lives and traditions of the local people of the local village is a major asset in the development of village tourism (Bramwell, 1994). Further Lane (1994) says that the tourist village is a series of activities taking place in the tourism village. Village tourism

is a form of tourism that relies on the object and appeal in the form of village life with a special unique character in the local community, including its culture, which has a chance to be a commodity for visitors / tourists, and all generated by the activities in the village will be enjoyed by local people directly. Support the active role of community participation is crucial in the survival of village tourism destinations (Ganon, Agness, 1992). Added to Setyaningsih (2013) found that the community needs to turn its attention to the loss of character of the buildings in Kauman, if the Kauman area is further developed considering only economic activities and not conservational issues. In the meantime, local communities in Kauman have not yet understood and realized why it is important to maintain local identity, and that unique value are an important asset.

Thus, the tourist village is one of significant product development in reducing poverty in the ghetto town. Green-tourism through local communities involved in tourism activities there. Furthermore, local communities are expected to be able to feel and benefit from the development of tourism activities. development of tourist destinations to make this tourist village has criteria and supporting factors in the development of village tourism (Greffé, X. 1994; Gannon, A. 1994; RTBL Kampung Baluwarti, 2010).

Villages of theories, towns and rural villages-tourism, it can be concluded that the tourist village is a form of tourism that relies on local knowledge objects and the potential attractiveness of village life with a special unique character of local communities (physical and non-physical), which has opportunities for commodities as an asset for visitors or tourists to enjoy, and all the activity generated by the village will benefit the local community.

2. Low impact development (LID)

Changes in land use as residential development will result in a reduction in infiltration areas and increase the rate of runoff. Low Impact Development (LID), a small-scale management concept of a rainwater drainage system in residential areas. LID is planned to control the water level and that will be released to the downstream area and maintain the base flow (base flow) and filter waste from residential areas. LID techniques is an excellent tool to help protect the balance of nature on an ongoing basis (Suseno, D. 2010 in Hermono, 2011)).

Some application of LID: "Bioretention or rain garden, grass channels," filter strips, "and the pavement" permeable".



Figure 3. Application of filter strips on open space

Further, in the tourist village area development planning towards culture-city, a few things must be considered in environmental management (maintaining, protecting and preserving the existence and condition of nature and the environment and be part of the planning area); recycling, the use of technology, behavior / conduct communities and planning which allows for processing of waste products back into material that can be reused and do not contaminate or adversely affect the environment, sustainability, sustainable development that has a vision and mission for the long term. Harmony with the environment is not only related to the harmony and balance of land use, but also in the physical planning of facilities capable of adapting the local character of both physical and cultural nature. Therefore, the development of the area in order to be in line with the principles mentioned above, as well as strengthening the environmental area as one region competitive value, then the guidelines (guidelines) plans need to be made as a reference basis for the development of facilities and activities in the region. From the above description, it is understood that sustainable development depends on three basic elements: ecological integrity: the natural environment, which would be realized if the community (both individually and collectively) to live in harmony with the natural environment; economic security: economic development, to achieve level, who can control that the public (individuals and groups) can live with their own socio-economic conditions, Democracy: community-based development, it is created as public participation (Pirages, 1996).

3. *Green-tourism*

The term green-tourism, appeared in the WTO in Bali (described as a development-friendly and sustainable tourism, not accompanied by negative impacts on the environment (physical and non-physical). Added that the success of the development of green-tourism-based tourism is determined by the quality of the natural environment people's behavior and culture, both of which are major capital. preservation order to be sustainable, tourism development should always pay attention to the achievement of harmony between the needs of tourists, tourist destinations, as well as a host of local community (Nuryanti, 2010).

Green-tourism concept aims to maintain harmony between the elements, such as the needs of tourism development, preservation of the natural environment, social and culture, the quality of the tourism product, the professionalism of human resources, as well as the satisfaction of tourists. Various elements must be maintained so that the balance will not result in a conflict between one element to another. This is a sound concept of sustainability and the region as a former manager of the tourist area later. Green-tourism by adopting an attitude of cultural change in managing the environment, the behavior and lifestyle patterns to support the sustainability of the tourist areas, and the establishment of a new attitude towards the tourist area of human interaction (Fundamentals of green-tourism, 2010).

As an activity which is complex and has many facets, green-tourism surrounding environment including tourism as a vehicle for conservation education and recreation are growing and developing rapidly, with displays of local people's behavior authenticity and variety of uniqueness, so intertwined are built through communication and interpretation activities appreciation of the potential of local knowledge.

From the description above it can be concluded that the growing development of the tourist village to the green-tourism, it must meet several criteria including: the existence of the tourist village, the location must have the potential appeal of a typical local wisdom, and there is a strong motivation of local communities to create creativity in the green-to minimize the negative impacts of tourism towards green tourism community development must be enthusiastic and have a collaborative system continued partnership between government, private sector and local communities as a driving motor.

Added in the City of Gold Coast, basically there are 9 (nine) principles of adaptation into sustainable development which must be implemented by all actors of development: 1). Respect and care for the community of life; 2). Improving the quality of human life; 3). Preserving the vitality and diversity of the earth; 4). Avoid the waste of resources that are not renewable; 5). Trying not exceed the carrying capacity of the earth; 6). Changing attitudes and lifestyles of individuals; 7). Support people's creativity to maintain their own environment; 8). Provides a comprehensive framework to integrate development efforts, and preservation; 9). Creating global cooperation.

Urban Linkage System to reinforce the system of structural and spatial Tourism Village historic district Kauman through landscape design concept of an urban setting 'garden city'.

Assertion framework structure area (urban structure) can be confirmed by a combination of green along the way / green belt structure, green space in the room / space / green belt of the road area (Jl. Trisula, Jl, Wijaya Kusuma, Jl. Kalimosodo).



Figure 4: Five Main Road and Village Kauman Kauman (source: *Wiwik 2013*)



Figure 5. GREEN LID implementation in the region and towards Kauman as Kauman for Tourism Regions Based LID and Green (source: *Wiwik, 2013*)

Further in support of the existence of Historic Areas Kauman as Village Tourism Concept LID Towards Green Tourism, then there are several criteria that must be considered,

1. Orientation and Main / Side Entrance

The selection is based on the main entrance zone that allows the large area and is easily recognizable on the edge Jl Slamet Riyadi and city walk are in the area. Achieving electoral considerations into tourist village Kauman:

Main Entrance:

The selection of main entrance based on the reason for the ease of finding, ease of circulation, easy to reach, easy to remember, easy recognizable. Therefore selected from the main entrance towards Jl Slamet Riyadi as is by the main road.

2.Circulation

The road to the Kauman area should be clear. Once it is

determined the secondary roads. Physical condition or existing roads, wide roads and material road should be mapped. Preferred user comfort for easy access and determine which path option selected.

3. Circulation in the area of the tourist village Kauman

Upon entering the area Kauman then the next thing to think about is the way to the achievement of each of the buildings in the area Kauman. Clarity and ease of the user either two-wheel or four-wheel walkers to be important. Location of pockets of parking should be clear. Pedestrian comfort takes precedence.

4. Pedestrian Ways and Bookmarks Road / signage

To facilitate and make it convenient marker made road users to reduce possible road travelers astray and make it easier to achieve the goal.



Figure 6 Orientation and Main / Side Entrance Source: Analysis *Wiwik, 2010*

3. Pavement

Pavement intended as circulation and plaza area, selected material that is easily cleaned, shaped geometric pattern. In addition to that purpose also for steering / signpost Some contributing factors to the tourist village Kauman are:

1. Attractive street

Designing the road corridor in order to create an attractive area, which varied street patterns to derive comfort and security. Signage is designed to get the convenience and comfort (shade, the bag breaks and street vendors). Building facade is designed with a modern concept, but the original building is maintained in accordance with the original. Chosen to incorporate appropriate building materials thereby strengthening local wisdom

2. Social events

Is a means of gathering citizens and residents staging the scene, could be a whole range of activities tourist village.

3. Open stage

An open space may be crossing the street or the park that could be used as a communal space for interaction among residents.

4. Urban furniture

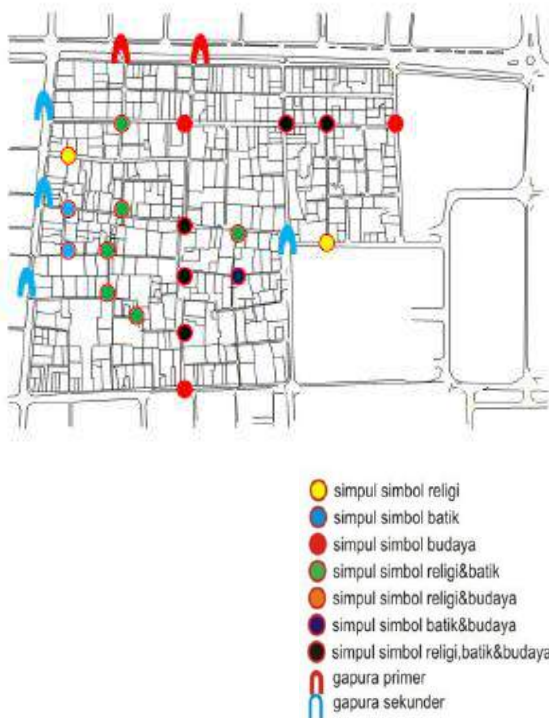


Figure 7. Travel Tourism Village knot Kauman
Source: Muhammad, Reanalysis *Wiwik* 2013

IV. CONCLUSION

From the discussion above it can be concluded that the application of LID in Kauman region can also be applied in other cities equal Kampung Kampung such Laweyan, Kampung Sondakan and villages which have the character of dominance.

To achieve Kauman as a tourist area which refers to the concept of green a few ways to do this below: Implementation of LID low impact development with drainage channels to accommodate the road along the edge, making the slope of the road from the center and tilted to one side lengthwise, making rain water infiltration, use of grass block to the parking area and communal space, reducing the asphalt road should use materials that can be absorb water / paving block. Application of green design to make the arbor in citywalk, made in the greening of parking spaces, making reforestation along the edge of the road, in the area of afforestation entry Kauman region, providing an attractive

trash along the roads in the area kauman, structuring street vendors in all managing Kauman area street furniture to be comfortable to use and does not interfere with road users

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